



ACRS

The Australian College of Road Safety

News Letter



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Victorian Chapter

VEHICLE SAFETY

If all car owners purchased the safest car in their class (small, medium, large) the road toll would be reduced by 40 to 50 per cent." European Transport Safety Council.

Happy New Year to all ACRS-Victorian Chapter Newsletter readers and welcome to this Vehicle Safety edition - the first for 2004. On the back of Victoria's lowest annual road toll on record (330), it is important to remember that significant gains can still be made in the death and injury toll. As the above quote illustrates, encouraging the population to purchase safer cars, and encouraging manufacturers to include safety features as standard items, is potentially one of the most effective ways to continue to reduce the road toll. Whilst there is no specific College policy on vehicle safety, it recognises its importance having policies on Vehicle Contributors and Countermeasures, e.g. airbags. Occupant protection is also one of the challenges identified in *arrive alive!* - Victoria's Road Safety Strategy 2002-2007. In December 2003, the Victorian Chapter of ACRS hosted a seminar titled, *The Car - Friend or Foe of Safety?* David Healy, General Manager Road Safety, Transport Accident Commission chaired the seminar and introduced speakers from road safety organisations and industry who provided an update on the latest developments in improving the safety of vehicles.

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Manager Environmental & Safety Engineering, Bruce Priddle from Ford Australia presented vehicle safety from a manufacturer's perspective using the BA Falcon as an example. Ford was keen to ensure that the BA Falcon delivered new levels of occupant crash protection to its customers and sought to do this through the use of Systems Engineering and Intelligent Safety technologies. Mr Priddle explained how road safety is a classic systems engineering problem involving three main systems - the road environment, the vehicle, and the driver. While each system can contribute individually to overall safety, the reliability of the road system depends heavily on the interactions between the three systems. He explained that road trauma is invariably the consequence of a system interaction failure. In advancing the direction of a "Vision Zero" each system must be designed with the other in mind so that the interfaces can be managed optimally. The BA Falcon is the safest Australian made vehicle in its class receiving an ANCAP rating of four stars.

Senior Projects Officer, Paul Tierney from the Transport Accident Commission outlined research being undertaken by the TAC in conjunction with Ford Australia and the Monash University Accident Research Centre into Intelligent Transport Systems (ITS). The TAC SafeCar project seeks to identify and test ITS technologies that have an impact upon road safety, and to combine them into one vehicle to build a truly Safe Car. The ITS technologies included in the SafeCar were chosen for their anticipated ability to reduce the incidence and severity of crashes dealing with issues of speeding, following distance, seatbelt wearing, reversing crashes and conspicuity. Each of the

warnings are silent so drivers will be unaware that they are driving a TAC SafeCar. Studies have estimated that intelligent vehicle technology that assists drivers to avoid crashes could reduce the road trauma by more than 20%.

Senior Research Fellow, Dr Narelle Haworth from the Monash University Accident Research Centre discussed the role of vehicle safety in improving the safety of company fleets. Background information presented on the topic demonstrated that road crashes are the most common type of work related death in Australia (49% of all work related fatalities) and 13% of all road fatalities involved fleet drivers. Speeding and driver fatigue are particular concerns with work-related driving. Dr Haworth outlined what some of the benefits of reduced crashes for organisations are and she explained the Occupational Health and Safety responsibility of companies to their fleet drivers. Various fleet safety initiatives were presented with corresponding evidence of their effectiveness - if any. These included fleet safety guidelines, driver selection and induction procedures, selecting safer vehicles, driver training and education, driver management, incentives and disincentives, and company safety programs. Dr Haworth concluded that safer vehicles have an important role to play in improving the safety of work-related driving, however, vehicle selection is not everything. There is also the need for ongoing management of drivers and vehicles.

Ross McArthur, Manager Vehicle Safety VicRoads, provided an overview of vehicle safety initiatives throughout the world, and in particular, France, Germany, Italy, Japan, Sweden, Poland, the Netherlands, UK, Canada and USA. The Swedish "Vision Zero" approach was also discussed in relation to the reversal of the mobility/safety equation. Mr McArthur suggested that in general there seems to be a greater commitment to NCAP worldwide, largely brought on by a disillusionment with the time taken to amend vehicle standards.

Mr McArthur then focused on new technologies in vehicle safety as one of the key methods in which the road toll could be reduced further. In particular, preventative crash and pre-crash features were highlighted as the features likely to deliver the next wave of safety benefits.

Keynote Speaker, Chairman of NCAP Australia, Lauchlan McIntosh spoke of the key role of ANCAP as the public face trying to advertise what car companies are doing in terms of in vehicle safety and to facilitate improvements in safe vehicle selection through consumer education and buying power.

Mr McIntosh reported that modern cars are safer and cleaner than ever before and are now designed to achieve good NCAP ratings. He reflected that as NCAP programs continue to drive these ratings higher, this will hopefully result in more crashworthy vehicles. However, he did express concerns over the inconsistencies in vehicle safety standards between models of vehicles, between manufacturers and between countries. He highlighted that there is considerable amount of de-specification of safety

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(cont...)

features in Australian vehicles compared to vehicles in the United Kingdom. Many safety features are considered non-standard in the Australian market, making the cost of improving occupant safety higher for consumers and thus influencing purchasing considerations.

In his view, the use of technology to reduce human error is ever increasing – a statement exemplified by the introduction of active safety features such as adaptive cruise control, distance warning systems and seat belt reminder systems. He suggested that in the future there will be a greater focus on the marketing and assessment of these active safety features in addition to the results of vehicle crash testing, and together these ratings will provide greater direction for consumers when making purchasing decisions. He concluded his presentation by stating that the next key challenge is 'matching five star cars to star roads' – and such a challenge requires the effective integration of vehicle based safety technologies into the road environment.

ANCAP - THE TESTING PROCESS

The Australian New Car Assessment Program (ANCAP) is designed to provide consumers with information about how well new vehicle models protect their occupants in serious crashes. Crash tests are designed to simulate two of the most frequently occurring types of collision.

Each vehicle model tested in ANCAP is subjected to an offset crash test into a barrier, a side impact test and a pedestrian impact test. A pole test is optional. The vehicles purchased for the test program were typical of those vehicles available to new car purchasers.

The offset frontal crash test stimulates colliding with another vehicle. In this test, 40% of the car, on the driver's side, initially makes contact with a crushable aluminium barrier at 64km/h.



The side impact test consists of running a 950kg trolley into the driver's side of the test vehicle at 50km/h. The trolley has a crushable aluminium face to simulate the front of another vehicle.

A pole test is an extra test, available at the manufacturer's cost, if the vehicle performs very well in the side impact test and is fitted with head protecting side airbags. None of the vehicles tested by ANCAP in Australia were fitted with head protection airbags. The vehicle impacts a steel pole lined up with the driver's head, at 29km/h sideways.

Below is an example of the results from ANCAP testing for the small vehicle class. If you are purchasing a car or know someone who is ANCAP results and Used Car Safety Ratings are useful tools for checking and comparing the safety of vehicles. Used Car Safety Ratings, based on analysis by MUARC, help consumers identify safer models when purchasing a second-hand vehicle. For more information or to compare vehicle safety ratings go to www.howsafeisyourcar.com.au or pick up some brochures at VicRoads offices or RACV shops for more information.

LATEST CRASH TEST RESULTS

Vehicle Make & Model	Occupant Rating				
	1*	2*	3*	4*	5*
ANCAP Small Cars					
Honda Jazz Front Airbags, 2003 on	[Progress bar showing 5 stars]				
Hyundai Getz Driver Airbag, 2002 on	[Progress bar showing 4 stars]				
Mitsubishi Lancer Front Airbags, 2003 on	[Progress bar showing 4 stars]				
Daewoo Kalos Front Airbags, 2003 on	[Progress bar showing 3 stars]				
ANCAP Compact 4WDs					
Holden Cruze 4WD Front Airbags, 2003 on	[Progress bar showing 4 stars]				

COMING EVENTS



ACRS - Vic. Chapter Hypothetical

Emerging liability issues for businesses with fleets

Tuesday 23 March 2004, 2pm - 4.30pm

Venue: Parliament House, Spring Street, Melbourne

The College will assemble a panel of experts which will discuss a hypothetical case of a worker seriously injured while driving for work. Legal and OH&S responsibilities of fleets will be addressed. Vehicle fleet managers, risk managers, OH&S reps, road safety practitioners & drivers concerned about safety would benefit from attending.

If you wish to attend please email details to jgspeas@bigpond.com.au before Friday 19 March 2004.

World Health Day 2004: Road Safety

Wednesday 7 April 2004, 10am-12:30pm

Venue: Parliament House, Spring Street, Melbourne

Every year the World Health Organization (WHO) hosts an event, focusing on one health issue. This year World Health Day (WHD) focuses on road trauma and its prevention. The ACRS, Victorian Chapter will be hosting the key WHD event in Victoria, a seminar focusing on the Past, Present & Future of Road Safety in this state.

For more information on what is happening around the world on World Health Day, follow the link from the College website - www.acrs.org.au

Australian Institute of Traffic Planning & Management (AITPM)

has released its calendar of events for 2004:

Upcoming technical forum dates & topics:

9 March - Vehicles of the Future

6 April - Enforcement strategies

5 May - Traffic Signs

For more information go to: www.aitpm.org.au

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