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**PASSENGER MOTOR
VEHICLE SAFETY**

House of Representatives
Standing Committee on Road Safety

Report

May 1976

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on 5 March 1975.

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REPORT FROM COMMITTEE

1. The Committee was appointed by resolution of the House of Representatives on 17 March 1976 to inquire and report on -

- (a) the main causes of the present high level of the road toll in Australia;
- (b) the most effective means of achieving greater road safety in Australia;
- (c) the particular aspects of the problem to which those concerned with road safety could most advantageously direct their efforts, and
- (d) the economic cost to the community of road accidents in Australia in terms of -
 - (i) material damage,
 - (ii) loss of man-hours and earning capacity, and
 - (iii) cost of treatment of accident victims.

2. These terms of reference are identical with those of the Standing Committee on Road Safety established in the Twenty-ninth Parliament and with the terms of reference of the Select Committees of the Twenty-seventh and Twenty-eighth Parliaments.

3. The purpose of this first report of the Committee in the Thirtieth Parliament is to place before the House the results of an inquiry into passenger motor vehicle safety conducted by the Committee in the Twenty-ninth Parliament.

4. In July 1974 the previous Committee began an inquiry into the safety aspects of vehicles using public roads. During the course of the inquiry the Committee decided that it would be beneficial to restrict its investigations to matters concerning passenger motor vehicle safety.

5. Final evidence was taken in Canberra on 11 September 1975 and a draft report prepared. The dissolution of Parliament on 11 November 1975 however, prevented the previous Committee from considering the draft report.
6. The Committee has decided that the results of the previous Committee's inquiry should not be delayed by re-opening the inquiry. In reaching this decision the Committee is fully aware that more recent evidence, statistics and developments could be added to the report. Despite these considerations the Committee considers that in view of the importance of the inquiry, which the Committee regards as one of Australia's most comprehensive inquiries into vehicle safety, it has a duty to report to the House without further delay in order that recommendations and conclusions may be known and put into effect.
7. The Committee therefore appointed a Sub-committee consisting of three Committee members who were members of the previous Committee to consider the draft report.
8. The Sub-committee's report has been adopted by the Committee as the report on Passenger Motor Vehicle Safety.
9. In adopting the Sub-committee report the Committee points out that the report does not necessarily convey specific views of Committee members not being members of the Sub-committee.
10. The Committee notes that the House of Representatives Select Committee on Road Safety in its first report recommended the establishment of a National Authority on Road Safety and Standards as a statutory authority to have the following functions -

- "(a) advise the Minister for Transport on road safety including proposals for financial assistance to the States for this purpose;
- (b) formulate, in consultation with the relevant State and Australian authorities, proposals in respect of:
- motor vehicle standards;
 - road safety standards in respect of highway engineering, traffic management, roadside furniture and town planning; and
 - uniform traffic codes;
- (c) certify compliance of motor vehicles and vehicle and vehicle components with approved standards;
- (d) prepare road safety impact statements in respect of transport and urban development programs being financed to a significant degree out of Australian Government funds;
- (e) conduct road safety research on a multi-discipline basis by the use of outside bodies and persons and of its own staff and facilities;
- (f) collect and disseminate road safety research information;
- (g) collect and disseminate in consultation with the Bureau of Census and Statistics national statistical information required by workers in the various disciplines relevant to road safety and relating to such topics as drivers, vehicles, accidents etc., on an Australia-wide basis;

- (h) conduct road safety education and publicity campaigns and co-ordinate State and Territory efforts in this field."

11. The previous Government established the Road Safety and Standards Authority which was to be sited at Albury-Wodonga. The objectives of the Authority as outlined in the Act were as follows -

- "(a) the promotion of road safety;
- (b) the promotion of the means for the control and reduction of noise, fumes and other emissions from road vehicles; and
- (c) the protection of the interests of persons who buy or otherwise acquire road vehicles in the design, construction, durability, performance, maintenance and repair of their vehicles,

so far as those matters relate to matters with respect to which the Parliament has power to make laws and, in particular, so far as those matters relate to trade and commerce among the States, purposes in connection with a Territory or the use of road vehicles by Australia or by an authority of Australia."

12. The present Government has introduced a Bill to repeal the Road Safety and Standards Authority Act and indicated its intention of having the functions and activities of the Authority carried out by the Department of Transport. It is understood that a non-statutory body (whose title has yet to be determined) will be established within the Department of Transport to take charge of the Authority's functions and activities.

13. The Committee notes the Government's decision on the matter and proposes to re-examine the question of whether or not such a national body should be a statutory authority after the new structure has been functioning for a period of time.

14. The Committee would like to express its appreciation to members of the previous Committee for their contributions; to Mr J.L. Bell, Department of Transport, Mr G. Alexander, University of New England and Mr P. Wherrett, Peter Wherrett Advanced Driving Pty. Ltd. who provided valuable assistance as specialist advisers to the previous Committee; and to all those who assisted in the preparation and compilation of the report.

15. The report of the Sub-committee follows.

May 1976

R.C. Katter
Chairman

PASSENGER MOTOR VEHICLE
SAFETY

SUB-COMMITTEE REPORT TO THE HOUSE
OF REPRESENTATIVES STANDING COMMITTEE
ON ROAD SAFETY

RECOMMENDATIONS FROM THE SUB-COMMITTEE

The Sub-committee recommends that:

1. the Federal Government, in establishing a Bureau of Road Safety provide maximum assistance to the Bureau to enable it to become fully operational as soon as possible. (Paragraph 54)
2. the Design Rule Committee come within the Bureau of Road Safety's jurisdiction and that the Bureau of Road Safety be developed as the principal body for formulating standards and recommend proposed Australian Design Rules to Australian Transport Advisory Council for approval. (Paragraph 78)
3. the Australian Transport Advisory Council in its review of the Advisory Committee on Safety in Vehicle Design give careful consideration to its membership and make provision for consumer representation. (Paragraph 82)
4. design rule proposals be publicised and comment invited during the 90 day period. (Paragraph 86)
5. in general Australian Design Rules should follow overseas standards but the making of unique rules should not be precluded where considered desirable but particularly where justified by Australian conditions. (Paragraph 97)
6. Draft Regulations should be immediately called up into Australian Capital Territory and Northern Territory legislation and enforced through the inspection system in the Australian Capital Territory. (Paragraph 111)

7. . a complete review and rationalisation of the relevance and adequacy of the Draft Regulations be made by the Government as soon as practicable.
 - . the Bureau of Road Safety co-ordinate the functions of the Advisory Committee on Vehicle Performance, the Advisory Committee on Safety in Vehicle Design and the Standards Association of Australia to avoid duplication in the formulation of standards.
 - . Australian Transport Advisory Council endeavour to ensure that safety related Draft Regulations it approves are enacted in each State and Territory. (Paragraph 118)
8. . Australian Transport Advisory Council recommend to its constituent members legislative proposals to ensure uniform compliance of Australian Design Rules throughout Australia requiring the fixing of compliance plates to all vehicles and that penalties be included for failure of manufacturers to affix compliance plates.
 - . the Bureau of Road Safety institute procedures for the thorough testing of vehicles to ensure satisfactory compliance with Australian Design Rules. (Paragraph 133)
9. the Advisory Committee on Safety in Vehicle Design make a formal approach to individual vehicle companies requesting detailed cost information and other relevant information whenever necessary for the purposes of design rule formulation. Manufacturers should also be requested to provide assistance in

evaluating the effectiveness of safety features in vehicles. (Paragraph 188)

10. the Department of the Treasury review its advice on the proposal for a reduction of sales tax on vehicle safety components in the interest of obtaining increased vehicle safety at a reduced cost. (Paragraph 192)

11. the Bureau of Road Safety monitor television, radio and newspaper advertisements of manufacturers and bring to the company's attention advertising which, in the opinion of the Bureau, is not in the interest of road safety, requesting appropriate rectification. (Paragraph 201)

12. . the Bureau of Road Safety investigate means by which all appropriate bodies which inspect new vehicles, including State governments, will be required or requested to formally advise the Bureau of detailed results of their inspections in relation to safety related defects.
 - . the Bureau of Road Safety communicate to manufacturers evidence of serious or recurring safety related defects and seek their co-operation with regard to their correction.

 - . the Federal Government establish a stricter procedure for the comprehensive inspection and recording of safety related defects in new vehicles and that the testing of vehicles be conducted by the Army Quality

Assurance Service on behalf of all Federal Departments and Instrumentalities on a cost-share basis. (Paragraph 227)

13. . the Bureau of Road Safety investigate the establishment of a committee, representing all relevant organisations, as a form of mediation between manufacturers and others to -

- (a) monitor defect information,
- (b) monitor manufacturers' action with regard to recalls,
- (c) regularly publicise all defect and recall information, and

. the Federal Minister for Transport report to the Australian Transport Advisory Council on the success or otherwise of this problem over a period of time with the view to obtaining by co-operation a legal framework in which to operate if this is found necessary. (Paragraph 258)

14. the Bureau of Road Safety establish formal access to vehicle company plants for quality control observation and develop a system of monitoring quality control standards. (Paragraph 272)
15. Australian Design Rule 31 be reconsidered with a view to ensuring that overall braking performance will at least be maintained. (Paragraph 301)
16. the Bureau of Road Safety undertake or commission and supervise a test program over a range of surface and load conditions with a view to establishing braking

performance requirements based on the statistical mean performance of present vehicles.

(Paragraph 301)

17. the Advisory Committee on Safety in Vehicle Design investigate brake response time with a view to incorporating reasonable standards into a design rule. (Paragraph 307)
18. an educational campaign be conducted by the Government to inform the public, particularly mechanics, of the need for proper attention to the handling of brake fluids. (Paragraph 316)
19. the Advisory Committee on Safety in Vehicle Design investigate the severity of the problems associated with brake fluids with a view to specifying a performance standard for brake fluids to ensure that only high quality brake fluids are utilised. (Paragraph 318)
20. force and performance requirements of Australian Design Rule 31 be reviewed with respect to the development of a partial compensating master cylinder to establish whether less degradation of performance is now practical at a low cost safety benefit. (Paragraph 323)
21. the Bureau of Road Safety should investigate the appropriate labelling of retreaded tyres (including tread depth indicators) and maximum recommended vehicle speeds when fitted with retreaded tyres. (Paragraph 337)

22. the Bureau of Road Safety provide a facility for approved marking of replacement wheels shown to comply with appropriate strength and durability standards. (Paragraph 338)
23. an Australian Design Rule be developed to ensure that Australia obtains at least the degree of standardisation of controls and instrument panel achieved by overseas legislation. (Paragraph 343)
24. a stop lamp indicator requirement be considered by the Advisory Committee on Safety in Vehicle Design to inform the driver of the correct functioning of brake lamps and that the provision of a brake failure indicator be investigated for its effectiveness and possible standard use. (Paragraph 344)
25. immediate steps be taken to develop an Australian Design Rule to prevent less conspicuous colours being applied to vehicles. (Paragraph 358)
26. all Federal and State Government Departments and Authorities ensure that vehicle colour selection is made on the basis of safety. (Paragraph 361)
27. a no less demanding design rule for field of view be substituted for Australian Design Rule 13, to ensure that advantages already gained are not negated. (Paragraph 367)
28. Australian Design Rule 15 be upgraded to include demisting of the rear window. (Paragraph 376)

29. the fitting of 4-way flasher warning lights be subject to Australian Design Rule formulation without further delay. (Paragraph 379)
30. developments in human tolerances, vehicle aggressivity and cost-benefit, be closely monitored, supported by local research where possible, with the objective of drafting performance specifications for crashworthiness. (Paragraph 399)
31. the method of data reporting for rollover accidents be investigated. (Paragraph 419)
32. the Federal Government ensure that the Australian Capital Territory and the Northern Territory immediately legislate for the retrofitting of seat belts based on the Advisory Committee on Vehicle Performance draft code of practice. (Paragraph 444)
33. the Federal Department of Transport, in conjunction with the State and Territory registration authorities, immediately initiate a program to notify all pre-1974 model vehicle owners, at the time of registration renewal, of the inherent dangers associated with the incorrect wearing and fitting of seat belts. (Paragraph 454)
34. the Government investigate the practicality and feasibility of incorporating an outside device on vehicles to indicate whether seat belts are being worn. (Paragraph 465)
35. an Australian Design Rule be developed to ensure that vehicles are fitted with a "fasten seat belts"

warning light on the dashboard operated in conjunction with the ignition switch. (Paragraph 466)

36. the Government immediately investigate the present reasons for granting exemptions from seat belt wearing and encourage State and Territory authorities to amend their legislation according to the result of the investigation. (Paragraph 468)
37. the Advisory Committee on Safety in Vehicle Design investigate the desirability of passive belt restraints with a view to design rule implementation. (Paragraph 473)
38. the Federal Government promote the beneficial effects of Australian seat belt wearing law in overseas countries. (Paragraph 478)
39. the Federal Government ensure that the Australian Capital Territory and Northern Territory legislate to ban the sale and fitting of unapproved child restraints. (Paragraph 490)
40. the Advisory Committee on Safety in Vehicle Design undertake research with a view to designing vehicles, particularly family type vehicles, to enable the fitting of approved child restraints. (Paragraph 491)
41. immediate steps be taken by the Federal Government to ensure that legislation is enacted to require the wearing of restraints by children in the Australian Capital Territory and the Northern Territory. (Paragraph 493)

42. the Advisory Committee on Safety in Vehicle Design review Australian Design Rule 10 in line with approved developments and that the angled effectiveness of energy absorbing columns be verified and possibly incorporated into the design rule. (Paragraph 506)
43. an Australian Design Rule be developed to ensure that vehicles are fitted with laminated windscreens consistent with the latest developments of laminated glass. (Paragraph 524)
44. the Advisory Committee on Safety in Vehicle Design investigate developing a design rule to reduce fire risks, no less stringent than the United States standard. (Paragraph 531)
45. data collection and analysis be modified to more accurately relate pedestrian injuries to various vehicle designs and features in order to determine significant variations in protection performance. (Paragraph 544)
46. . the Bureau of Road Safety urgently review existing information on Periodic Motor Vehicle Inspection with a view to urging the States not already using Periodic Motor Vehicle Inspection to adopt a suitable form of inspection system to suit their needs.

 . the Federal Government urgently investigate a form of Periodic Motor Vehicle Inspection suitable for the Northern Territory with a view to its early implementation. (Paragraph 567)

47. . the "hot line" concept for dealing with consumer complaints be extended and improved within the Bureau of Road Safety to ensure protection in the vehicle safety area.
- . the Bureau of Road Safety regularly publish details of consumer items relating to vehicle safety similar to Consumer Protection Bulletins issued by the United States National Highway Traffic Safety Administration. (Paragraph 599)
48. the Bureau of Road Safety should, in conjunction with all State and Territory police, ambulance and traffic authorities, develop simplified reporting formats and the use of coding information to facilitate data collection by police and ambulance officers.
(Paragraph 636)
49. the Federal Government remove all administrative impediments so that the Aeronautical Research Laboratories can be utilised for appropriate road safety research whenever defence commitments permit.
(Paragraph 664)
50. the Federal Minister for Transport, in co-operation with the Federal Treasurer, request the Insurance Commissioner to obtain relevant information from insurance companies. (Paragraph 687)
51. the Federal Government, in consultation with State Governments, should investigate implementing a system of variable rating of third party insurance according to vehicle size and accident record and other matters which encourage occupant safety as well as a system

of funding third party insurance by a fuel tax either in whole or in part. (Paragraph 696)

52. the Bureau of Road Safety, in conjunction with the Australian Bureau of Statistics, investigate the usefulness of collecting data from insurance companies and formally seek the co-operation of the insurance industry to assist in vehicle safety research. (Paragraph 704)

ABBREVIATIONS

AAA - Australian Automobile Association
ACSVD - Advisory Committee on Safety in Vehicle Design
ACVP - Advisory Committee on Vehicle Performance
ADR - Australian Design Rule
AMI - Australian Motor Industries Ltd
AMVCB - Australian Motor Vehicle Certification Board
ARL - Aeronautical Research Laboratories
ATAC - Australian Transport Advisory Council
BRS - Bureau of Road Safety (or as it may otherwise be titled)
CCA - Australian Car Consumers Association
Chrysler - Chrysler Australia Ltd
ECE - Economic Commission for Europe
EEVC - European Experimental Vehicles Committee
EGORS - Expert Group on Road Safety
ESV - Experimental Safety Vehicle
FCAI - Federal Chamber of Automotive Industries
Fiat - Fiat of Australia Pty Ltd
FMVSS - Federal Motor Vehicle Safety Standards (U.S.)
Ford - Ford Motor Company of Australia Ltd
GMH - General Motors-Holden's Pty Ltd
HPR - High Penetration Resistant Glass (Laminated)
IAC - Industries Assistance Commission
IAME - Institute of Automotive Mechanical Engineers
IRDG - Industrial Research and Development Grants
Leyland - Leyland Motor Corporation of Australia Ltd
Mercedes-Benz - Mercedes-Benz (Australia) Pty Ltd
NHTSA - U.S. National Highway Traffic Safety Administration
PMVI - Periodic Motor Vehicle Inspection
ROSTA - Road Safety and Traffic Authority (Vic.)
RSSA - Road Safety and Standards Authority
RSV - Research Safety Vehicle
SAA - Standards Association of Australia
SAAB - SAAB-Scania Australia Pty Ltd
SAE - Society of Automotive Engineers

ABBREVIATIONS - continued

TARU - Traffic Accident Research Unit (N.S.W.)
VIN - Vehicle Identification Number
Volvo - Volvo Australia Pty Ltd
VW - Motor Producers Limited (Volkswagen)

Acknowledgment

Material used for illustrations in this report came from the Department of Motor Transport, New South Wales; the Proceedings of the Fourth International Congress on Automotive Safety; General Motors - Holden; the Ford Motor Company; Motor Producers Ltd and Pilkington Bros (Aust.) Ltd. Its use is acknowledged with thanks.

CHAPTER I: INTRODUCTION

PART A

-Appointment of the Standing Committee

1. The House of Representatives Select Committee on Road Safety was first appointed on 27 April 1972. The Committee tabled its first report entitled Road Safety - A National Authority, The Constitutional Position and Statistical Needs on 25 September 1973; and its second report entitled Roads and Their Environment on 10 April 1974.
2. Following the dissolution of the House of Representatives on 10 April 1974 and the subsequent general election, the Committee was reappointed on 18 July 1974¹ as a Standing Committee to inquire into and report on -
 - (a) the main causes of the present high level of the road toll in Australia;
 - (b) the most effective means of achieving greater road safety in Australia;
 - (c) the particular aspects of the problem to which those concerned with road safety could most advantageously direct their efforts, and
 - (d) the economic cost to the community of road accidents in Australia in terms of -
 - (i) material damage,
 - (ii) loss of man hours and earning capacity, and
 - (iii) cost of treatment of accident victims.
3. The Committee's resolution of appointment provides that the Committee have power to consider and make use of the evidence and records of the House of Representatives Select

1. House of Representatives, Votes and Proceedings No. 6 of 1974, p. 52.

Committees on Road Safety appointed in previous Parliaments.

4. The terms of reference are identical to those given to the previous Select Committees. The Select Committee's first report indicated that it would be considering the problem of road safety under various basic headings namely,

- (A) the institutional framework,
- (B) the cost of road accidents,
- (C) the road environment,
- (D) the vehicle, and
- (E) the human aspect,

and would report on these aspects from time to time.

5. The Standing Committee will continue and expand the Select Committee program of inquiry and reporting on these various aspects of road safety. The Standing Committee also intends in this and future reports to comment on the progress made towards implementing the recommendations of previous reports.

6. The Committee, in its first report, Road Safety - A National Authority: The Constitutional Position and Statistical Needs recommended that a National Authority on Road Safety and Standards be established. This recommendation was implemented and a Road Safety and Standards Authority (RSSA) established with the enactment of the Road Safety and Standards Authority Act 1975. The Committee notes at the outset that at the time of consideration of this report the Government had announced that it was its intention to abolish the RSSA. Legislation to this effect was introduced into the House of Representatives on 6 May 1976. The Federal Minister for Transport has assured the Sub-committee that the decision to incorporate the RSSA into the Department of Transport does not in any way lessen the Government's commitment to road safety. The Minister indicated that the title of the section within the Federal Department of Transport responsible for road safety had not yet been determined. This section within

the Department is hereinafter referred to as the Bureau of Road Safety (BRS). Where the Committee previously considered it appropriate in this report to make comments and recommendations relating to the RSSA it now refers to the BRS (or as it may otherwise be titled) of the Department of Transport as the appropriate and responsible body.

-The Inquiry

7. On 3 August 1974 the Committee placed advertisements in newspapers in Canberra and the State capital cities, inviting interested individuals and organisations to make submissions on the motor vehicle aspect of road safety. In addition, vehicle manufacturers, component manufacturers, vehicle insurance companies and Australian and State road safety organisations, consumer groups, vehicle design experts, and numerous other organisations were approached directly and requested to make submissions on the inquiry.

8. Submissions were received from over 100 individuals and organisations and 130 witnesses appeared before the Committee to give evidence (see Appendix 1). In addition, many exhibits were received and were included in the records of the Committee. The Committee (or its Sub-committees) held 27 public hearings in Canberra, Sydney, Melbourne and Adelaide. The Committee also took evidence at 2 in-camera hearings. Evidence taken at public hearings of the Committee is available for inspection at the House of Representatives Committee Office or at the National Library of Australia.

9. During the course of the Inquiry the Committee decided that it would be beneficial to restrict its investigations to matters concerning passenger motor vehicle safety. The somewhat different problems in heavy vehicle and motorcycle safety are causing the Committee increasing concern and will therefore be subject to specific and detailed inquiry by the Committee following completion of this report.

-Response to Inquiry

10. During the course of the inquiry it has become clear to the Committee that the general public is vitally interested in vehicle safety and is looking to the Federal and State governments to provide a lead in the campaign to reduce the death and injury rate on Australian roads. State authorities are doing significant work in the road safety field and have provided the Committee with considerable assistance in its inquiry. It is clear to the Committee that co-operation between State road safety bodies and the yet to be established BRS will be of paramount importance in achieving safer drivers, roads and vehicles. The response of motor vehicle manufacturers to the inquiry was in some cases unsatisfactory and there was evidence of an unwillingness to co-operate with the Committee, particularly early in the inquiry. It became clear to the Committee that some manufacturers were genuinely interested in building safer cars whereas others only paid lip-service to the concept of greater vehicle safety. Many manufacturers of vehicle components have co-operated willingly with the Committee and provided much valuable evidence. The motor vehicle insurance industry, on the other hand, was unable to give the Committee any substantial assistance in its inquiry.

PART B

-Comments by the Sub-committee on Action taken
on the Reports of the House of Representatives
Select Committees on Road Safety

11. The Committee believes that, implicit in the status of a Standing Committee, there is a responsibility to investigate and report to the House on what action, if any, responsible bodies take on recommendations contained in previous reports. To this end the Committee approached the

Federal Government departments and authorities responsible for the implementation of recommendations of the Select Committee's first and second reports. The information contained in Appendix 2 is a summary of what steps have been taken by these bodies to implement the Select Committee's recommendations. The departments and authorities which provided this information were the Department of Transport, Department of Urban and Regional Development, Attorney-General's Department, Commonwealth Bureau of Roads, Telecommunications Commission, Australian Bureau of Statistics, Universities Commission and Commission on Advanced Education. The Committee appreciates the co-operation of these bodies in assisting it to survey the legislative and administrative action which has been taken to implement the recommendations of the Select Committee's first and second reports.

12. The Committee is pleased to note that, in most respects, the recommendations contained in these reports have been implemented or are under consideration by the Federal Government and their bodies responsible for undertaking action on the recommendations.

13. The Committee regards the establishment of the BRS as being a most important initiative in the road safety field. Many of the Committee's recommendations contained in the second report are contingent upon available Federal support and research staff. While the Department of Transport has most Committee recommendations under consideration, their effectiveness will be dependent on longer term planning.

14. The Committee, however, considers that with respect to certain recommendations urgent attention by the responsible bodies is required.

-First Report : Road Safety - A National Authority,
The Constitutional Position and
Statistical Needs

15. The Committee's inquiry into passenger motor vehicle

safety has again highlighted the need for uniformity in the collection of data on an Australia-wide basis. The Australian Bureau of Statistics has established a Working Group which has commenced consultation with all relevant State authorities on these matters. The importance of uniform data collection is considered in Chapter XIV of this report (Recommendation 6).

-Second Report : Roads and Their Environment

16. The Committee feels that the implementation of pedestrian malls and cyclist paths should have high priority for State and local Government planners (Recommendations 12, 13 and 28).

17. While the Committee has carefully considered aspects of passenger motor vehicle safety in this report, it reiterates its view that accidents on Australian roads will be reduced with an increased provision and use of public transport facilities (Recommendations 18, 26 and 27).

18. The Committee strongly supports the concept of traffic interchange systems and fully supports an application by the Council of the City of Sydney to construct such a system in Taylor Square, Darlinghurst, NSW. The Committee urges the Federal Government to provide assistance where possible to the Council for a pilot project in implementing the Olivero interchange system (Recommendation 24).

19. The Committee recognises that universities and colleges of advanced education are autonomous institutions, each responsible for the content of their own courses. Nevertheless, it urges that they respond to community needs in this area and provide a greater road safety orientated content in engineering courses (Recommendation 25).

CHAPTER II: THE VEHICLE ASPECT OF ROAD SAFETY

20. During 1974, 3572 people were killed and 91,358 were injured in road accidents throughout Australia. Of these, 2330 and 67,968 respectively, were vehicle occupants. As a result of the motor vehicle being within the reach of most people, there are 5½ million vehicles in Australia today. The building of passenger vehicles is one of Australia's largest industries meeting an annual demand of half a million cars.

21. Road accidents are currently costing the community millions of dollars, not to mention the incalculable misery and suffering to road accident victims and their families. It is for these reasons that the Committee feels it has a responsibility to put forward recommendations which may be unpalatable and restrict individual freedom and choice but it has done so only with the most careful regard for the individual and public benefit. Australians react immediately to disasters such as the tragedy of cyclone Tracy or the Tasman Bridge disaster and quite naturally concern and sympathy is expressed by all sections of the community and efforts made at the national level to remedy the situation. However, there exists on our roads a far greater disaster with well over 3500 people being killed each year, but efforts to reduce this number and the costs associated with accidents do not really receive the concern commensurate with the degree of tragedy.

22. Throughout the inquiry, the Committee received overwhelming evidence in favour of the wearing of seat belts as a method of reducing fatalities and the number and severity of injuries. The Committee was presented with 1974 figures on fatalities and injuries involving vehicle occupants, which show that for Australia there was a 26 per cent fall in fatalities and a 21 per cent fall in injuries from the predicted levels. At the same time the fatalities and injuries of road users other than vehicle occupants have not shown a corresponding decline. This appears to confirm the contention that vehicle occupants were being affected by a measure not

operative for other road users. The evidence is almost indisputable that the compulsory seat belt wearing legislation was the responsible measure.

23. The vehicle industry appeared slow to realise that the major factor in the reduction of death and injury was this simple fact of a seat belt. It is a great technical advance not a behavioural one and it required legislation to ensure that seat belts were fitted on all passenger vehicles manufactured after 1970.

24. The Committee is concerned that a large proportion of death and serious injuries are coming from the small percentage of people who do not wear seat belts. Many Australians are dying and being seriously injured needlessly because of their failure to wear seat belts.

25. The Committee considers that while Australia has lead the world with mandatory seat belt laws, there is still much scope for improvement. This can be achieved through more stringent enforcement of seat belt laws and other associated matters such as the sale of ineffective safety devices, for example, unapproved adult and child restraints.

26. Various estimates have been made of the vehicle as a causative factor in road accidents, some being made as high as 25 per cent.² From all the estimates submitted to the Committee, there was sufficient consensus and authority to suggest that vehicle defects are a causative factor in at least 6 per cent of all accidents. In many accidents, however, the actual cause may never be known and it is common practice to blame the driver. The fact that a vehicle did not stop in time to avoid a collision can, in some cases, be attributed to less than satisfactory braking efficiency rather than to

2. Expert Group on Road Safety, Road Accident Situation in Australia, Report to the Minister for Transport, September 1972, Parl. Paper 172, 1972, p.49.

human error. The Committee regards 6 per cent as the minimum figure of vehicle causation in the road accident equation.

27. The Committee feels that it is inconsistent to attempt to improve traffic safety by reducing road and human deficiencies by way of better roads, driver education and improvement programs, traffic regulations and increased enforcement, and at the same time ignore one of the basic factors - vehicle deficiencies.

28. The Committee is aware that drivers are largely to blame for accidents, but at the same time, it considers that this should not be a reason for those concerned with vehicle design, production and maintenance to abrogate their responsibilities. Drivers alone do not cause accidents consequently there is a need for safe cars. The Committee has been concerned therefore, to establish not so much how safe cars have been or are but how safe cars can be and should be in the future.

29. The Committee feels, whether we like it or not, given the number of drivers on our roads, society will always be burdened with the problem of the errant driver despite continual efforts to overcome this problem. The more effective and immediate way to achieve results is to change the driver's environment rather than being totally preoccupied with efforts on changing the individual's behaviour. In this respect, roads should be better designed and more thought should be given by vehicle manufacturers to improving a vehicle's ability to avoid collisions and to give occupants all possible protection in a collision. Even the most inattentive, the more careless and the most drunken driver has a better chance of survival if the vehicle under his control answers correctly to his belated reflexes. Being moralistic about an errant driver will afford no protection or comfort to innocent victims of

the actions of this driver.

30. Whilst there have been tremendous advances in vehicle safety since the Senate's inquiry into road safety in 1960³ and as a result of the Ribicoff Committee⁴ and the influence of Ralph Nader in the mid 1960's in the United States, the Committee found that there are still areas for improvement in vehicle safety which are reflected in the recommendations of this report.

31. The Committee feels that, like many other areas of industry, there is a profound responsibility on the vehicle manufacturing industry to produce safe goods. This responsibility includes advanced measures to assist the driver to avoid a crash and provide better protection for vehicle occupants should a crash occur. Their efforts should also be directed towards eliminating, as far as possible, vehicle defects (and where defects are identified and recognised, taking steps to recall and remedy them), ensuring that advertising is responsible, adopting an approach in vehicle manufacturing consistent with responsible sets of criteria for design, performance, capacity of speed and suitability for Australian conditions.

32. The Committee was pleased to observe that the manufacturers have moved away from the somewhat cynical practice of offering safety as an option hitherto defended on the grounds of customer choice. This trend was reversed largely in response to government regulation requiring the inclusion of safety features in vehicles. The requirement to incorporate safety features in vehicles means that the community gains and no one manufacturer is advantaged or suffers in the market place. The Committee feels that

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3. The Parliament of the Commonwealth of Australia, The Senate, Report from the Select Committee on Road Safety, 21 September, 1960, Parl. Paper S.2, 1960-61.
 4. U.S. Senate Sub-committee on Executive Re-organisation, 89th Congress.

manufacturers should be capable of initiating as well as reacting to new concepts of vehicle safety.

33. In the course of the inquiry, vehicle manufacturers stressed that it was desirable to only include features that have a proven cost-benefit. It should be noted that not all safety features necessarily increase manufacturing costs. No cost-benefit can be performed if costs are unknown. The Committee received evidence that vehicle manufacturers were unwilling to submit sufficient costing of proposed safety features to the organisation responsible for drafting new design rules thus making cost-benefit analysis very difficult. The Committee had its own experience in this matter which is dealt with in paragraphs 182 and 183.

34. The Committee considers that if the manufacturers were sincere about cost reduction in relation to safety they could direct their efforts towards limiting the maximum speed performance and weight or "aggressiveness" of new vehicles.

35. The Committee noted during its inquiry, that there was a tendency by the Australian manufacturers to follow rather than keep pace with safety advances of their parent companies. There appeared to be a tendency by local manufacturers to over-rely on the dictums and research of the parent companies rather than addressing themselves to the needs of the Australian people.

36. The Committee came to the conclusion as a result of its inquiry that the constitutional position militates against an Australia-wide approach to the problem of road safety and specifically vehicle safety. This is perhaps understandable when one considers that the mass produced passenger motor vehicle was not envisaged when the Australian Constitution was drafted. There exist today numerous Federal, State and local government authorities duplicating valuable resources and effort. The Committee was made aware of problems in

collecting valuable Australian-wide data for vehicle safety research in that every organisation responsible for data collection considers that its system should be the one to apply on a national basis. No doubt, many people are aware of the confusion resulting from the application or interpretation of different regulations throughout Australia. The Committee considers that some road safety problems would be more rationally and effectively dealt with on a national level.

37. The Committee was pleased to see the beneficial effects of co-operation between Governments in vehicle safety. Government action has been necessary to ensure that all vehicle manufacturers build the minimum safety standards into their vehicles. Design rules covering such features as hydraulic brake systems, windscreen wipers, washers and demisters, turning signal lamps, seat belts, safety glass, collapsible steering columns and padded instrument panels have been enforced for the benefit of all occupants.

38. Although this report deals with passenger motor vehicles and covers problems related to their continued presence on the roads for the foreseeable future, this should not be seen as a lessening in the Committee's resolve as indicated in its report, Roads and their Environment, public transport is a much safer mode of transport than the private vehicle. The Committee feels that advances in vehicle technology such as electric cars and radar controlled brakes, will require continual research and new challenges in the area of vehicle safety will need to be met. The Committee notes with satisfaction the trend towards smaller and therefore less "aggressive" vehicles which should not only contribute to safety on the road but also conserve materials and energy resources.

39. The Committee points out that its recommendations not only take into account the short term problems of vehicle

safety but are also directed towards the continued development of safety in vehicles of the future.

CHAPTER III: THE FEDERAL GOVERNMENT'S ROLE IN
PASSENGER MOTOR VEHICLE SAFETY

The Constitutional Position

40. Since the Select Committee's first report, which examined the constitutional position with regard to road safety generally, it appears that the uncertainty of the Federal Government's power to act on road safety matters has not been resolved.

41. Even though the Minister for Transport announced on 15 October 1973 that a thorough examination of the constitutional position recommended by the Committee in that report would be commissioned in order to remove any barriers to action, no positive steps appear to have been taken (see Appendix 2).

42. With regard to the Federal Government's power concerning aspects of motor vehicle safety, the Committee sought further advice from the Attorney-General's Department. The Committee's particular concern was in relation to effecting legislation at the national level with regard to motor vehicle standards. The Department's reply referred to their previous advice which stated:

Undoubtedly, in the exercise of its power under section 51(i.) of the Constitution to legislate with respect to trade and commerce with other countries, the Australian Parliament could impose a requirement that vehicles imported from overseas must comply with specified safety design standards. Equally clearly, the Australian Parliament could impose similar requirements on vehicles to be used in the Territories. There could also be no doubt that the Australian Parliament could apply these standards in the acquisition of vehicles for its own use. The

requirements could also be applied to vehicles used on any Commonwealth place such as an aerodrome.

43. Referring specifically to Australian Design Rules (ADR's) and Draft Regulations for motor vehicle safety the advice of the Attorney-General's Department of 2 September 1975 included the following observations:

- (a) Because ADR's and Draft Regulations are voluminous and detailed they would have to be examined in considerable detail, and no doubt some special legal questions are likely to arise.
- (b) There is no power to make ADR's and Draft Regulations mandatory throughout Australia in respect of all vehicles but they could be enforced in the Territories and the so-called "Commonwealth Places".
- (c) The Australian Parliament could impose a requirement that imported motor vehicles must comply with ADR's and Draft Regulations.
- (d) The Corporation's power in section 51(xx.) of the Constitution could possibly support legislation requiring vehicles sold or hired by foreign corporations, or by Australian trading or financial corporations to comply with ADR's and Draft Regulations. However, the High Court has not ruled specifically on this matter and no assurance could be given as to the validity of such legislation.
- (e) There is no constitutional power in the Australian Parliament to prohibit non-corporate persons throughout Australia using vehicles not complying with ADR's and Draft Regulations.

44. The Committee also sought specific advice on the Federal Government's power to legislate to direct manufacturers to recall defective vehicles for rectification. The Committee was advised that there were similar restrictions which indicate that there would be no power to enact legislation of this kind in respect of all vehicles or all manufacturers throughout Australia.

45. It was stated, however, that manufacturers could, under the "statistics" power in section 51(xi) of the Constitution, be required to notify the Federal Government, for statistical purposes, of any recalls that they have made whether the vehicles in question or component parts have been imported or not.

46. The first report of the Select Committee indicated the need to deal with road safety on a national level. This Committee was often reminded of the problems created by lack of co-ordination, uniformity and enforcement in various aspects of vehicle safety which could best be eliminated on a national basis.

47. The Committee requested information on what action had been taken in relation to the Select Committee's recommendation to examine the constitutional position "with a view to removing any barrier to the implementation of recommendations of this Committee or of any duly constituted authority". The Attorney-General's Department advised that it assumed that this recommendation referred to specific proposals proposed to be implemented by, for example, the Government and on which further constitutional advice might be needed.

Bureau of Road Safety

48. The focus of Federal Government involvement in motor vehicle safety is on the Federal Department of Transport. As indicated in paragraph 6 of this report it is the intention of the Government to establish a Bureau of Road Safety within

the Department of Transport to carry out the functions and activities of the previous RSSA.

49. The objects and functions prescribed for the RSSA are outlined in Appendix 3. The Committee is of the view that the BRS should be established with a view to having similar objectives and functions to those of the RSSA.

50. The Committee does not believe that it should be the intention of the BRS to supplant the functions of other road safety bodies, but rather to supplement, encourage and assist these bodies.

51. This objective is expressed in paragraph 4(3) of Appendix 3 which states that, where appropriate, consultation should be had with the relevant authorities of Australia, the States and Territories, local governing bodies and other interested bodies. It is of course essential that to be effective as a co-ordinating body the BRS should do this, but the Committee stresses the importance of the "relevant authorities" and "other interested bodies" similarly consulting with the BRS. Co-operation must be mutual if maximum effectiveness is to be achieved in road safety improvement.

52. The Committee stresses this matter because of evidence received to illustrate overlapping functions and the duplication of technical facilities and human resources. It was suggested that independent action by the States could result in a dilution of the Australian Transport Advisory Council's (ATAC) effectiveness. For example, the Committee notes some States intend setting up their own emissions laboratories. At the same time concern was expressed in evidence at the New South Wales Government's legislation on emission requirements which is different from the present ADR requirements.

53. Vehicle manufacturers informed the Committee that, in their view, vehicle standards should be uniform and

controlled at the national level because different standards cause problems for them in manufacture. The Committee appreciates their understandable concern. The Committee considers that, unless there are good reasons to the contrary, States should not continue to act unilaterally in view of the objective for uniformity provided in the ATAC system. Some vehicle companies offered to assist Governments in data research, and provide overseas information and were generally prepared to co-operate with regard to safety matters. The Committee also expresses the view that the division of responsibilities among Federal Government authorities must also be well co-ordinated. A principal object of the BRS is expected to be in relation to consumer protection and appropriate liaison and rationalisation between consumer protection bodies on motor vehicle matters will be required.

54. Many of the recommendations contained in this Report are directed to the BRS. While many recommendations are made on the basis of the Bureau being fully operational, other recommendations should be taken up as soon as practicable. Any delays in establishing a fully functional Bureau of Road Safety will have consequent delays in attacking the road safety problem and particularly in implementing the Committee's recommendations. The Subcommittee therefore recommends that the Federal Government, in establishing a Bureau of Road Safety provide maximum assistance to the Bureau to enable it to become fully operational as soon as possible.

Other Areas of Involvement

55. The Federal Government, in conjunction with the States through ATAC, has considerable responsibility in motor vehicle safety. The Advisory Committee on Safety in Vehicle Design (ACSVD) the Advisory Committee on Vehicle

Performance (ACVP) and the Australian Motor Vehicle Certification Board (AMVCB) appointed by ATAC will be discussed in the next chapter.

56. Federal Government responsibility and involvement in passenger motor vehicle safety is referred to throughout this report covering such areas as recalls, quality control, consumer protection, taxation powers, import controls, industrial research and development grants, data collection and research such as that conducted by the Aeronautical Research Laboratories (ARL).

57. The purchasing power of the Federal and State Governments was also a matter considered by the Committee. The volume of vehicles purchased by these Governments could be a significant factor in ensuring the safety and quality of vehicles. While the Committee expresses its belief that Governments should set an example by insisting on maximum safety in the vehicles they purchase, it is also suggested that their influence in the manufacturing industry could well assist in maximising the standard of safety for the cars produced for the private motorist. The bodies responsible for purchasing vehicles such as the Departments of Manufacturing Industry and Defence and the Telecommunications Commission should consult with the BRS, in an endeavour to use their power in the market place more effectively in encouraging the development of safer vehicles.

CHAPTER IV: THE AUSTRALIAN TRANSPORT ADVISORY COUNCIL

General

58. The Australian Transport Advisory Council (ATAC) is a co-ordinating and advisory committee at Ministerial level to review various laws and regulations and to consider other important areas relating to transport. It is a forum at which Federal and State Governments attempt to, and generally succeed in, maintaining a uniformity of approach towards transport administrative procedures and policy. A number of specialist committees assist ATAC through a Standing Committee of Advisers. At its August 1975 meeting, ATAC instituted a revision of its support structure which is still under review. An outline of ATAC structure appears as Appendix 4.

59. ATAC was established in 1946 by the Federal and State Governments and comprises the State Ministers responsible for Transport on Roads, the Federal Ministers for the Capital Territory and the Northern Territory and the Federal Minister for Transport, who is the Chairman.

60. ATAC has endorsed Draft Regulations defining vehicle construction, equipment and performance standards for road vehicles. These Regulations are formulated by the ACVP and provide the basis for State and Territory law. They are enforced at the point of registration.

61. ATAC also endorses ADR's for motor vehicle safety. These are formulated to cover cases where the requirements are too complex for compliance to be established at registration. A special committee, the ACSVD was set up by ATAC to formulate design rules.

62. The design rules endorsed by ATAC also cover motor vehicle emissions. These are formulated by the Committee on Motor Vehicle Emissions. The Committee has not been concerned with the operation of the Emissions Committee as

it is not directly related to motor vehicle safety.

63. Certification for compliance with the design rules is the responsibility of the AMVCB which was also established by ATAC. The AMVCB, when satisfied that compliance has been established with the design rules applicable to a vehicle at the date of manufacture, issues to the manufacturer an approval to affix a compliance plate to his vehicle. This plate then indicates to the registering authorities that the vehicle complies with the appropriate design rules.

64. The Federal Department of Transport provides technical and secretariat services for ATAC and its advisory committees. It is also committed to the provision of technical services in relation to the work of the AMVCB.

65. When requested by ATAC, the Department convenes ad hoc committees for specific purposes. These have included committees to examine defects in vehicles under warranty, the inspection of interstate buses and industry problems in meeting design rules.

66. Since 1971 ATAC has been concerned with the recall of vehicles which have safety related defects and since 1973, the Department has undertaken an investigation of consumer complaints relating to vehicle defects in general, thus extending its original interest in safety related defects. In this area, it is in close liaison with automobile associations and with the vehicle industry.

67. A number of witnesses stated to the Committee that the ATAC system worked quite well. It was pointed out that many consumer complaints were received directly by ATAC Ministers, their own Departments or through the wide range of interests represented on the numerous advisory committees. At the same time, however, ATAC Ministers are subject to pressures from interest groups affecting their decision making. It was suggested to the Committee that the withdrawal of certain

design rules in 1970 reflected importers objections and the influence of industry on the decision making of ATAC.

Advisory Committee on Safety in Vehicle
Design (ASCVD)

68. The ACSVD was established by ATAC in November 1970 "to advise on safety standards in respect of the design of motor vehicles". With the approval of ATAC Ministers or the Standing Committee of Advisers, the Committee may -

- (a) initiate investigations on motor vehicles and their component parts and accessories with a view to reducing road deaths and minimising the extent and severity of road accident injuries to occupants or other road users and pedestrians by the production of a safer road vehicle,
- (b) prepare draft ADR's. These should represent the Committee's assessment of what would be optimum provisions in Australian conditions having regard to technical facts, economic feasibility and practical feasibility. Wherever possible the draft design rules should specify performance requirements rather than means of achieving them,
- (c) where the draft ADR's differ from existing or proposed United States or Economic Commission for Europe (ECE) standards these differences should be pointed out and the case for pursuing such differences substantiated, and
- (d) assist in the preparation of submissions on vehicle safety standards to overseas standards bodies particularly ECE and Federal Motor Vehicle Safety Standards (FMVSS).

The Committee reports to the Standing Committee of Advisers of ATAC.

69. The ACSVD was preceded by the Australian Motor Vehicle

Design Advisory Panel established by ATAC in July 1965. The Panel proceeded to develop draft ADR's for submission to ATAC. The first three rules were endorsed by ATAC in February 1967 and covered seat belts, seat belt anchorage points and hydraulic brake hoses. By the beginning of 1970, 22 rules had been endorsed.

70. However, in February 1970, ATAC withdrew 15 of these rules and reconstituted the Panel as the ACSVD with increased industry representation. In July 1969, ATAC had agreed to grant manufacturers a period of 90 days in which to furnish comments on proposed new design rules, as requested by the Federal Chamber of Automotive Industries (FCAI).

71. ACSVD reconsidered the rules which had been withdrawn, taking account of industry objections particularly in relation to departures from corresponding overseas standards.

72. By July 1971, all but two of these rules had been modified and endorsed by ATAC. The remaining two rules 'Forward Field of View' and 'Location and Identification of Controls' have been under review taking into consideration results of Australian research and progress in the formulation of overseas standards.

73. During the past three years, ATAC has endorsed six new design rules related to safety and in addition two on motor vehicle emissions. Five other rules have been upgraded or simplified. In the case of the latter, some of the modifications have been aimed at reducing difficulties arising during preparation for certification. A list of current ADR's and implementation dates for different vehicles and a description of each rule are included as Appendixes 5 and 6.

74. Members of the committee are appointed by the Federal Minister for Transport after nomination by a specified

organisation. All ten members are part time and their committee work is additional to their regular duties. In recent years the committee has met about once a month amounting to approximately 17 sitting days a year. Considerable additional time has been taken up with sub-committees. Experts with specialist knowledge from universities, industry, governmental and other organisations are co-opted to these sub-committees.

75. As referred to earlier in this report the structure of ATAC and its committees is currently under review. The Committee considers that it is opportune to review the basis of formulating and implementing standards for motor vehicle safety. The Committee is convinced that the BRS should play a more significant role in the rule making process. The Committee considers that ATAC should give close consideration to the role of the BRS in formulating standards.

76. A statement issued by ATAC Ministers attending the August 1975 meeting included the following comment on the work of the ACSVD -

Ministers reviewed the design rules for motor vehicles and noted that the majority of proven vehicle safety features are covered by design rules already in force or about to be introduced. It was anticipated that only one or two proposals for major new vehicle requirements would be coming forward in each of the next few years.

The Committee considers that there should be no suggestion that the ACSVD has completed its task or that fewer rules will be necessary in future. Recommendations contained in this report and the Report of the Expert Group on Road Safety (EGORS) of 1975⁵ indicate many areas requiring further

5. Expert Group on Road Safety, The Road Accident Situation in Australia in 1975, A Report to the Australian Minister for Transport, October 1975.

vehicle design improvement. It has been stated in evidence that the severe shortage of support staff (particularly expert technical staff) and lack of testing facilities has affected the ACSVD's ability to formulate rules. This would appear to be the most significant factor in the formulation and adoption of an average of two ADR's each year. This factor together with evidence of industry influence has reduced the progress of many desirable ADR's.

77. As a result of these difficulties, the ACSVD had to rely on the advice and facilities of industry, particularly cost information, to a very large extent. It was expressed in evidence that there was a need for an independent assessment of costs, technical advice and testing. The cost to employers of their part time representatives on the ACSVD causes some concern. In the case of industry representatives on committees and sub-committees it was stated in evidence by a member of the ACSVD that -

We work as closely as we can with our industry colleagues and we believe that they as responsible engineers do the very best job that they can on the committee. But of course they are tied by company policies and so on and sometimes something which has been the subject of discussion within the committee is in fact going on in a design office somewhere and we do not know about it until it is a fait accompli. Now I do not know the answer to that but this is another area of institutional framework that perhaps ought to be the subject for research. (Evidence p. 2110).

It is not surprising to the Committee that the industry has claimed with some pride that in most respects their safety design is well ahead of legislation.

78. The BRS should have staff and facilities which could be directed towards alleviating these problems confronting

the ACSVD. Even though the ACSVD has been instrumental in advancing the safety of vehicles since its inception, the Committee considers that considerable work in formulating and upgrading new standards is still required. The BRS is the full time organisation needed to accomplish this important task. The Sub-committee therefore recommends that the Design Rule Committee come within the BRS's jurisdiction and that the BRS be developed as the principal body for formulating standards and recommend proposed ADR's to ATAC for approval.

-Membership of Committee

79. The vehicle manufacturers are represented on the ACSVD through the FCAI (the individual companies represented being General Motors-Holden's Pty Ltd (GMH), Ford Motor Company of Australia Limited (Ford), and Chrysler Australia Limited (Chrysler)). Australian Motor Industries (AMI) pointed out to the Committee that even though they had 11 per cent share of the market they were not represented on the ACSVD. Industry representation on the ACSVD does not include vehicle importer interests.

80. The question of consumer representation on the ACSVD was raised in evidence on a number of occasions. The Industries Assistance Commission (IAC) report stated that consumer representation should be strengthened on ATAC committees and specifically the ACSVD.⁶ The reason given in correspondence to the Committee by the Department of Transport on the lack of consumer representation was because -

This committee comprises a small group of technical experts, none of whom represent any organisation. Proposals for new Design Rules are given to the Australian Automobile

6. Industries Assistance Commission Report, Passenger Motor Vehicles etc., 10 July 1974, A.G.P.S., p. 194.

Association and to industry for comment. If the proposal relates to trucks or buses comment is also sought from the Australian Road Transport Federation. In addition, it has always been considered that feed back from the public is received through the ATAC Ministers and their Departments.

81. The Committee is not convinced that the consumer is adequately represented and does not believe that the reasons given by the Department necessarily preclude such representation. A person can represent consumer interests and at the same time be a technical expert. An appropriate consumer organisation should be in a position to nominate an acceptable member to represent consumer interests on the ACSVD.

82. The Sub-committee therefore recommends that ATAC in its review of the ACSVD give careful consideration to its membership and make provision for consumer representation.

-Ninety Day Comment and Lead Times

83. The results of the deliberations of ACSVD take the form of recommendations for the adoption of new design rules or for amendment of existing rules. Before submission to ATAC for endorsement these recommendations are issued to industry for a 90 day comment period. They are also circulated to other bodies (but not publicly) such as the Australian Automobile Association (AAA) (for ADR's for passenger cars and derivatives), the Australian Road Transport Federation (for truck and bus ADR's) and the motorcycle industry (for motorcycle ADR's).

84. The ACSVD advised the Committee that the implementation dates which have been set for some of the ADR's have sometimes been criticised as being unduly long. Implementation of ADR's is a trade-off - early implementation at higher cost versus later implementation at

lower cost. This is particularly so with items which require changes in major structural components. In addition to increasing cost, reduced lead times may for a period remove some overseas vehicle models from the Australian market.

85. The date of implementation represents the date from which all future production must comply with an ADR, if it is to be registered in an Australian State or Territory. In the past there have been cases where some manufacturers have included features as standard well in advance of the implementation date. The more important examples include energy absorbing steering columns, head restraints, seat belts and anchorages, strengthened door latches, hinges and seat anchorages, demisters and more recently retractor seat belts and side door beams.

86. Members of the ACSVD told the Committee that the 90 day comment period "primarily deals with the fait accompli, and aims mainly at the problems associated with the implementation of the rule". (Evidence p. 1789) It appears to the Committee that proposed ADR's, upon which important community groups can comment concerning their adequacy or otherwise, are not given wide enough circulation. The Committee is not satisfied that proper independent assessment is made throughout the design rule formulating process. While public comment may cause possible delays and increase the work of the committee by way of assessment, there appear to be advantages in the suggestion. The Committee believes that improved rules will result in some cases. The Committee is aware of the United States system where comments have led to many revisions of proposed rules prior to their endorsement. The Sub-committee therefore recommends that design rule proposals be publicised and comment invited during the 90 day period.

87. Lead times are necessary to enable industry to tool up to meet proposed implementation dates and importers to submit written reports to certify that ADR requirements have been met. It is a significant cost saving if ADR's can be introduced at the time of model changes rather than in current models. The ACSVD is aware of this important matter. The Committee also accepts the evidence that if compromise is required then it should be on the lead time rather than the standard. Again the ACSVD is not in a position to assess lead times adequately and is forced to rely on industry advice with regard to production time and machine tool requirements. Communication on lead times is important and the industry should allow access to details of industry costs and planning to enable the shortest possible lead times to be set.

-Design Standards and Implied Safety

88. A major requirement of ADR's is that they are performance standards, in that their specifications are determined and expressed in terms of specific measurable requirements and test procedures, particularly for areas of accident avoidance. No objections were expressed by the industry to this principle.

89. Design standards have been prescribed for some seat belt design rules, but the view was expressed that design specifications can restrict industry innovation. The Committee points out, however, that too much design latitude on some safety features may not be desirable. There may be occasions where design specifications, such as seat belts, could encourage development to ensure that suitable objectives are reached.

90. It was also pointed out that the effectiveness of ADR's would, whenever possible, be established before introduction rather than tested on the road for their effectiveness. Again there are exceptions, and this principle

should not unduly restrict safety development. In addition, some advances in safety may still be desirable in terms of engineering judgment and based on principles of "implied safety".⁷

-Overseas Standards and Australian Conditions

91. The ACSVD advised the Committee that in framing its recommendations for design rules, the committee takes into account existing and proposed overseas standards. The United States Federal Motor Vehicle Safety Standards (FMVSS) and the Regulations annexed to the United Nations Agreement Concerning the Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts (commonly known as the ECE Regulations) are most important. It is the normal practice of the ACSVD to recommend to ATAC, wherever possible, the requirements contained in existing international standards so as to avoid the complications which unique Australian rules might cause for both imported and exported motor vehicles. The introduction of an ADR which is unique means that overseas manufacturers either have to produce a special run of vehicles for export to Australia, produce all vehicles to conform to ADR's or withdraw from the market.

92. The ACSVD stated that some features not covered in overseas standards are likely, on the basis of sound engineering judgment, to be effective. Furthermore, given sufficient lead time, their cost in Australian built vehicles would be low. However, their incorporation in imported vehicles may be very expensive for reasons given in

7. Although there is no known relationship to safety, this does not mean that changes or improvement in a design feature will have no effect on accident reduction. It is desirable for such advances to be monitored and statistical evidence gathered to ascertain benefits in relation to their cost.

the preceding paragraph. Examples include standard layout and identification of controls, colour coding of warning lights, location of turn signal lamps relative to other rear lights and thin windscreen pillars.

93. However, in some instances more stringent requirements have been specified, where the overseas standards were considered inadequate or where a unique Australian requirement did not involve major structural alteration to the vehicle. Examples have been -

- (a) the 85 per cent optical transmission requirement for windscreens which ensures better visibility at night,
- (b) improved location of seat belt upper anchorages,
- (c) more severe abrasion and sunlight degradation requirements for seat belts,
- (d) more specific requirements for the hydraulic brake failure warning lamp, and
- (e) restrictions to prevent head restraints being adjusted too low.

94. In other instances, different requirements have been specified because of the Australian environment. For example, windscreen demisters, washers and wipers are not required to operate at the low temperatures which apply overseas. Appendix 7 shows the nominal relationship between ADR's, FMVSS and ECE Regulations. Appendix 8 lists those FMVSS and ECE Regulations not covered by ADR's. It will be noted that the ADR's do not cover all these standards, because some are covered by the Draft Regulations or Australian Standards, while others do not appear to be warranted for Australian conditions. Furthermore, the adoption of some of these standards is being delayed pending an investigation of their probable effectiveness. It

should be pointed out that many of the ECE Regulations have not been taken up by all participating countries. Some of these countries have their own local rules which cover areas similar to Australian Draft Regulations.

95. Some witnesses, particularly manufacturers, advised the Committee of the need to be cautious about adopting unique design rules. On the other hand, other witnesses expressed the view that ADR's should not suffer because of this approach as there is often good reason for developing unique rules. The proven benefit of seat belts would not have resulted had Australia not adopted unique rules in conjunction with compulsory seat belt wearing legislation.

96. This approach appears to have resulted from the decision by ATAC in 1970 to withdraw the 15 original design rules. The Committee was informed that these rules were revised or dropped to accommodate industry and importer's objections based on the principle that Australia should not exceed international rules or have a unique ADR except in special circumstances. It was stated that variation in international rules often involves considerable expense for which the customer eventually pays. In addition, difficulties were created for export manufacturers to meet standards operating in other countries.

97. The Committee considers that, wherever possible, it is desirable to follow overseas standards for the reasons given by the industry. However, the Committee notes the differences in existing ADR's from both ECE Regulations and FMVSS and the sound reasons for these differences. The Committee also notes that evidence given by the ACSVD indicated that European countries were very slow in implementing rules suggested by the ECE. In fact, there are no true international rules. Of course, caution has to be exercised and, in some instances, advantages can be gained by evaluating the performance of overseas standards before adopting similar

standards. But the Committee does not believe this is sufficient reason to retard safety development or not to develop unique rules wherever desirable, particularly for new safety features which are cost-effective or suit Australian conditions. The Sub-committee therefore recommends that in general Australian Design Rules should follow overseas standards but the making of unique rules should not be precluded where considered desirable but particularly where justified by Australian conditions.

-Future of Australian Legislation

98. The Committee noted that vehicle manufacturers do not object to design rules as such. Ford was of the opinion that ADR's were "absolutely necessary". GMH stated that Australia had a very effective rule making system and Chrysler was of the view that the Australian approach to vehicle legislation over the design of new vehicles is "superior to any in the world". Manufacturers considered that legislation was important to ensure equity in the market place for all vehicle manufacturers. The Committee considers that adequate safety standards will not be achieved without legislation.

99. The Committee was advised particularly by manufacturers, of the need to formulate design rules on the basis of cost-benefit analysis. Anticipated effectiveness can be best judged on the basis of accident data against which costs have to be weighed. More detailed consideration of this important concept appears in later chapters of this report.

100. The Committee received evidence that safety development may be restrained when a new feature does not fall within the specifications of existing ADR's. This appears to be the case with the Volkswagen (VW) passive restraint system not allowable under the current ADR's for seat belts. The Committee believes that the ACSVD should readily respond to situations

of this kind and remove barriers which inhibit new safety developments.

101. The Committee noted the statements by Dr A.P. Vulcan, Chairman, ACSVD, and Dr J.M. Henderson, Executive Director, Traffic Accident Research Unit (TARU) New South Wales Department of Transport, that in their view the design rules have coped "with all the easy things". The next phase of investigation would be directed to areas of accident avoidance in terms of handling, steering and suspension. Dr Vulcan informed the Committee that intensive research through in-depth accident studies is essential in determining where design rule needs lie. Occupant protection will still be a major area of concern, given that the main crash modes are impacts to the front and side structures of the vehicle causing injuries to face, chest, abdomen and hips.

102. The Committee considers that Australia should continue to occupy a leading position in the world in reducing death and injury resulting from road accidents by injecting greater effort into the design rule system.

Advisory Committee on Vehicle Performance (ACVP)

103. The Committee was informed that the ACVP advises ATAC on 'on-road' standards for road vehicles, and their equipment and loads. The recommendations of the committee generally are in the form of what are termed Draft Regulations which detail minimum standards for most aspects of vehicle construction and are recommended for adoption in the legislation of the States and Territories. The committee, established in 1970, is the successor to the Australian Motor Vehicle Standards Committee which was established in 1947 to advise ATAC. The first volume of Draft Regulations was published in 1954.

104. Draft Regulations contain provisions which include some of the matters now covered by ADR's. The regulations have been retained in these cases because ADR's apply to vehicles manufactured from the date of effect, and the Draft Regulation

is still necessary to cover the vehicles manufactured prior to the effective date of the design rule.

105. The ACVP stated that -

In general, the Draft Regulations are intended for application in the field, or at best, in an inspection station or garage with relatively little equipment, so they can be applied by inspectors or enforcement officers on the spot . . . the Draft Regulations often have to be highly subjective, or give considerable discretion to the registering or enforcement authorities. Compromises are necessary between the need to be specific and not unduly restrictive. (Evidence p. 3461)

106. The detailed work of the committee is generally accomplished through sub-committees comprising appropriate members or their nominees, often with appropriate experts co-opted. The AAA represents consumer interests on the committee. As with the ACSVD, the ACVP has a staff problem and lack of test facilities. Servicing of the ACVP by the BRS should alleviate some of these staff problems.

107. The Draft Regulations express a need to ensure that compliance with the intention of ADR's is maintained, and an opposing desire not to be unduly restrictive on modifications and replacement parts. The Committee appreciates this objective but is concerned that there is evidence of a lack of enforcement of Draft Regulations in some States, particularly with regard to modifications to vehicles.

108. The Committee agrees with the view of the ACVP that the piecemeal nature of the constant flow of amendments and changes in needs generally, have made a complete rewrite and re-arrangement highly desirable, if not essential. The Committee would only add that this be done urgently.

-Specific Areas of Concern

109. Attention was frequently drawn to the lack of uniformity between the States and Territories in the manner and extent of their adoption of Draft Regulations into legislation. In 1971, a comparison of the implementation of 638 points of the Draft Regulations was made which is summarised in the following table:

TABLE I

COMPARISON BETWEEN AUSTRALIAN STATES
AND TERRITORIES OF IMPLEMENTATION OF
638 POINTS OF DRAFT REGULATIONS

	Comply	Variation	Admin. Control	No Legislation
N.S.W.	350	79	30	179
Vic.	332	78	1	227
Qld.	350	75	-	213
S.A.	204	67	-	367
W.A.	456	46	-	136
Tas.	148	58	-	432
A.C.T.	79	41	77	441
N.T.	117	50	120	351

Source: Evidence p. 3466

The Committee was informed that such comparisons are a complex task, and the results are subject to a considerable degree of error. The broad view given by the table would still represent the situation today, but it was pointed out that the numbers in themselves do not show the true picture because they do not differentiate between important and trivial items or variations. On occasions variation may be justified to suite individual State conditions. The Committee appreciates the qualifications referred to in interpreting the above table but expresses its deep concern that Draft Regulations have grown in a disorderly

fashion since 1954. Lack of uniformity and application by the States demonstrates the need for the problem to be resolved by the ATAC Ministers.

110. The Committee was informed that many Draft Regulations not enacted are not significant from the safety point of view and most do not apply to passenger motor vehicles. However, there are nevertheless significant safety regulations which the evidence reveals are either not being legislated for in all States (e.g. Draft Regulations relating to hood latch systems and retrospective fitting of seat belts - see paragraphs 439 to 444.) or are not being adequately enforced (e.g. Draft Regulations relating to limitations on Modifications).

111. The most serious inadequacy in the Draft Regulation system is that, even if the States do adopt regulations their enforcement appears to be ineffective. Enforcement is only possible through vehicle registration or vehicle inspection as in the Australian Capital Territory and New South Wales or, in the case of other States, by way of random checks by the police. The method of random checks as a means of enforcement compared with certification procedures for ADR's is less effective on all but the simplest requirements. In addition, the subjective nature of the regulations gives considerable discretion in enforcement. Enforcement could be maximised by a vehicle inspection system such as that operating in the Australian Capital Territory. Draft Regulations are enforced in the Australian Capital Territory and the Northern Territory through a general provision which states that the Registrar of Motor Vehicles through a discretionary power shall be satisfied that a vehicle is not likely to cause danger or annoyance. A large number of Draft Regulations are therefore not called up in Australian Capital Territory legislation. While periodical motor vehicle inspection (PMVI) ensures a high level of enforcement, the

Committee considers that the use of discretionary powers, particularly for safety related items applying to passenger motor vehicles, is not an entirely satisfactory situation. The Sub-committee therefore recommends that Draft Regulations should be immediately called up into Australian Capital Territory and Northern Territory legislation and enforced through the inspection system in the Australian Capital Territory.

112. Professor R.W. Cumming, (a member of the ACSVD) and witnesses from the Department of the Capital Territory suggested that Draft Regulations would be better expressed in physical terms, as are ADR's, so that they can be checked accurately by a physical measurement rather than relying on subjective judgment. Imprecise wording of Draft Regulations leaves room for variation in interpretation by manufacturers in vehicle design.

113. The incorporation of 4-way flashers (or warning lights), regarded by some as a desirable safety feature, is indicative of some of the problems inherent in the Draft Regulation system. The Chairman of the ACVP said that, while the Draft Regulations do not require 4-way flashers to be fitted, they make provision for them to be fitted. There is currently a proposal before the ACVP to make them mandatory. On this proposal the witness further stated that -

...the sorts of things the Committee has to consider are how much this is going to cost, how long it will take to have introduced as a requirement and then, for that matter, whether it should be a design rule or a draft regulation, and whether it can be shown that the benefits from the fitting of 4-way flashers would more than outweigh the costs. This is the sort of general approach the committee will be taking if proposals are made for a draft regulation about something like this. (Evidence p. 3480)

114. The South Australian Road Traffic Board indicated that South Australia had precluded vehicles from having 4-way

flashers but had now legislated for them. Chrysler and GMH stated that 4-way flashers had been refused on their vehicles by some State registration authorities. This confusion should be avoided whenever possible and could be resolved by better communication between the authorities and manufacturers and among the Authorities themselves. This is a further example of the uncertainty and lack of uniformity with regard to standards effecting safety.

-Relationship to Other Standards

115. The ACVP, the ACSVD and the Standards Association of Australia (SAA) each set standards for motor vehicle safety. Evidence shows that overlapping of standards occurs and requires rationalisation to avoid unnecessary duplication of cost effort and resources.

116. The Committee agrees with the following statement in a letter to the Committee by the Department of Transport which helps to clarify the respective functions of these bodies in the field of motor vehicle safety standards -

There is a deliberate effort made at co-ordination of activities between ACSVD and ACVP. These two advisory committees to ATAC rely on a common technical secretariat and refer matters to each other when appropriate. The recommendations of both committees are considered by a common body, the Standing Committee of Advisers (now the Motor Transport Group) before being submitted to ATAC. Both committees have attempted to work with the SAA in the formulation of new standards and the modification of existing SAA standards. Such standards for items of vehicle equipment are called up in the Design Rules and Draft Regulations. In addition, members of the Department's technical Secretariat for these committees are members of a considerable number of SAA committees.

Rationalisation can best be achieved by having SAA concentrate on standards relating to test methods and to replacement components and accessory items which can be added to the vehicle. This would leave for the ATAC committee requirements for performance of the vehicle as a whole, and for components which should be regarded as integrated with the vehicle.

117. The Committee realises the complexity of the Draft Regulations and the problems faced by the ACVP. The Committee expects that the BRS will be able to absorb much of the responsibility for arriving at Draft Regulations. The ACVP stated that it lacked full time expert staff, the States do not necessarily take up its recommended legislation, it should be doing more safety work, it has no research and test facilities, it has never undertaken a research program in relation to a particular regulation and has no way of knowing the extent of breaches of enacted Draft Regulations in each State. The Committee considers that under these conditions the system is not efficient and the majority of these problems should be taken into account in ATAC's current review.

118. The Sub-committee recommends that -

- . A complete review and rationalisation of the relevance and adequacy of the Draft Regulations be made by the Government as soon as practicable.
- . The Bureau of Road Safety co-ordinate the functions of the Advisory Committee on Vehicle Performance, the Advisory Committee on Safety in Vehicle Design and the Standards Association of Australia to avoid duplication in the formulation of standards.
- . Australian Transport Advisory Council endeavour to ensure that safety related Draft Regulations it approves are enacted in each State and Territory.

Australian Motor Vehicle Certification Board (AMVCB)

119. In 1969 ATAC established the AMVCB to advise State and Territory registering authorities on compliance for ADR's in new motor vehicles.

- Compliance Plates

120. The Committee was informed that the AMVCB's principal function is to issue compliance plate approvals. This means that the AMVCB has satisfied itself that a motor vehicle has been designed to comply with ADR's applicable to that type or model of vehicle at its date of manufacture. The approval authorises a manufacturer to fit an approved compliance plate to his vehicle, and this plate signifies to State and Territory registering authorities that the manufacturer has satisfied the Board in respect of compliance by his vehicles with the applicable ADR's.

121. As the functions of the AMVCB are advisory, it has no power to take any action against any vehicle manufacturer who has failed to fulfil the conditions relating to the affixing of compliance plates, such as a failure to meet the requirements of ADR's in production vehicles. The Committee was informed that this was a deficiency in the compliance system and that in some cases the system was not working as it should.

122. The AAA informed the Committee of the problem of compliance plates not being affixed to vehicles which was occurring because there was no legal authority to enforce the fitting of compliance plates. It was suggested that in Tasmania registering authorities do not regard a compliance plate as being a pre-requisite for registration. It appears that some States and their registering authorities enforce compliance and others do not. The only recourse

available to the AMVCB is to withdraw the approval. Such a withdrawal would also be notified to the State and Territory registering authorities who can exercise a legal and enforceable penalty on the vehicle manufacturer, either by refusing to register vehicles which do not have a currently approved compliance plate, or by cancelling the registration of a vehicle which fails to comply with the appropriate ADR's.

123. The Board currently certifies compliance with 24 ADR's in respect of passenger cars. ADR's being detailed and complex performance requirements are very specific in their measures. As some of the ADR's would require the destruction of the vehicle or component to establish that the model complies, some form of type approval is the only practical means of enforcement.

124. The AMVCB informed the Committee that performance levels specified in ADR's are set at a level which ensures that, with reasonable maintenance, it is possible to maintain an acceptable performance level for the safety feature throughout the vehicle's normal life expectancy. In the case of many ADR's normal wear and tear will reduce the performance attainable. While some of this may be restored by maintenance, on the whole, a vehicle can only be expected to meet the performance levels specified in ADR's at one time in the life of a vehicle and enforcement can only take place at the time of first registration. The need for maintaining the performance levels of ADR's through other means are discussed in other parts of this report.

- Certification for Compliance with the Design Rules

125. A vehicle manufacturer wishing to ensure registration of his vehicle in Australia submits to the AMVCB evidence

that the vehicle complies with each ADR. Evidence consists of plans, specifications, and reports of tests undertaken on the vehicle or components. AMVCB, in each case, requests the Vehicle Structures Safety Branch, of the Department of Transport to thoroughly check the evidence submitted and report whether it indicates compliance by the vehicle or component tested.

126. Since the inception of the certification scheme in 1969, AMVCB has issued 3734 compliance plate approvals and currently deals with 800 vehicle models. A further 300 models will be added to this number in 1976 when motor cycles are brought within the certification scheme. In addition, there will be the normal annual increase of 200 per annum in the number of new vehicle models requiring certification. The number of submissions or test reports on individual ADR's received since the inception of the scheme is about 27,000. During 1975 AMVCB received about 8,000 submissions. If this trend continues submissions received will reach 15,000 per annum by 1980.

127. Through the National Association of Testing Authorities system of approved laboratories in Australia and overseas, AMVCB can be satisfied as to the authenticity of test results. It also has the opportunity, through inspection and approval procedures, to ensure that the approved laboratory has the appropriate equipment and is conversant with the requirements for testing to ADR's.

128. The requirements of certification with respect to vehicles imported into Australia were criticised by a number of witnesses. The criticisms were based on the length of time taken to process certification due to detailed, repetitive and voluminous test reports required by the AMVCB. The "paper work" generated by these procedures results in a cumbersome and time consuming system.

Assemblers, such as AMI, carry out as many tests as possible within Australia, but importers of vehicles such as SAAB-Scania Australia Pty Ltd (SAAB) and Mercedes-Benz (Australia) Pty Ltd (Mercedes-Benz) have to submit test results for all ADR's for certification before vehicles may be imported.

129. The witness representing SAAB pointed to this problem in the following way -

There would probably be thousands of man-hours spent to very little use. From the technical point of view, I would not say that we have had too many problems with the Australian forms that we have to fill out, although the one on seat belts is really extensive. It is 40 or 50 pages thick or something like that, just to prove a thing that would take you 2 minutes if you were sitting in the car, because it is extremely difficult to explain or for the official to be completely sure that the seat belt has a proper fit and everything like that if you are going to do it on paper without looking at the car. (Evidence p. 3458).

130. AMI also commented on the administrative problems of certification. It was stated that the AMVCB's staff had to process "stacks and stacks" of test reports and required test reports to be lodged 90 days before the actual implementation date of an ADR. When relying on an overseas company to produce test reports it is not always possible to meet the deadline. The witness stated that -

...perhaps we have 15 submissions to make and we might have 11 of them in on time, but the last two or three come in maybe 3 or 4 weeks before the deadline. We have a stack of cars that we want to market and we have to try to twist somebody's arm to give us verbal approval ahead of time. (Evidence p. 2690).

131. The Committee was informed that the use of a Vehicle Identification Number (VIN) system (see paragraphs 647-651)

would simplify compliance procedures in addition to its advantages in recording accident data. This proposal is currently under review by the AMVCB and the ACSVD.

132. One of the BRS's functions is expected to be the certification and compliance of road vehicles. The Committee considers that the review currently under consideration by ATAC should take into account the need for rationalisation of the procedures of the AMVCB and that revised procedures be quickly integrated into the BRS.

133. The Sub-committee recommends that -

- The Australian Transport Advisory Council recommend to its constituent members legislative proposals to ensure uniform compliance of Australian Design Rules throughout Australia requiring the fixing of compliance plates to all vehicles and that penalties be included for failure of manufacturers to affix compliance plates.
- The Bureau of Road Safety institute procedures for the thorough testing of vehicles to ensure satisfactory compliance with Australian Design Rules.

CHAPTER V: MANUFACTURERS' APPROACH TO VEHICLE SAFETY

134. Following an examination of the evidence, the Committee concluded that there appeared to be a lack of real commitment in the philosophical approach by some manufacturers to past, present and future vehicle safety. The Committee recognises the existence of legitimate industry problems but feels that these problems should not unduly restrict or prevent safety-consciousness in design and development. Some of the problems facing Australian manufacturers to which the Committee's attention was drawn were, a drop in vehicle sales, declining profitability, employment and industrial difficulties, a rise in import sales, wage demands and cost increases.

135. The Committee was made aware that until recently vehicle safety design was very much a minor consideration and was almost always compromised by considerations of style and price. Although Australia has generally lagged behind international, particularly American advances in safety design, there nevertheless has been significant improvement in Australian manufactured vehicles in the last few years. However, there still are compromises with safety and it has taken considerable time before "safety" lost the connotation of being a "dirty word". Even future vehicle safety will have to be compromised by energy, cost and environmental demands.

136. Almost all manufacturers who gave evidence to the Committee claimed that they had put safety features into their vehicles long before legislation required them to do so. However, when questioned by the Committee concerning future safety development manufacturers showed a disturbing lack of real planning and forward thinking safety research. The industry's attitude appears to be based on the need for

more accident data and that additional safety was related to customer demand and could only occur following exhaustive testing, proven reliability and cost-benefit analysis. Manufacturers on the other hand stated that they did not consider that they should collect data on the accident involvement of their own vehicles, with a view to using the information for the design and development of safer vehicles and to assess the effectiveness of their safety features.

137. The Committee was assured by the major manufacturers that they were responsible for the safety of the products they put on the market, and it was agreed that competition should not come into play in the matter of saving lives. But evidence of a certain reluctance to conduct recall campaigns (see paragraphs 249 to 252), assume more responsibility for warranty work and a reluctance to share knowledge and pool resources would suggest otherwise.

138. The Committee found that of the amounts received by Australian Manufacturers from Industrial Research and Development Grants, little had been applied to specific safety developments. The Committee considers that manufacturers should make greater use of Industrial Research and Development Grants for vehicle safety research and development. Government assistance of this nature could serve a useful purpose in reducing the cost of safety. A list of vehicle and component manufacturers receiving grants and the amount of grants received between 1969-70 and 1973-74 appears as Appendix 9. Australian manufacturers indicated that certain proportions of these grants were spent on safety research. Some manufacturers were unable to indicate precise figures with regard to the application of the grants. The Committee recognises that the Industrial Research and Development Grants Act does not require detailed information on how grants are used. Ford requested that

grants applied to safety research remain confidential. GMH indicated that during the past five years an amount equivalent to 92 per cent of the total grants received had been devoted to "research and development related to ADR requirements". The Committee appreciates the financial demands of ADR's but considers that Industrial Research and Development Grants would be better directed to future safety research and development.

The Concept of Vehicle Safety

139. In focusing on the vehicle aspect of road safety the Committee was assured by GMH that they were "aggressively trying" to make their vehicles safer. However, the Committee was also informed that GMH, in fact, does little basic safety research, particularly in restraint systems and crashworthiness. Its crash facilities are principally used for ADR compliance testing. It was suggested that the measuring of human tolerance would best be left to medical and safety people since GMH only employ "mechanical engineers".

140. GMH also indicated that they preferred designing and building safety into vehicles rather than "adding it on" and that every engineer would show concern for safety in the design and development of the product. However, the Committee was informed that GMH's safety organisation which consists of seven people "unfortunately is primarily involved in the paper work and the operation of the system rather than in any direct contribution to the design testing and development of a vehicle" (Evidence p. 2075) and is headed by a person who "guesses" he is in charge. It was further suggested that projected developments in crashworthiness in the next five years would be negligible because "by necessity of just pure numbers, more and more of our local programs will be mainly taken up by just doing what we have to do legally in order to

certify a vehicle; that certainly would be our main effort in the next five years" (Evidence p. 2062). At the same time, however, the Committee was repeatedly informed that most safety features have been incorporated in their vehicles prior to legislation. The Committee was further informed by GMH that safety was a very difficult concept to define. Yet the witness inferred that an ignition lock design in a Holden vehicle which had contributed to a fatal accident at Wagga Wagga, N.S.W. in 1971 was not a matter of safety but one of driver culpability.

141. The Committee notes that FMVSS requirements in the United States are more comprehensive than ADR's. GMH provided the following list to the Committee:

CHANGES REQUIRED TO HAVE GMH PRODUCTS CONFORM
TO UNITED STATES SAFETY LAWS

1. BRAKES - Parking brake loads for 30% grade needs to be reduced approximately 15%.
2. LIGHTS - Add 4-way hazard flasher lights. We could not include in HQ in 1971 as these rules were illegal by registration groups.
3. THEFT PROTECTION - (a) Add a buzzer to the ignition system so key must be removed when in locked position.
(b) Visible car serial number; we would have to relocate.
4. INTERIOR PROTECTION (a) Our bench seat back would have to be weakened to meet impact energy absorption requirement.
(b) Fit laminated windshield as standard equipment.
(c) Sedans would require side beams to meet initial and intermediate load deflection requirements.
5. BUMPERS - Install energy absorbing bumpers for slow speed impact protection.

The Committee feels that if GMH was serious about safety then concurrent development with the United States and the incorporation of safety features would be standard practice rather than waiting for ADR's as in the case of side door strength and 4-way flashers.

142. While the Committee is aware that certain FMVSS features may have been considered impractical, and while in some cases it may be better to learn from these mistakes it nevertheless considers that, on balance, the evidence of prevarication by some Australian manufacturers indicates that the safety thinking within Australian companies is not as strong as is claimed.

143. Ford's concept of safety was expressed in terms of manufacturers having a basic responsibility to make cars progressively safer. It was also expressed that while there was a need for Government to exercise its right on behalf of the population as a whole, this did not mean that safety features should not be voluntarily incorporated in the course of design and construction. The Committee however, was disturbed by the comment by the General Manager of Ford that -

By and large we like to ship our cars with the full safety features. This seems sensible, but if a person specifically asks us to delete something for competitive reasons, or as a matter of choice we will do it. (Evidence p. 2375).

144. While admitting that the seat belt is the most important single safety development in automobile safety, on occasions manufacturers delete them from their export vehicles. The Committee views with concern this feature of industry thinking and suggests that these countries should be encouraged in the use of seat belts by Australian manufacturers.

145. Ford expressed the view that they need "statistical significance to be sure" that a feature "is a safety item rather than an option". Yet, on the other hand, the company indicated that the data was not available in Australia and regarded it as impossible for the company itself to collect the data and establish the required "statistical significance".

146. It was also stated in evidence that -

one of the advantages that Australia has is that it has the rest of the world to choose from and in many cases it does not have to do the research and development to obtain the results of the efforts of parent companies. That is a great advantage because we do not make the mistakes and can pick up the fruits of that work. To that extent we are in a very privileged position. (Evidence p. 2381).

Even though the Committee appreciates this point, it should not be a reason for lack of development and data collection for Australian conditions otherwise the development of seat belts may not have occurred.

147. It was further stated by Ford that -

for the unrestrained passenger a laminated windshield is a safety factor. (Evidence p. 2378).

And yet the company offered it as an option. Heated rear windows, demisters and four wheel disc brakes were also options and with regard to these items the General Manager stated that they were in the dilemma "of identifying a safety item with significance as against one which is convenient". (Evidence p. 2379). Another witness from Ford stated however, that he did not think "there is a real safety feature that we know of that is not standard in our car". (Evidence p. 2379).

148. Ford indicated that the Product Development Group within the company is responsible for planning, design and

engineering and that safety was generally taken into account within each stage of development within that group. The structure outlined to the Committee is as follows:

SAFETY ADVISORY WITHIN FORD'S PRODUCT DEVELOPMENT
GROUP

Area	Function	Equivalent Full Time People
Product Committee	Decides vehicle range and specifications.	
Product Planning	Directs Product Engineering and Styling on detail specifications and design.	2
Design (Styling)	Interior and exterior design, to ensure compliance with dimensional etc., legal requirements.	1
Pre-program Engineering	Drafting layouts (both interior and exterior) to ensure compliance with package requirements etc.	3
Passenger Car Engineering	Engineering of vehicle components to suit legal and corporate requirements.	26 (Plus 54 people on emissions)
Truck Engineering	As for Passenger Car Engineering	4
Development and Test	Develops vehicle components to ensure durability, function etc. whilst still satisfying legal requirements. Conduct Certification Tests.	22
Safety and Liaison	Submit Certification Data to Governmental Authorities. Assist in formulation of new ADR's etc.	5

In addition to the above areas directly involved in safety planning design, development and test, there are the clerical support people, facility maintenance people, etc. within Product Development Group; plus internal quality control and supplier quality assurance personnel ensuring the maintenance of design and performance intent on vehicle components and systems.

Source: Evidence p. 2389

149. The Committee notes that the safety and liaison group is relatively few in number and it would appear to suggest that research and development may not receive the company attention it should demand. The activities of testing and compliance, as is the case with GMH, appears to be the major demand on staff resources. Emission control demands significant staff resources, but the Committee makes the observation that the allocation of staff for direct safety research and planning appears to be disproportionate to its importance. One witness from Ford indicated that -

We actually re-organised our total engineering activities and planning activities about 2 years ago, really to be much more responsive because things were happening on an ad hoc basis. The numbers of people are not large; we are a small group. But I think it is a systematic group. (Evidence p. 2384).

150. Chrysler made the following statement concerning manufacturers' responsibility for safety -

Primary safety has always been the prerogative of the vehicle manufacturer, and when we review the safety legislation laid down here and elsewhere it would appear that there is no legislation aimed at correcting negligence on the part of the manufacturer particularly in the area of primary safety. The conclusion that can be drawn from this is that the manufacturer has not done a bad job after all. Secondary safety is a far greyer area than primary safety for it is far more difficult to determine the direction to take

both for the manufacturer and the legislator, mainly for the lack of reliable data. Nonetheless, it may be shown that the vehicle manufacturer has not shirked this task and indeed had he done so the legislators would have been disadvantaged. As it stands I believe it can be shown that the legislator trails the manufacturer, with one or two exceptions, which is as it should be.

In summary, of the 23 current safety related Design Rules, 14 of these follow the trail blazed by industry, and the remainder particularly ADR's 4 and 5 came to fruition with the cooperation and support of the industry. (Evidence p. 2833-4).

151. The General Manager of Chrysler stated that he thought safety was an -

evolution that will continue, and the priorities and importance of various design aspects of the car are continually changing. I suppose, based on the United States experience as much as on our own, that the more immediate and pressing problems of safety have been resolved. In fact, in some areas there are some real questions now about the direction in which safety should go in cars. (Evidence p. 2950).

The Committee was also informed that the company, as with other Australian manufacturers, did not collect its own data on the accident involvement of its products but stated that this required "concerted effort by governments". One Chrysler witness stated that overseas research indicated that vehicle causation in accidents amounted to 7 per cent but the same witness concluded that "I believe that to keep the vehicle in the causation thing is really wrong. I think the vehicle has just about disappeared as a causation factor" (Evidence p. 2937). Further on this matter the Committee asked whether Chrysler would consider instituting their own study in relation to accidents (similar to Swedish manufacturers in Sweden). The witness indicated that he had not "really thought about it".

152. Chrysler informed the Committee that during 1974, an average of 29 engineering personnel were engaged full-time on legislated safety programs. This represented approximately 9 per cent of the total workforce for that year. The vehicle safety department of Chrysler devotes 100 per cent of its time to this aspect of their operations. While these safety staff numbers given by Chrysler may be larger than GMH or Ford "safety" personnel, the Committee is in no position to make comparisons which may reflect on the relative commitment of individual companies to safety research in the organisational sense.

Conclusions

153. In view of the above statements and other statements in evidence, the Committee is concerned that the major Australian manufacturers' concept of safety is not the same as authoritative opinion outside the industry or for that matter that of this Committee. The Committee does not suggest that vehicle safety can be quickly improved by massive industry expansion of safety engineering departments or by going out and collecting masses of data for example, but neither is it possible that the defensive approach of these manufacturers will result in significant advance in safety design and development.

154. It is some consolation to the Committee that Australia is generally regarded as the world leader in accident injury reduction, but in the opinion of this Committee it is no time for Australia to rest on its laurels. It took the automotive industry a long while to digest that the major factor in the reduction of death and injury is the simple fact of a seat belt. It is a technical advance not a behavioural one and it required legislative action to make it effective. The Committee states quite clearly that if up to 4,000 people are dying each year in road accidents,

then a fair-minded, socially conscious automotive industry should share some of the responsibility. For diseases causing fatalities scientists are seeking ways to eliminate death and suffering. This tradition should be extended to the road accident situation.

155. The Committee concludes that the competitive nature of the vehicle industry is responsible, in part, for this philosophical approach to vehicle safety. This view was reinforced by evidence of AMI which stated that -

significant progress has been made during the last few years in improving the safety of passenger cars and we believe that this progress is essentially the result of legislation rather than voluntary action on the part of manufacturers. (Evidence p. 2634).

This general view was stated in evidence on a number of occasions and the Committee concludes that to achieve equity in the market place and to ensure satisfactory progress in safety, legislation is necessary.

156. A former General Manager of GMH, Sir Laurence Hartnett, suggested that there was no alternative to laying down certain cardinals in design and construction related to safety. Other points raised by Sir Laurence Hartnett help to explain the philosophical approach of manufacturers. These include entrenched engineering standards; inherent thinking that imported products are considered better than Australian ones; the attitude that Australia is too small a market to enable substantial development, let alone produce its own commercially viable car; foreign ownership mitigating against Australian design; the hitherto "bad word" connotation of safety; and (understandable) profit motives.

157. Sir Laurence Hartnett suggested that the industry needed to standardise and increase efficiency but the problem was whether the industry would come at it with a competitive

spirit. He also suggested that -

if you could have some form of competition which gave marks for the safety of the car, I think the public would respond to it. (Evidence p. 1245-6).

CHAPTER VI: COST OF VEHICLE SAFETY

Aspects of the Cost Factor in Vehicle Safety

158. The cost factor associated with increased vehicle safety was frequently raised by manufacturers as a fundamental reason for resisting safety changes, particularly in view of the possibility of jeopardising customer demand. While the Committee appreciates this there is evidence to suggest that increased public acceptability of safety and industry re-organisation would enable increased emphasis on safety without unduly adding to the cost. While price increases have shown a dramatic upward trend in recent years, evidence given to the Committee indicates that safety has been responsible for a relatively small part of these increases.

159. The Committee expresses the view that provided prices are not pushed absurdly high, the incorporation of safety features could be expected to enable good markets to be retained. If all companies orientate their activities towards safety, or are required to do so by legislation, then the community gains and no one manufacturer suffers. The Committee gave close attention to the propensity of the automotive industry to produce hundreds of makes and models of vehicles and was concerned to know how it is possible for safety features to receive satisfactory attention. The proliferation of makes and models and options tailored to meet individual choice must surely be rationalised to the benefit of manufacturer and consumer and not to their detriment.

160. Manufacturers should be capable of initiating as much as reacting to new concepts in vehicle safety. The incorporation of a feature costing \$10 per vehicle is equivalent to an increase of \$5 million a year to the industry. It could be argued that these costs should not be imposed on

the consumer, on the community as a whole or even the economy. But in the opinion of the Committee the cost of accidents and lives make these costs insignificant by comparison.

161. There was general agreement among manufacturers that significant cost savings can be achieved in respect of tooling and piece costing if safety changes are made at time of model change rather than halfway through a model run. The Committee considers this to be an important factor in keeping safety costs to a minimum. Extending this concept further, the Committee believes that the cost of safety is even further reduced if companies develop safety from the conceptual stages in design. The Committee believes that Australian manufacturers are not adopting this approach to any significant extent. The Committee noted that this philosophy has been adopted by certain overseas manufacturers which indicates the importance of this approach and its bearing on costs. Mercedes-Benz, Volvo and SAAB witnesses were of the view that safety was an integral part of the car and you cannot say "this is our safety component and it costs so much". Indicative of this approach is the statement by SAAB who informed the Committee that -

The whole of design and development is more or less safety related because we are involved in trying to build a safe car. (Evidence p. 2817).

Makes, Models and Options

162. The Committee received a considerable amount of evidence relating to costs to the industry associated with the large number of makes, models and options available on the Australian market. Evidence given to the Committee suggested that base model vehicles offered by major manufacturers were of an inferior safety standard and only by optioning could the standard of the vehicle be upgraded. Evidence from manufacturers indicated that very few base models were in fact

sold other than to fleet purchasers. It was suggested that the "options game" as it is often referred to was a matter determined by the competitive nature of the market place. There is however, evidence to suggest that the "options game" is costly and has an indirect and detrimental effect on safety.

163. Some comments concerning options are summarised as follows -

- (a) By introducing an additional option industry virtually creates another model which affects the inventory or stock being carried both by the manufacturer and the dealer.
- (b) Additional costs are incurred in tooling up and incorporating them in the particular model and not others.
- (c) The option causes the basic model to spread itself over several price groups.
- (d) When the same vehicle has to be adapted to a wide range of options the hazards for safety and quality control become more apparent.
- (e) Dealers stand to increase profit from sale of options.

164. AMI stated in evidence that -

The options game, we believe in the final analysis results in an unnecessarily expensive vehicle because of the following factors:

- . High component stocks required to cover all possible variations in specification.
- . High cost of physically controlling the movement of all the necessary components to the particular point on the assembly line to produce the particular vehicle specified.
- . High yard and dealer stocks of finished vehicles required in the attempt to satisfy buyer requirement ex stock.

In conclusion, we believe that options if not severely restricted must push up the cost of the vehicle to the consumer, and may in some cases also introduce potentially unsafe cars onto the roads. (Evidence p. 2639).

165. AMI further stated that apart from the normal industry practice of offering standard and deluxe versions of a particular model and manual and automatic transmissions, they restricted options almost entirely to body and interior trim colour combinations. While the Committee appreciates that vehicle importers may not be subject to the same pressures as local manufacturers there is nevertheless considerable support for these arguments.

166. On the subject of options GMH made the following statement in its submission to the Committee:

For commercial reasons, some types of safety features are offered as options. In this way we test the market place to determine whether or not our customers consider this device is of sufficient merit to justify the increased cost. In some cases, controlled usage gives valuable assurance of the safety value. (Evidence p. 1890).

167. The Committee found conflicting the later evidence of GMH where it was stated -

As far as I am concerned there is no trade-off in any of our vehicles or compromise for safety because of the variations and options, models, trims and so forth. These things, I feel, are a necessity because of the highly competitive nature of the marketplace and I do not think in any way there is a connection between that and the safety of our vehicles. (Evidence p. 1934-5).

If "for commercial reasons some types of safety features are offered as options" then the Committee considers that the very fact that it is a "safety feature" suggests that "trade-off" or "compromise" would occur. GMH was not able to indicate whether there could be cost savings in reducing options and whether these savings could be channelled into

areas such as safety. A list of GMH options available for a HJ model Holden appears as Appendix 10.

168. Conflicting evidence was given when the witness stated that he did not know of any safety features that were optional on their Australian cars. He went on to say that in the United States there were two devices "that could be construed as safety devices" which are sold as options; the anti-lock brake system and the air bag system. While there may be doubts on the effectiveness of these two items in their present state of development, the Committee would regard them as safety features. GMH include the following items as options but none of them were regarded by the company as "really safety orientated"; disc brakes (because they were not better brakes); different suspensions (because they affect the ride not handling); bucket seats; laminated windscreens; and heated rear windows. The Committee is concerned that Australia's largest vehicle manufacturer was unable to assist the Committee by indicating where greater efficiency could be achieved in this aspect of the industry which could possibly result in advantages for safety.

169. Ford indicated that it was very conscious of model complexity and the difficulties this imposes on assembly operations. Model complexity could be reduced and funds diverted into other activities such as safety, but essentially this would affect the Company's livelihood when one takes into account the way in which the Australian car manufacturing industry has developed. This is one of the factors which accounts for the significantly wider range of models offered by Australian manufacturers compared with the majority of importers and which gives the Australian manufacturers a competitive advantage.

170. On the question of options Ford made similar statements of competitiveness vis a vis importers. It was suggested that Japanese manufacturers for example, have heavy

optioning in the Japanese market but not in Australia. While agreeing with this proposition AMI added that they too had a factory problem because of it and added that "options are frankly a pain in the neck". It was suggested that the industry was arriving at a situation where vehicles are coming in what was termed "packages of options". The point was also made by Chrysler that there was going to be a trend to a more rationalised product line-up in the future which would result in benefits of volume, reduced inventories and increased quality. Chrysler also suggested that savings could be made to the benefit of safety. Chrysler was of the view that in terms of primary safety the company fitted those features necessary for the effective functioning of a vehicle and that options were purely something for people who want to add to their vehicle and in no way detract from the safety of the vehicle. An analysis of Chrysler's option list shows the following features as options: laminated windscreens, heated rear window, power steering and mud flaps, which could be construed as being safety related.

171. The Committee notes the view of the IAC which states -

The local content plans have led to a proliferation of models offered by the local industry. The volume limitations of the plans have encouraged assemblers to produce a wider range of models with a smaller volume of sales for each model, rather than to offer fewer models with a larger volume of sales for each model.⁸

The IAC also indicated that the Australian motor industry had considerable cost disadvantages relative to overseas manufacture of motor vehicles. The Commission found that unexploited economies of scale was the main reason for these cost disadvantages.⁹

8. Industries Assistance Commission Report, p. 136.

9. Industries Assistance Commission Report, p. 98, 125.

172. The Committee notes that there appears to be a trend to a reduction in models and options available on the Australian market and encourages manufacturers to accelerate this trend where it can be shown that significant cost advantages can be made. The Committee concludes from the evidence, that cost savings resulting from the rationalisation of the range of makes, models and options could be channelled into safety areas.

173. The Committee recognises the importance of market demand and customer preference with regard to options. The Committee concludes that the availability of safety oriented features as options on vehicles cannot be accepted. While manufacturers may argue as to what constitutes a safety feature or what is a convenience feature, the Committee strongly urges manufacturers to ensure that safety oriented features are fitted as standard equipment. Customer preference should not be confused with customer ignorance. The relatively marginal cost of many safety features justifies, the Committee believes, an adjustment of industry thinking in this area, particularly as there is increasing evidence that customer preference is tending towards safety considerations. In essence the Committee considers that the offering of safety items as options is little more than cynical irresponsibility. This view is particularly important when one considers the manufacturers' claim that generally the industry has fitted safety features prior to legislative requirements. In the case of laminated windscreens however, manufacturers have failed to follow the example of their parent companies by fitting them as standard equipment. (See paragraph 147). Just over 18 per cent of GMH customers take up the laminated windscreen option which appears to the Committee to be a significant proportion. Putting this further into perspective, cost information suggests a number of safety features could be fitted for the price of a car radio tape deck.

174. Of equal importance is the styling changes which companies undertake (for competitive reasons), the cost of which the customer in the end pays whether he likes it or not. Styling changes over the last five years cost GMH \$10.3 million, and new model program expenditure cost Ford \$56.7 million (including \$47 million in 1972 representing major model changes over a whole range of vehicles). It was pointed out to the Committee that it was very difficult to make an exact categorisation of styling costs and these figures include other cost factors. With the 'H' series Valiant, a full body shell change incurred an in-plant tooling cost to Chrysler of approximately \$13 million amounting to \$59.50 per vehicle. The only other styling cost in the last 5 years was \$0.74 million in tooling costs for the 'J' series Valiant. The Committee considers unfortunate the fact that safety is not considered with such acceptable and automatic vigour within the industry as for consideration of vehicle style.

Costs of Safety in Relation to Benefits and Effectiveness

175. The ACSVD drew the Committee's attention to the importance of cost-benefit analysis in determining ADR's to provide improved safety measures in new vehicles. The ACSVD supports the principle of giving priority to proposed safety design features according to their expected benefit in relation to costs. The Committee was informed that the benefit side of the equation comes from analyses of accident records from the States, safety authorities and special analyses commissioned by the ACSVD and the Australian Department of Transport. The cost side of the equation almost invariably comes from industry.

176. Professor Cumming (a member of the ACSVD) further informed the Committee that more emphasis should be put on design principles and the cost-benefit principle could take a secondary role. He stated however, that all engineering

in the end was a compromise and the cost factor was important, but that because it was important, the ACSVD should be assisted with details of individual companies' costs for independent judgement (confidentially if necessary). Professor Cumming concluded that -

Perhaps what we really need is better information on the economics involved in some proposals and also the implications in terms of production and therefore production time and machine tool requirements and so forth. This of course is material which at the moment is really only available to people working in the industry. I think it would be very much more useful if the situation prevailed in Australia in the automotive industry, that prevails in the aviation industry; namely that the training of people, the research in the area and so on were open rather than closed. I do not think we need more people, I think we need more information. (Evidence p. 2114).

177. Australian manufacturers generally agreed that cost-effectiveness was a very important consideration in determining new safety measures. But the evidence indicates that hitherto there has been a reluctance by manufacturers to provide detailed costs in order to determine this situation. The Committee notes from an American Society of Automotive Engineers (SAE) publication¹⁰ that no cost-benefit or cost-effectiveness analysis can be performed if the costs of the system under scrutiny are unknown. In the formulation of motor vehicle standards costs are, in fact, largely unknown in America, as in Australia, to all but the automobile manufacturers themselves.¹¹ The Committee was informed by manufacturers, that the total cost of ADR's was regarded as being a reasonable price to pay for safety. It should be pointed out that motor vehicle

10. B. O'Neill and A.B. Kelly, Costs, Benefits, Effectiveness and Safety: Setting the Record Straight, Society of Automotive Engineers, Automobile Engineering Meeting, Toronto, Canada, October 21-25, 1974, p. 8.

11. O'Neill and Kelly, p. 8.

safety standards do not necessarily increase manufacturing costs.

178. Ford stated -

We have mountains of US data and we have very detailed cost-benefit analyses based on over 400,000 accidents. We have our safety research group and it indicates that for unrestrained passengers things like windshields are very important. (Evidence p. 2378).

179. When asked how Ford assesses the relationship of costs to benefits it was stated -

To be truthful, I do not really think we do. I think we are talking about safety oriented features such as heated back windows. If one measures it purely as a method of avoiding expenditure a heated back window is a very poor buy. If one likes the convenience of having a heated back window and not having to get out and scrape off a thin layer of ice or wipe the mist from the inside, it could be very worthwhile as a convenience feature just as air conditioning is a significant factor in ease of driving. (Evidence p. 2459).

180. In relation to providing costs to the ACSVD Ford stated that it provided costs to aid the Committee in determining the cost-benefit relationship, but -

We are only offering them the cost because we do not know what the benefits are. If we knew what the benefits are we would make them available. I do not know how we or anybody else would assess the benefits of a heated back window. (Evidence p. 2460).

181. GMH indicated that it would make cost information available to the ACSVD -

Where the circumstances involve that it is necessary in order to make a rational decision on what is involved, but to make this information available to them on just a general basis we would say no. We would do that as a need-to-know kind of a rule. (Evidence p. 2458).

182. During the course of the inquiry the Committee requested Ford, Chrysler and GMH to provide details of ADR costs so that judgements could be made as to what proportion of the cost of a vehicle is incurred as a result of meeting the requirements of ADR's. Ford and GMH considered that the details were confidential and requested that the Committee accept the figures on that basis. It was stated to the Committee that the publication of these figures could not be provided because it was competitive information. The witnesses from Ford and GMH however, were unable to satisfactorily inform the Committee to what extent and in what way the figures would aid competitors. Chrysler did not hold the view that the details of ADR costs would necessarily aid competitors and provided the costs to the Committee. Chrysler pointed out that any assessment of the costs should take into account that they were sensitive to volume and were conditional upon how much safety content a vehicle contained before a design rule was applied.

183. The Committee was not prepared to accept these cost details on a confidential basis and therefore insisted that GMH and Ford produce the documents. The Committee considered it important that all three companies be treated on an equal basis and regarded the information essential in establishing the real costs of safety. Details of ADR costs provided by these companies appear as Appendix 11. In summary, the information provided for typical passenger vehicles gives details of estimated increments in early 1975 of costs and prices resulting from the fitment of safety related ADR's implemented over the period 1969 to 1975. The total¹² of these increments for each manufacturer was as follows:

12. The totals arrived at by the Committee do not include non-safety related ADR's (ADR's 25, 26, 27, 27A, 28) and metric speedo and compliance plate figures which appear in the Appendix.

	<u>GMH</u>	<u>Ford</u>	<u>Chrysler</u>
	\$	\$	\$
Manufacturing Cost	148.23	88.24	86.25
Retail Price	228.85	123.39	120.42

Additional safety related ADR's have been added to vehicles since these figures were supplied. The Committee concludes that for the extensive safety benefits provided by ADR's the costs are quite low and extremely good value, particularly in view of the emphasis placed on the cost of safety features by the industry in the past. This is particularly so if emission costs are excluded.

184. While this "after the event" information is important, the Committee believes that the industry has a greater responsibility in providing detailed cost information to be taken into account during the design rule making process. As illustrated in the Chrysler figures the costs may well be zero if adequate lead time can be given and advantage taken of model changes. If there are short lead times the costs could be very high. The Committee accepts the view that it is preferable to compromise on lead time rather than on the standard. The manufacturers generally agreed that safety should not be subject to undue competition and the Committee would therefore encourage manufacturers to give the ACSVD maximum co-operation with regard to costs. The Committee notes that during the inquiry this view became increasingly acceptable to the manufacturers. The Committee intends to closely watch developments with regard to this matter and review the situation at some future time. Manufacturers are urged to be equally co-operative in assisting wherever possible in assessing expected benefits from safety measures under consideration.

185. The cost components of safety features which need to be considered in cost-benefit analysis include not only the cost to develop, manufacture, purchase, and maintain, but also human suffering, non-productive labor involved in attending accidents and accident victims, "quality of life"

and lost production. Useful methods of evaluating the degree of effectiveness have recently been developed and significant advances have been made in the past year in predicting overall cost effectiveness.

186. Some of the methods of predicting and evaluating benefits include expert estimates, experimental samples, trial usages, large scale usages, and 100 per cent or compulsory usage (before and after). Each method has its place and all need to be utilised as required. Intensive studies of accident statistics are and will still be needed to verify actual performance. These studies must be maintained not only to evaluate the immediate effect but to ensure the desired effects continue and any unexpected undesirable effects are discovered so they may be minimised.

187. The Committee considers that cost-benefit analyses are very important in the formulation of ADR's but it nevertheless points out that it is not always possible to fully assess the effectiveness until considerable experience has been obtained in actual use. It is inconceivable that if Australia waited every time for conclusive proof, a number of safety features would never have come into use and seat belts could have been one of them. Analysis of benefits, it is suggested, ultimately comes down to a matter of judgement. This is particularly true for the introduction of a design rule but the inaccuracy of a judgement can be significantly lessened by checking data and evaluating benefits of particular features during actual performance.

188. As industry cost information is available, the Subcommittee recommends that the Advisory Committee on Safety in Vehicle Design make a formal approach to individual vehicle companies requesting detailed cost information and other relevant information whenever necessary for the purposes of design rule formulation. Manufacturers should also be requested to provide assistance in evaluating the effectiveness of safety features in vehicles.

Government Assistance to Manufacturers

189. Considerable government financial assistance is provided to manufacturers in the form of Industrial Research and Development Grants. The Committee believes these grants should continue and that manufacturers in future give preference in applying these grants to safety research and development.

190. The Committee also gave consideration to providing other incentives to manufacturers to encourage safety developments. The Committee considered whether advantages could be gained by the abolition or reduction of sales tax on safety components fitted to motor vehicles such as ADR's but more particularly for features fitted over and above ADR's. Manufacturers were agreeable to this proposal. At the present time seat belts are the only item exempted from sales tax.

191. The Committee sought advice from the Federal Department of the Treasury on this proposal and was informed that such a proposal could not be supported. The following reasons were given to support this conclusion -

- (a) Difficulty in setting the values attributable to various features in various makes of vehicles at the point of sale to the dealer. Many difficulties are experienced with exempting seat belts in this regard.
- (b) The proposal seems unnecessary in relation to safety components fitted as mandatory requirements. It would merely mean that society was making it less costly for individuals to comply with standards set by society.
- (c) The more prudent motorist would presumably fit "superogatory" safety components.
- (d) The major part of the cost would remain even if there were a sales tax exemption.
- (e) The cost to revenue of exemption could be quite high.

- (f) Exemptions have been sought for many other classes of goods on safety grounds and it would be difficult to establish which goods justify exemption above others. A general exemption would be costly to revenue.
- (g) Costs and mark-ups would need to be verified by the Taxation Office and there would be special problems in ascertaining details in relation to imported cars.
- (h) Questions would arise as to how far the safety concession should go in relation to particular components, e.g. collapsible steering columns.
- (i) There seems to be no clear line of demarcation between safety and non-safety features.

192. While the Committee appreciates these difficulties it is of the view that the proposal is worthy of more detailed consideration. The Sub-committee recommends that the Department of the Treasury review its advice on the proposal for a reduction of sales tax on vehicle safety components in the interest of obtaining increased vehicle safety at a reduced cost. In making this review it points out that saving of lives and the reduction of traffic accidents could be expected to result in considerable cost savings for the community and the economy as a whole.

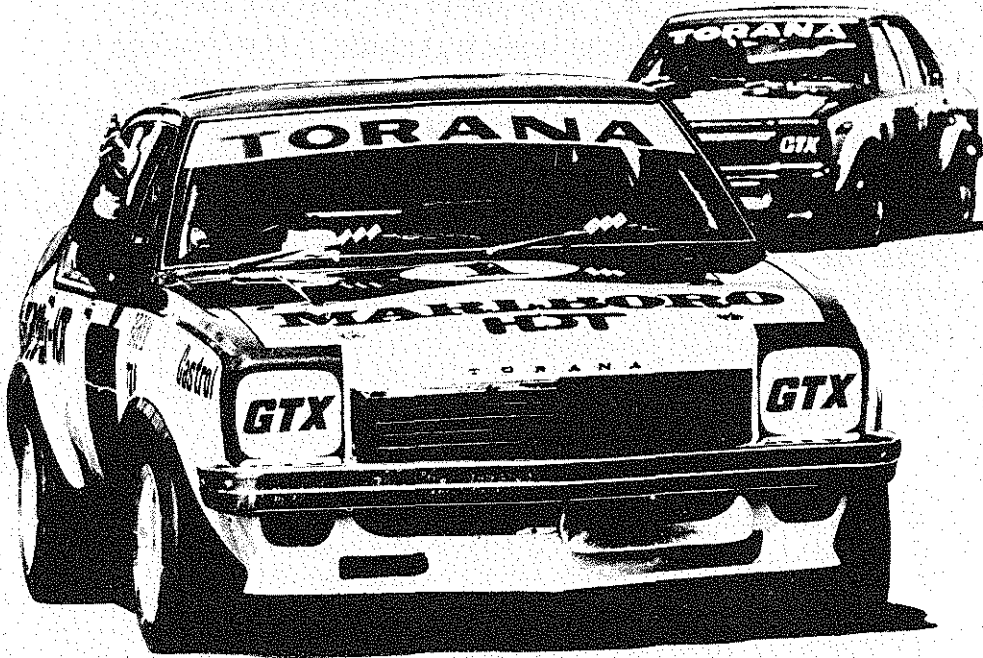
Advertising

193. Advertising techniques employed by manufacturers are a matter the Committee considered in some detail and to some extent those techniques are indicative of the manufacturers' general approach to vehicle safety. The Committee was made aware of an increased emphasis being placed on safety advertising by all manufacturers. The Committee is pleased that this trend is apparent as advertising can have both harmful and beneficial effects on public safety consciousness. The matter of educating the public in vehicle safety matters

should be a responsibility of the manufacturers as much as it is the responsibility of other parties. The corollary, of equal importance, is that advertising placing undue emphasis on power and speed is irresponsible and not in the interests of greater road safety.

194. The Committee was made aware of the variety of advertising conducted by manufacturers. Advertising emphasised such matters as economy, safety, comfort, durability, reliability, performance, power and speed. The Committee was concerned that some, generally isolated, advertisements used racing cars and drivers to emphasise power and speed and were usually accompanied by words carrying similar connotations. (Examples of this advertising follow)

Whammy!



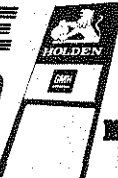
When it comes to fantastic
handling, & power-plus performance...
Torana leads 'em all!

Surfers Paradise, Sunday November 10,
Round 4 of the Australian Manufacturers
Championship for 1974. Right from the
start it was a tough test of men and their machines.

When the chequered flag waved,
Torana SLR 5000 was there first.

Why don't you drive a winner today?
That's Torana... at your Holden Dealer.

QUICK-SIZE
Holden Torana
If you like to drive **6/v8**



Marlboro
100%

L27A

*Results subject to official confirmation.



Michael Stillwell flies Escort.



If you're a motor racing fan, Michael and his low flying Escort need little introduction.

Class winner in the 1972 Australian Touring Car Championship and the 1973 Sports Sedan Series, Michael's shown a clean pair of heels to the hottest competition in Australia — and he's got the trophies to prove it.

What makes Michael's Escort a winner?

Michael's skill behind the wheel . . . but let's not forget that Escort has always been something of a success car.

Outright wins in the London Mexico World Cup Rally and the gruelling East African Safari prove that!

And Escort certainly has what it takes to be a winner . . . easy

handling manoeuvrability, mile stretching economy, excellent driver comfort.

But what's more important, Escort makes driving fun again. You only have to glance through Escort XL's standard equipment listing to see that.

Complete with lively 1300cc engine, quick change 4-speed box and front power disc brakes. Push-button radio, high back reclining bucket seats, front inertia reel seat belts, carpets, cigarette lighter and a woodgrain finish dash. Test drive the class car of the small car class at your Ford Dealers soon.

You won't be disappointed!
Going Ford is the Going Thing.

FORD ESCORT



FE236

Ford and GMH witnesses did not regard this sort of advertising as irresponsible but indicated that it was designed to attract attention to the advertisement, which was an important marketing technique in such a competitive field.

195. GMH could not clarify for the Committee if their advertisement was primarily aimed at the young male driver group which is known to be over-represented in major road accidents. The witness said that it could not be assumed that this driver was the only one who purchased this sort of car as there were a lot of people other than the young who like "performance cars". It was further stated, however, that the Monaro (not the subject of the advertisement illustrated) was aimed at young people. GMH stated that safety features were used to sell their vehicles. They had to be merchandised, however, with the same approach as other features, such as air conditioning, power steering, and automatic transmission.

196. Ford gave similar views to the Committee in that the use of safety in their advertisements although a theme, it was not the principal theme. The witness did not consider that the advertisement stimulates people to take risks or to drive irresponsibly. It was further stated, however, that Ford Escorts are sold primarily to young people. The submission of Ford commented on the under 25 year old male driver group as follows -

This group has a traditional aggressiveness, which while it will attempt to avoid unacceptable exposure to risk, will nonetheless force the exposure to dangerous limits. It is inconceivable that a driver would knowingly bring about an accident in which he would be a participant but there is the evidence of numbers to suggest that he will surround himself with sufficient risk situations to make the occurrence of an accident a distinct possibility. (Evidence p. 2176).

In commenting on the advertisement the General Manager stated -

The advertisement depicts a car on a race track. There is nothing wrong with racing on race tracks. People like to be associated with successful people. (Evidence p. 2479).

197. Chrysler indicated that the change in advertising in recent years had been the result of increased social responsibility on the part of manufacturers.

198. The Committee is aware of a noticeable difference in the advertising techniques between Australian manufacturers and marketers of imported vehicles. The Committee was informed that SAAB advertisements were almost 100 per cent based on safety because there was a growing awareness of the importance of safety and it was their principal selling argument. Volvo similarly emphasised safety because it also considers that "safety sells".

199. VW's philosophical approach to advertising was one of "self depreciating understatement", not aimed at specific market segments and avoided emphasis on speed, flashiness and fashion. VW's approach was based on technical and factual information and avoided giving the impression that it was a fully accident-proof vehicle. A similar philosophy exists with AMI which deplores the type of advertising which emphasises and glamorises the speed and performance image.

200. The Committee believes that manufacturers have a responsibility to advertise safety in an endeavour to promote community safety consciousness. The Committee cannot accept advertisements, such as those illustrated which place undue emphasis on speed. The Committee does not object to "performance" as such as this is a necessary function of the vehicle, but it does not accept the need to associate racing cars with the general motorist. This type of advertising

could be regarded as an incitement for people who purchase these cars to drive them fast and drive them dangerously. This is not consistent with the view of some manufacturers who stress that the driver is the most important element to whom attention must be directed in tackling the problem of road safety. Drivers' attitudes must to some extent be determined by the media; by what they see on television and in newspapers. The Committee therefore urges all manufacturers to avoid using advertisements which give undue emphasis to speed. The Committee considers that advertising can play a useful role in promoting safety awareness in the community and encourages all manufacturers in this regard.

201. The Sub-committee recommends that the Bureau of Road Safety monitor television, radio and newspaper advertisements of manufacturers and bring to the company's attention advertising which, in the opinion of the Bureau, is not in the interest of road safety, requesting appropriate rectification.