

## Vehicle Safety

- 6.1 The Committee believes that vehicle safety measures have great potential to make a significant reduction in the road toll, a contribution that as yet has only been partly realised. The Committee's central concern is that although many of these measures have been identified, and are often already available, progress in bringing them on-line has been too slow. More needs to be done to accelerate the uptake of new vehicle safety technology.

### Vehicle Safety—the National Road Safety Strategy

- 6.2 Vehicle safety measures—improvements in vehicle compatibility and occupant protection, and new technology to reduce human error—are expected to generate 12 per cent of the 40 per cent reduction in fatalities over the life of the National Road Safety Strategy.<sup>1</sup>
- 6.3 Most of this 12 per cent reduction in fatalities (ten per cent overall) represents the flow on effect of vehicle occupant safety improvements already implemented or scheduled to be implemented, while only a fraction (some two per cent overall) represents the impact of intelligent transport systems (ITS). ITS will, however, have a much more substantial impact in the longer term.<sup>2</sup>

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1 ATC, *National Road Safety Strategy, 2001–2010*, p. 19.

2 *Transcript of Evidence*, p. 3.

6.4 The vehicle safety action areas identified in the *National Road Safety Action Plan 2001 and 2002* include:

- Developing design standards for vehicle compatibility, including
  - ⇒ introducing ADRs for rear and side underrun protection on heavy vehicles
  - ⇒ developing ADRs for passenger vehicle compatibility;
- Improving occupant protection through regulation and consumer demand, including
  - ⇒ continuing existing ADR programs
  - ⇒ promoting crashworthiness rating of vehicles under the Australian New Car Assessment Program (ANCAP), the Buyer's Guide to Used Car Safety Ratings and other sources
  - ⇒ developing public information programs to encourage increased consumer awareness of vehicle safety features;
- Monitoring and encouraging adoption of emerging Intelligent Transport Systems (ITS), including
  - ⇒ in-vehicle systems that automatically notify emergency services of the location of a serious crash and, if practicable, details of the crash and number of occupants
  - ⇒ systems that monitor drivers for symptoms preliminary to sleep and respond with warning alarms
  - ⇒ systems that maintain safe following distances between vehicles
  - ⇒ systems that prevent drivers exceeding the speed limit
  - ⇒ systems that intervene to enhance vehicle stability during cornering, braking and acceleration.<sup>3</sup>

6.5 Action areas identified under the *National Road Safety Action Plan 2003 and 2004* include:

- Introducing an ADR for intrusive audible seat belt warning devices;
- Encouraging purchase of safer vehicles by promoting ANCAP and used vehicle safety ratings;
- Mandating display of safety ratings at point of sale;

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3 ATC, *National Road Safety Action Plan 2001 and 2002*.

- Researching the implications of increasing levels of vehicle incompatibility and potential countermeasures;
- Measures under the National Heavy Vehicle Safety Strategy (see Chapter 7);
- Introducing an ADR for underrun protection for heavy vehicles; and
- Encouraging the uptake of Intelligent Speed Adaptation.<sup>4</sup>

## Vehicle Safety Technology

6.6 The range of vehicle safety technology now becoming available is impressive. In his submission to the inquiry, Mr Ian Faulks, Committee Manager for the New South Wales STAYSAFE Committee, identified a number of systems that could potentially be used to control vehicle speed. These include:

- Intelligent Speed Adaptation (ISA)—where the system acquires information about local speed limits and encourages driver compliance;
- Top speed limiting, where the vehicle is unable to exceed realistic top speeds for extended periods;
- Cruise control and top-speed limited cruise control;
- Speed alarms that are set by the driver;
- On-board monitoring of vehicle speeds during entire journeys;
- On-board monitoring of vehicle speed just prior to an incident such as a severe accident; and
- Speedometer scales and ergonomics.<sup>5</sup>

6.7 In its submission, the South Australian Government also identified a range of systems that ‘have the potential to significantly reduce and in some cases virtually eliminate a number of behavioural issues that significantly contribute to the size and severity of the road toll’. These include:

- Alcohol interlock;
- Seat belt warning or interlock;

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4 ATC, *National Road Safety Action Plan 2003 and 2004*, p. 21.

5 Mr Ian Faulks, Submission no. 38.

- Speed warning devices;
- Intelligent speed adaptation systems;
- Fatigue warning and vehicle shut-down devices;
- Crash avoidance systems;
- Tailgating warning or control systems;
- Vehicle tracking devices;
- Route navigation units; and
- Smart cards combining licences, vehicle access and vehicle operation.

6.8 The Ford Motor Company is currently involved in a collaborative research project known as the 'Intelligent SafeCar' project with the Victorian Transport Accident Research Commission and the Monash University Accident Research Centre which has incorporated a number of the features listed above. The object of the project is to identify ITS technologies that promote road safety either by reducing the risk of accidents or reducing road trauma. The technologies being tested include:

- Intelligent Speed Adaptation
- Forward Collision Warning System
- Breath Alcohol Detection and Advisory System
- Seat belt reminder System
- Reverse Collision Warning System<sup>6</sup>

6.9 Intelligent Speed Adaptation is designed to warn drivers when they are travelling over the speed limit:

The system comprises a global positioning system (GPS) and a digital map of the road system that also contains a digital record of the speed limits applicable to various parts of the road system. A computer program analyses from the GPS data where the vehicle is being driven and compares the speed limit for that location with digitized speedometer input. It uses visual and auditory aids (flashing lights and a buzzer) to help the driver travel within the legal speed limit.

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6 Ford Motor Company of Australia Limited, Submission no. 11, pp. 1-3.

One variant of this system is to provide resistance through the accelerator pedal once the driver travels above the speed limit for a set period of time. A 'kick down' override facility is available if necessary.<sup>7</sup>

- 6.10 The Forward Collision Warning System warns drivers if they are approaching too close to the vehicle in front or about to collide with stationary or moving objects to their front:

The system uses transmitted and received radar signals to determine the distance and relative speed between the host vehicle and objects in front. It provides alerts in the form of visual and audible warnings indicating the relative distance to the object or vehicle in front and a crash warning if the driver is in immediate danger of collision.<sup>8</sup>

- 6.11 The Breath Alcohol Detection and Advisory System automatically detects the presence of alcohol in the air inside the vehicle cabin and issues a message to the driver to blow into a mouthpiece to test their breath alcohol concentration. If above the specified limit, the driver is advised to stop the vehicle. In fleet vehicles an electronic message can be sent to the fleet manager if the driver fails to stop.<sup>9</sup>

- 6.12 The Seat Belt Reminder System reminds drivers to fasten their seatbelts:

If any person (driver or passenger) sits in the vehicle and does not fasten his/her seat belt, a visual "unbuckled" icon illuminates until the vehicle speed reaches 15 km/hour. Between 15 and 24 km/hr, the "unbuckled" icon flashes and a single audio chime is heard. Between 25 and 49 km/hr, the chime sounds repeatedly at the same rate that the visual icon flashes. When the vehicle travels at 50 km/hr or higher, the audio chime and the "unbuckled" icon sound/flash even faster.<sup>10</sup>

- 6.13 The Reverse Collision Warning System warns the driver if they are likely to collide with an object behind the vehicle by activating audible alerts. These warnings increase in intensity at and below a rear object distance of one metre.<sup>11</sup>

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7 Ford Motor Company of Australia Limited, Submission no. 11, p. 2.

8 Ford Motor Company of Australia Limited, Submission no. 11, p. 2.

9 Ford Motor Company of Australia Limited, Submission no. 11, pp. 2-3.

10 Ford Motor Company of Australia Limited, Submission no. 11, p. 3.

11 Ford Motor Company of Australia Limited, Submission no. 11, p. 3.

- 6.14 In addition to the measures being tested, Ford also identified a range of features on the new BA Falcon designed to improve occupant safety. Known as Intelligent Safety Systems (ISS), they include:
- Two-stage passenger and driver airbags to control inflation pressure according to the circumstances of a crash;
  - An additional ‘crash sensitivity’ sensor to enable earlier detection of a wider array of crash events;
  - Driver’s seat position sensor to enable airbag inflation to be adjusted according to the proximity of the driver to the airbag; and
  - Seat buckle latch detection to determine if the seat belt is worn at the time of the crash.<sup>12</sup>

## Implementing New Technology

- 6.15 While the list of the new technology available makes impressive reading, implementing it is another matter. The Committee is aware of the range of pressures impacting on the introduction of new technologies as standard equipment, the commercial imperatives on the one hand and the cost in lives lost on the other hand.
- 6.16 In its submission to the inquiry the South Australian Government outlined what it saw as the problem:

None of these systems are awaiting discovery or the development of enabling technology. The Systems exist and they are beyond prototype stage. Some of the systems exist as marketable products. Some are becoming installed by some vehicle manufacturers in luxury-end models of their vehicle ranges.

Understandably, there are commercial interests and certain confidentiality issues involved with some of the devices. The progressive introduction of the devices into new vehicles is associated with a degree with the cost of implementation and competition between manufacturers in a healthy industry.<sup>13</sup>

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12 Ford Motor Company of Australia Limited, Submission no. 11, pp. 3–4.

13 Government of South Australia, Submission no. 32.

- 6.17 As a result, 'Australia is missing an opportunity to speed up the introduction of many of these devices to all new vehicles manufactured and sold in Australia', and the nation missing an opportunity to use the latest technology to reduce the road toll. The South Australian Government has proposed two solutions. Firstly, speed up the introduction of new technology through Australian Design Rules. Secondly, through direct government collaboration with vehicle manufacturers in Australia and overseas:

Australian manufacturers are part of the Australian community and there appears to be an opportunity to foster the voluntary increase in the speed with which ITS equipment is installed in all new vehicles sold in Australia. The provision of some incentives may be possible based on the likely benefit resulting from the uptake of the ITS devices.<sup>14</sup>

- 6.18 Another problem, identified by Mr Peter Sturrock, Chief Executive of the Federal Chamber of Automotive Industries, in his evidence before the Committee, was the need for the international harmonisation of standards:

The Australian design rules for motor vehicle safety and emission are currently about 70 per cent harmonised with the United Nations regulations. It is not unreasonable to aim for 100 per cent harmonisation in the near future. It is a situation well recognised by legislators and there is agreement to work towards a solution to reduce road trauma. But with the announcement of the post 2005 car industry plan, there is now a sense of greater need to ensure that our design regulations comply with global standards within a time span which facilitates new model development. Decisions taken now will have a significant effect on cars to be built post 2010.<sup>15</sup>

- 6.19 When questioned as to whether international standardisation would occur at the expense of the Australian public, however, Mr Sturrock assured the Committee that it would not:

No, not at all. We have very clear and well defined standards. We have seen the benefit of that in new models and new technology over recent years. That will continue, without any question. The investment by brands throughout the world in their new technologies is quite outstanding. We bring those to the open

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14 Government of South Australia, Submission no. 32.

15 *Transcript of Evidence*, p. 3.

market of Australia quite swiftly. We will continue to benefit from international developments within the industry.<sup>16</sup>

## Australian Design Rules

6.20 Despite the assurances of Mr Sturrock, the Committee received a considerable amount of evidence to the effect that Australia was not making as much progress as it could in terms of taking up new safety technology, and that one of the major hurdles was the Australian Design Rules.

6.21 In his evidence before the Committee at the one day forum, Professor Johnston said:

Several people have alluded to the design rule system. The design rule system is global lowest common denominator. It just takes forever to get any kind of design change. I would contend that the design rules are almost irrelevant. The manufacturers try to build to what comes through the ANCAP programs, so it really is about safety at a consumer level.

The innovation stuff ... is lagging well behind, so the design rule is certainly not innovating, and the whole process takes way too long. For example, on ADR69, which relates to full frontal impact, vehicles such as the Hyundai Excel, which is very small and does not have front airbags, passes ADR69 but in a real life crash performs appallingly. ADR73, which relates to offset frontal impact, only covers conventional passenger vehicles; it does not address four-wheel drives or forward control passenger vans at all, and four-wheel drives are the fastest growing category. I am not being critical of the federal government; what I am saying is that the globalisation of the car industry has meant that the actual design rule process has gone to the lowest common denominator.<sup>17</sup>

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16 *Transcript of Evidence*, p. 85.

17 *Transcript of Evidence*, p. 53.



6.22 In its submission, the AAA highlighted ‘de-specification’—the removal from Australian vehicles of safety features standard elsewhere—as an important consequence of the shortcomings of ADRs. It cited the example of airbags—sold as standard safety features on particular models in the United Kingdom, but not available on the same models here. The Submission continued:

The extent of vehicle ‘de-specification’ in Australia is not limited to the cars or safety features shown in this cursory examination. The problem is widespread, and given the proven benefits of features such as airbags, this situation is far from satisfactory. Furthermore, if this case exists for the easily observed safety features, it raises the question of the extent of the problem with less easily observed features such as structural design, which also have a significant effect on vehicle crash worthiness.<sup>18</sup>

6.23 In his submission, Dr Peter Hart, a consulting engineer, listed a range of specific problems with the ADR system:

- Design rule development has stalled, ‘because firstly the Vehicle Safety Services section of DOTARS is stretched thin and secondly because of the inertia involved in having new proposals agreed to by all the various governments and interests’.
- Vehicles may be modified before they are registered, but *after* they are covered by a compliance plate. ‘There is confusion by some manufacturers about what modifications are acceptable and about when the jurisdictions take over administration of vehicle standards.’
- There is no recognition of vehicle engineers’ status across jurisdictions. ‘Work that is approved in one state may be unacceptable in another state.’
- There is no national accreditation for secondary manufacturers who modify commercial vehicles, and the status of these vehicles is somewhat uncertain. Secondary manufacturers have no workable arrangements to have their work approved in other jurisdictions.
- The ADRs do not set standards for replacement parts.
- Specialist vehicles are treated differently in different places. ‘Heavy haulage trailers for example may be registered in a state where the guidelines are easier and used in another state.’

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18 AAA, Submission no. 18, p. 19.

- European Union compliance certificates are unacceptable to DOTARS, even though ‘virtually all of the EU rules are based verbatim on the appropriate UNECE [United Nations Economic Commission for Europe] rules’, which are accepted by DOTARS. ‘Some manufacturers spend a lot of time and energy getting around this road block.’<sup>19</sup>

6.24 In evidence before the Committee Mr McIntosh of the AAA noted that “the ADR’s were very effective when they were first introduced” however “regulations, like all regulations, tend to become more laborious because more people are involved. Every one has to be consulted, everybody wants to have their say and nothing much happens.”<sup>20</sup>

6.25 In addressing criticism of the ADR process Mr Peter Robertson of DOTARS stated that:

The Australian design rules are actually the standard set under the act. I need to point out that they are in a state of progressive review. We have been doing this for the past five years and we still have some way to go. We have a policy intention to harmonise with regulations developed by the United Nations Economic Commission for Europe. I just need to make a point here early. These are international regulations; they are not European regulations. When we talk about harmonisation, we are not harmonising with Europe; we are harmonising internationally. They are quite complex. The ADRs cover issues such as lighting, emissions, braking, anti-theft, occupant protection, structures and a whole range of miscellaneous items. As Mr McIntosh alluded to, yes, they are becoming very complex indeed. The lighting regulations alone are about 640 pages of small print and not the world’s best sellers.

An important point on jurisdictional responsibilities is that the Australian design rules and the Motor Vehicles Standards Act cover vehicles up to the point of first supply to the market. After that, it is a state regulation issue, or what we refer to as in-service regulation. With regard to the terms of reference you are addressing, one comment is that it takes eight or nine years to get an ADR up. That is incorrect, as I will explain, in terms of process. But certainly given the age of the vehicle fleet, when an ADR is introduced, for the effect to filter through the system, certainly if

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<sup>19</sup> Dr Peter Hart, Submission no. 29, pp. 2–3.

<sup>20</sup> *Transcript of Evidence* (11/02/2004), p. 11

you have a 10-year average age vehicle fleet, you are looking at timeframes to get saturation of the market in that order.”<sup>21</sup>

- 6.26 Mr Robertson also made the point that ADR’s are not prescriptive. They are performance based and a manufacturer may put in place any design or technical change to meet current regulations.

Very quickly I will go back to performance based standards, which is a requirement of both the COAG principles and the agreement on technical barriers to trade. I raise it because I have had a lot of comments about it, such as, for example, why don’t we just mandate side airbags on all cars. The simple answer is that that, like many of the other regulations, such as braking lighting, are performance based regulations. The object of the regulation, which is an international regulation, is to provide protection to the occupant as tested using instrumented dummies. The manufacturer can put whatever they want in the car to achieve that objective so that it is not design restrictive. It can include airbags and other technology that you might have.”<sup>22</sup>

- 6.27 The Committee takes the point that there is some misunderstanding as to the complexity of the regulatory environment in which the Australian Design Rules are implemented. The Committee also notes that DOTARS is only able to work within the national and international regulatory environment in which it finds itself. However the Committee feels more could be done to increase the influence of ADRs on vehicle safety in Australia.
- 6.28 The Committee notes comments from Mr Robertson that ADRs “are in a state of progressive review”<sup>23</sup> but it would appear to the Committee that there is a need for a more detailed and focussed review of the ADR system. This should be done with a view to making it more responsive and more comprehensive. It is imperative that Australian consumers have access to the safest vehicles possible and reliable information on vehicle safety. ADRs should provide the benchmark in terms of what is technically feasible and vehicles should be assessed by their level of compliance with those standards. Manufacturers and importers should be given time to

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<sup>21</sup> *Transcript of Evidence* (11/02/2004), p. 18

<sup>22</sup> *Transcript of Evidence* (11/02/2004), p. 20

<sup>23</sup> *Transcript of Evidence* (11/02/2004), p.18

comply with those standards, after which non-complying vehicles should be banned from sale.

### **Recommendation 16**

**6.29 The Committee recommends that the Australian Government undertake a comprehensive review of the Australian Design Rules to:**

- **ensure that ADRs are more responsive to the rapid uptake of new vehicle safety technology; and**
- **ensure that ADRs cover components and replacement parts.**

### **Recommendation 17**

**6.30 The Committee recommends that the Australian Government ask the Australian Transport Council to devise national standards for:**

- **vehicle modification;**
- **registration of specialised vehicles; and**
- **accreditation of secondary manufacturers.**

## **ANCAP**

**6.31** In contrast to problems with the ADRs, the importance of the Australian New Car Assessment Program in accelerating the uptake of new safety technology was highlighted in evidence taken at the one day forum and several submissions received by the Committee.

**6.32** ANCAP is a consortium of government and private interests involved in the testing of new car safety standards against a range of criteria. It operates alongside similar NCAP programs elsewhere in the world. Currently, ANCAP stakeholders include:

- all state governments;
- the New Zealand Government;

- all Australian automobile clubs and the New Zealand automobile club; and
- the FIA Foundation (a road safety foundation established by the international association of automobile clubs).

6.33 Its role in promoting vehicle safety has been acknowledged under both National Road Safety Action Plans and by a range of state road authorities. Mr Howard of VicRoads described ANCAP as ‘a very important program’ which had changed car makers’ approaches to safety. He urged the Australian Government to get involved.<sup>24</sup> In its submission the RTA argued that ‘ANCAP is a far more effective tool to drive improved road safety outcomes by influencing consumers than the complex and lengthy ADR process’.<sup>25</sup> Likewise, in its submission, the Queensland Government noted:

The national strategy acknowledges that there is little potential for new Australian Design Rules (ADRs) to impact upon the outcomes up until 2010. This places more emphasis on consumer advocacy, such as provided by ANCAP, to promote vehicle design that can improve occupant and vulnerable road user safety in the interim. ANCAP has had good success in improving the occupant protection levels afforded by new vehicles above regulatory standards. ANCAP has also accelerated the uptake of advanced safety features such as frontal and side airbags and more recently seat belt reminder alarms.<sup>26</sup>

6.34 The Queensland Government urged that ANCAP be sufficiently funded to continue its work of improving vehicle safety ahead of regulatory change.<sup>27</sup> In its submission, the AAA urged the Australian Government to commit ‘to becoming a financial partner of ANCAP, contributing at least \$500,000 annually’;<sup>28</sup> while the RTA thought it anomalous that ‘the European governments recognise the benefits of NCAP and the Australian Federal Government does not’.<sup>29</sup> In its submission, ANCAP itself requested Australian Government contributions to the tune of \$500 000, citing the cost benefit:

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24 *Transcript of Evidence*, p. 10.

25 RTA, Submission no. 35.

26 Government of Queensland, Submission no. 31, p. 9.

27 Government of Queensland, Submission no. 31, p. 12.

28 AAA, Submission no. 18, p. 20.

29 RTA, Submission no. 35.

The lack of the federal government's participation must be considered in terms of the overall cost of ANCAP and the benefits delivered so far ... the yearly ANCAP budget is approximately \$1.5 million, which equates to less than \$2 per passenger vehicle sold in Australia. The government currently receives \$7.50 per car sold in Australia through sale of compliance plates, for expected total revenue in excess of \$6.5 million this calendar year [2003].<sup>30</sup>

6.35 The ANCAP submission continued:

To continue to deliver improvements in vehicle safety standards and design, the ANCAP testing program needs to not only continue but also to expand into new areas such as evaluating and reporting on the benefits of active safety systems and different crash configurations. ANCAP requires additional stakeholders with a commitment to safety such as the Australian government to continue to achieve its aims of promoting improvements in vehicle safety.<sup>31</sup>

6.36 The Committee believes the contribution of ANCAP to vehicle safety is vital. ANCAP has been and will continue to be at the forefront of improvements to safety standards. It is beholden upon the Australian Government to be a part of this process, and to make a commensurate financial contribution. The Committee believes that given what is at stake, \$500 000 per annum is a reasonable figure.

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### **Recommendation 18**

**6.37 The Committee recommends that the Australian Government join the Australian New Car Assessment Program, and contributes \$500 000 per annum to its work.**

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30 ANCAP, Submission no. 20, p. 3.

31 ANCAP, Submission no. 20, pp. 3–4.

- 6.38 The Committee was also impressed with another suggestion presented in evidence. In their submissions, both the Queensland Government and the AAA proposed using the buying power of government vehicle fleets.<sup>32</sup> The AAA noted:

Governments can play a significant role in improving occupant protection, without necessarily needing to regulate. Each year, Government fleet purchases count for around 11% of new vehicle sales...

The Government should reduce the extent of 'de-specification' and improve the safety of cars generally, by exercising its significant buying power to require higher safety standards in fleet purchases.<sup>33</sup>

- 6.39 The point of both submissions was that government fleets should include only vehicles with state of the art safety features. This proposal was also advocated by Professor Johnston in his evidence before the Committee.<sup>34</sup>

### Recommendation 19

- 6.40 The Committee recommends that the Australian Government only purchase vehicles with state of the art safety features for government car fleets, and recommend similar action to the States and Territories.**

## Specific Issues

- 6.41 During the course of the inquiry, the Committee was made aware of a number of specific vehicle safety issues which require urgent attention. These include the introduction of ADRs for alcohol interlocks, seat belt warning systems/interlocks, daytime running lights and issues surrounding vehicle incompatibility. Professor Johnston also raised the question of modifying speedometers.

32 Government of Queensland, Submission no. 31, p. 12; AAA, Submission no. 18, pp. 20, 42.

33 AAA, Submission no. 18, p. 20.

34 *Transcript of Evidence*, p. 53.

## Alcohol Interlocks

- 6.42 Alcohol interlocks are widely seen as part of the solution to the problem of drink driving. In his evidence before the Committee, Mr Howard of VicRoads explained that ‘interlocks are now required for repeat drink-drivers and high-level first offenders’, and stated the Victorian Government’s belief that this technology ‘offers tremendous protection’.<sup>35</sup>
- 6.43 Dr Job, from the NSW RTA, told the Committee that ‘we see interlocks as a valuable measure for circumventing a great many problems and a piece of technology which allows better ways to address the problem than current enforcement’.<sup>36</sup> The Minister for Transport in New South Wales has referred the question of mandatory alcohol interlocks to the ATC for investigation.<sup>37</sup>
- 6.44 The AAA has also been a strong supporter of alcohol interlocks for many years, ‘because we believe that if used correctly, alcohol interlocks will be an effective tool in preventing recidivist drink drivers from injuring or endangering the lives of themselves and others’.<sup>38</sup>
- 6.45 The Committee is of the view that alcohol interlocks are going to prove a useful tool for law enforcement. But beyond that, they also have great scope for addressing the broader problem of drink driving by preventing any person driving while drunk. It is the Committee’s belief that interlocks should be a standard fitting on all new vehicles and that an ADR should be introduced to provide for that.

### Recommendation 20

- 6.46 The Committee recommends that the Australian Government introduce an ADR for the mandatory fitting of alcohol interlocks on all new vehicles.**

35 *Transcript of Evidence*, p. 8.

36 *Transcript of Evidence*, p. 24.

37 RTA, Submission no. 35.

38 AAA, Submission no. 18, p. 21.



## Seat Belts

- 6.47 During the course of the public forum the Committee heard evidence on the efficacy of seat belt reminder systems. The general consensus was that systems designed to make people wear seatbelts needed to be sufficiently aggressive to deal with dedicated non-wearers. In his evidence before the Committee, Professor Johnston warned that ‘we are not going to make that last three per cent wear their seatbelts by any other means than, for example, an interlock system in a vehicle’.<sup>39</sup> Similarly, in its submission the Western Australian Government called for the ‘support of other jurisdictions and the Federal Government in mandating seat belt interlocks or at least more aggressive seat belt reminder systems’.<sup>40</sup>
- 6.48 On the question of whether seatbelt reminders should come under the Australian Design Rules, however, there was some conflict. Mr Peter Robertson, Assistant Secretary, Vehicle Safety Standards, in DOTARS, questioned the need for regulation given the high level of market penetration of reminder systems.<sup>41</sup>
- 6.49 On the other hand, despite the high level of seat belt compliance—some 95–97%<sup>42</sup>—failure to wear a seatbelt is a contributing factor in a disproportionate number of fatalities. In his evidence before the Committee, Mr Allan, of the South Australian Department of Transport and Urban Planning, noted:

What staggers me—and I am sure it staggers just about every road safety person—is that ... 36 per cent of vehicle occupants killed on rural roads in South Australia were not wearing a seatbelt. That absolutely staggers me. The same rule applies and the same trend applies in South Australia that about 95 per cent of people are wearing seatbelts, but it clearly shows the risk you face if you do not have one on.<sup>43</sup>

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39 *Transcript of Evidence*, p. 55.

40 Government of Western Australia, Submission no. 37, p. 11.

41 *Transcript of Evidence*, pp. 47–8.

42 *Transcript of Evidence*, pp. 31, 53.

43 *Transcript of Evidence*, p. 31.

6.50 Similar results were reported in Western Australia. In its submission, the Western Australian Government stated:

In 2002 (preliminary data) about 21 per cent of drivers and passengers killed in road crashes were not wearing seatbelts and in a further 12 per cent it was not known whether seta belts were worn.

In rural areas the percentage of drivers and passengers killed not wearing seatbelts is higher. In 2002 (preliminary) 23 per cent of those people in country crashes were not wearing seatbelts compared to 13 per cent in the Perth metropolitan area.<sup>44</sup>

6.51 Given the magnitude of this problem, the Committee believes it is incumbent upon the Australian Government to take a more stringent approach to the problem of non-compliance with seatbelts laws. The Committee supports the immediate introduction of an ADR providing for the fitting in all new cars of intrusive seat belt warning devices and the eventual introduction of an ADR proving for the fitting of seatbelt interlocks.

## Recommendation 21

6.52 **The Committee recommends that the Australian Government:**

- **immediately introduces an ADR providing for the fitting in all new cars of intrusive seat belt warning devices;**
- **directs the ATSB to conduct research into seatbelt interlocks with a view to introducing an ADR by 2010.**

## Daytime Running Lights and Fog Lights

6.53 Evidence received by the Committee was strongly in favour of the mandatory introduction of daytime running lights. Both Mr Ian Faulks, Committee Manager of the New South Wales Staysafe Committee, and Mr Hannifey spoke strongly in favour of their introduction during the Committee's one day forum.<sup>45</sup>

44 Government of Western Australia, Submission no. 37, pp. 10–11.

45 *Transcript of Evidence*, p. 40.

6.54 In its submission, the NMAA wrote:

Daytime Running Lights (DRL) are compulsory on new vehicles in Europe, the United Kingdom and North America. Most Australian drivers consider that headlights are solely for the purpose of illuminating the road ahead. Very few realise that headlamps increase the visibility of the vehicle to other road users. The Inquiry should support this low cost option which dramatically increases vehicle visibility, particularly for dark coloured vehicles. Pedestrians are better protected when vehicles are more visible—some elderly pedestrians have very poor eyesight and hearing.<sup>46</sup>

6.55 In its submission, the RTA proposed the adoption of daytime running lights as an ADR. Recognising this would take some time, however, it proposed as an interim measure that ‘agreement could be sought from manufacturers for the voluntary adoption of DRL (as they do in Europe and the USA).

6.56 The Committee supports the adoption of daytime running lights as a mandatory standard under an Australian Design Rule. It also urges the Australian Government to pursue the voluntary adoption of daytime running lights as an interim measure.

## Recommendation 22

6.57 **The Committee recommends that the Australian Government introduce an ADR for the mandatory fitting of daytime running lights on all new vehicles.**

6.58 On the other hand, the evidence received by the Committee with regard to fog lights indicated that they were regarded as a real road safety problem. In his evidence, Mr Hannifey said:

Fog lights are an absolute menace to people who spend their life on the road, particularly when driving at night. Currently, there is no need for a warning light on the dash for forward facing fog lights; it is only required for rear facing fog lights ... I think there is a \$67 fine in New South Wales for driving with your fog lights on. At the moment it is done for pose value—every young bloke has a

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46 NMAA, Submission no. 5.

car and, if it does not already have two more lights, he will hang them on the front. With our roads being less than smooth, as you drive at night it is hard enough to get people to dip their lights let alone having them dip and finding even brighter lights under the bumper bar.<sup>47</sup>

- 6.59 Similar sentiments were expressed by Mr Gardiner in his submission to the inquiry. However, he also raised the issue of standards with regard to headlights generally:

The next complication is the fitment of after market globes that provide 30% to 50% more light, while other work in a different spectrum—cool blue, ice, and other variants are freely available.

Add to this mix the HID (Xenon High Intensity Discharge) lights that are so powerful they require fitment to vehicles with self-levelling suspensions, but due to our non-autobarn style of roads result in glare on occasions that require extreme concentration by the approaching driver.<sup>48</sup>

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### **Recommendation 23**

- 6.60 **The Committee recommends that the Australian Government ask the Australian Transport Council to investigate the issue of fog lights and vehicle light fittings generally with a view to adopting ADRs which:**
- **prevent the fitting of unnecessarily powerful lights to any vehicle;**
  - **ensure that all light fittings comply with appropriate safety standards.**

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47 *Transcript of Evidence*, p. 93.

48 Mr Douglas Gardiner, Submission no. 33, pp. 6–7.

## Rollover Protection

- 6.61 In an article entitled 'Rollover: One of the Road Safety Problems that is not being addressed', which appears in the 2004 year book of the Australasian College of Road Safety, Shane Richardson of DVExperts Pty Ltd, highlights the lack of government regulation or consumer testing of passenger vehicles and four-wheel drives with regard to occupant protection in rollover crashes. He notes that rollovers are a major cause of serious injuries and fatalities, and that four wheel drive vehicles have up to five times the rollover rate of typical passenger cars. He recommends consumer testing for both rollover propensity and crashworthiness, and the introduction of regulations to provide effective rollover protection in passenger cars and four wheel drives. He is concerned, however, that crash testing of vehicles be conducted under realistic conditions as limited simulations give a poor indication of either propensity to roll or occupant protection.<sup>49</sup>
- 6.62 The Committee is concerned at the apparent lack of effective occupant protection in passenger vehicles and four wheel drives involved in rollover accidents, and the lack of consumer information available with regard to rollover propensity and crashworthiness. The Committee is of the view that rollover protection should be addressed in ANCAP testing and ADRs, and that the assessment of vehicles should be based on real world performance not limited simulations.

### Recommendation 24

- 6.63 **The Committee recommends that the Australian Government:**
- **ask the Australian Transport Council to introduce ADRs for rollover protection in passenger vehicles and four wheel drives; and**
  - **fund ANCAP testing of rollover propensity and crashworthiness of passenger vehicles and four wheel drives.**

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<sup>49</sup> Shane Richardson, 'Rollover: One of the Road Safety Problems that is not being addressed', in Australasian College of Road Safety, 2004 Year Book, *Road Safety Towards 2010*, pp. 48-50.

## Reversing Alarms and Cameras

- 6.64 During its one day forum, the Committee heard evidence on the need for and efficacy of reversing alarms and cameras. Mr Scruby highlighted the fact that there ‘were 18 people killed last year by reversing vehicles, 12 of which were four-wheel drives’. While supporting the use of vehicle alarms, Mr Scruby noted that young children do not always react to alarms. He endorsed the use of reversing cameras, which provide a clear rear view through the rear vision mirror when a vehicle reverses.<sup>50</sup>
- 6.65 The Committee is concerned about the vulnerability of children to reversing vehicles and the disproportionate representation of four wheel drive vehicles in reversing accidents. The Committee believes that reversing alarms and cameras should be mandatory fittings on four wheel drive vehicles, and should become mandatory fittings on all vehicles.

### Recommendation 25

- 6.66 **The Committee recommends that the Australian Government:**
- **ask the Australian Transport Council to introduce ADRs for reversing alarms and cameras; and**
  - **fund ANCAP testing of reversing alarms and cameras.**

## Vehicle Compatibility

- 6.67 The vexed question of vehicle compatibility was raised by a number of witnesses and submissions before the inquiry.<sup>51</sup> Small cars have become increasingly popular with women and younger drivers due to their low cost, while larger vehicles, such as four wheel drives, have also grown in popularity. This has presented particular challenges in terms of vehicle safety. In his evidence before the Committee, Professor Johnston noted:

There is absolutely nothing in the design rules on vehicle compatibility. If we look into the future of road safety, that is probably the single biggest problem. The mid-sized cars are disappearing, the big four-wheel drives are growing very rapidly

50 *Transcript of Evidence*, p. 77.

51 *Transcript of Evidence*, pp. 12, 20, 53, 83.

and the very small cars are growing very rapidly, and the unequal mass of the vehicles works counter to road safety. We have to address compatibility, but the National Road Safety Strategy does not even talk about it.<sup>52</sup>

- 6.68 The Committee notes that the *National Road Safety Action Plan 2003 and 2004* recommends that research be conducted into the 'vehicle compatibility implications of the increasing diversity of the Australian vehicle fleet' including potential countermeasures.<sup>53</sup> The Committee believes such research should be carried out as a matter of priority.

### Recommendation 26

- 6.69 **The Committee recommends that the Australian Government urge the Australian Transport Council to commission research into the problem of vehicle compatibility as a matter of priority with a view to identifying specific countermeasures to be applied in the next National Road Safety Action Plan and beyond.**

- 6.70 Of particular concern was the increasing number of four wheel drive vehicles upon our roads. In its submission the Queensland Government stated:

Vehicle incompatibility ... provides a challenge for road safety. Population growth, changing vehicle purchasing patterns and the increased freight task are impacting on the types of vehicles entering the transport system resulting in increasing numbers of small passenger vehicles, 4WDs and light commercial vehicles. This may lead to a potential for greater injuries for small vehicle occupants in the event of a crash with a larger vehicle. Of increasing concern is the mass and geometry incompatibility of 4WDs with other passenger cars that may result in higher injury levels to occupants in passenger cars in the event of a collision with a 4WD.<sup>54</sup>

52 *Transcript of Evidence*, p. 53.

53 ATC, *National Road Safety Action Plan 2003 and 2004*.

54 Government of Queensland, Submission no. 31, p. 5.

- 6.71 Evidence presented to the Committee indicated that four wheel drives were overrepresented in road trauma statistics. Several witnesses called for the favourable tariff treatment accorded four wheel drives to be rescinded in an effort to discourage their use.<sup>55</sup>
- 6.72 The Committee shares this concern and supports bringing tariffs on four wheel drives back into line with other imported passenger vehicles. The only proviso would be that genuine primary producers should be able to purchase four wheel drive vehicles tariff free.

### **Recommendation 27**

- 6.73 **The Committee recommends that the Australian Government bring the tariff on four wheel drive vehicles into line with the tariff on other imported cars, with genuine primary producers and others who have a legitimate need for four wheel drive capability receiving tariff exemption.**
- 6.74 The Committee also shares Mr Scruby's concern that bull-bars and other illegal protuberances continue to proliferate despite design rules which specifically prohibit them.<sup>56</sup> As bull-bars are inherently dangerous and rarely serve the purpose for which they are intended, the Committee believes that the onus should be upon the vehicle owner to prove that they require such protection for their vehicle on-farm or for other commercial purposes; that the vehicle be specifically registered to show this; that vehicles not so registered have bull-bars and other protuberances removed; and that where vehicle owners fail to comply their vehicles are impounded.

### **Recommendation 28**

- 6.75 **The Committee recommends that the Australian Government work with its State and Territory counterparts to prohibit the use of non-compliant bull-bars, except under specific exemption, and to remove all vehicles from the road that fail to comply with such prohibition.**

55 *Transcript of Evidence*, pp. 24, 77; RTA, Submission no. 35.

56 *Transcript of Evidence*, p. 72.



## Speedometers

- 6.76 In his evidence before the Committee, Professor Johnston raised the issue of speedometers in relation to speeding, asking, quite reasonably in the Committee's view, why speedometers needed to show speeds well in excess of any legal speed limit:

We market cars on speed and power, and we have talked about that kind of advertising and its impact already. The vehicle industry likes to suggest that it does not have much impact, but we know that is not true. If we stopped installing speedos that went around to 240 kilometres per hour with 100 kilometres per hour being at the vertical point, we could really start to discriminate. It would be impossible for a vehicle manufacturer to sell on speed and power when the speedo looked like that. It is not something that would impact on global marketing, because you can put into our cars any other kind of meter, since all you have is a calibrated speedo.<sup>57</sup>

- 6.77 The Committee can see no good reason why the change suggested could not be implemented, and agrees that it would have an impact on the way motor vehicles are marketed and driven.

### Recommendation 29

- 6.78 **The Committee recommends that the Australian Government ask the Australian Transport Council to investigate the design of speedometers with a view to bringing them into line with actual speed limits.**

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57 *Transcript of Evidence*, pp. 53–4.

