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## Accident Research Centre

**VEHICLE SAFETY RATINGS ESTIMATED FROM  
POLICE REPORTED CRASH DATA: 2007 UPDATE  
AUSTRALIAN AND NEW ZEALAND CRASHES DURING 1987-2005**

by

Stuart Newstead  
Linda Watson  
& Max Cameron

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**Author(s)**

Newstead, S.V., Cameron, M.H. and Watson, L.M.

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**Abstract:**

Crashworthiness ratings measure the relative safety of vehicles in preventing severe injury to their own drivers in crashes whilst aggressivity ratings measure the serious injury risk vehicles pose to drivers of other vehicles and unprotected road users such as pedestrians, cyclists and motorcyclists. Updated crashworthiness ratings and aggressivity ratings for 1982-2005 model vehicles were estimated based on data on crashes in Victoria and New South Wales during 1987-2005, in Queensland, Western Australia and New Zealand during 1991-2005 and in South Australia during 1995-2005. This update of the ratings included South Australian crash data for the first time. Both crashworthiness and aggressivity were measured by a combination of injury severity (the risk of death or serious injury given an injury was sustained) and injury risk (the risk of injury given crash involvement). The ratings were adjusted for the sex and age of the person whose injury outcome was being measured, speed limit at the crash location, the number of vehicles involved where relevant, the jurisdiction in which the crash occurred and the year in which the crash occurred. These factors were strongly related to injury risk and/or severity. In addition to the above factors the aggressivity rating was also adjusted for the type of other road user impacted as this factor was strongly related to injury severity and varied between vehicle models. The ratings estimate the risk of being killed or admitted to hospital when involved in a crash, to a degree of accuracy represented by the confidence limits of the rating in each case.

Crashworthiness estimates and their associated confidence limits were obtained for 381 vehicle models classified into 10 market groups. They were sufficiently sensitive that they were able to identify 180 models of passenger cars, four wheel drive vehicles, passenger vans and light commercial vehicles that have superior or inferior crashworthiness characteristics compared with the average vehicle. Aggressivity rating estimates and their associated confidence limits were obtained for 349 vehicle models and were sufficiently sensitive that they were able to identify 145 models of passenger cars, four wheel drive vehicles, passenger vans and light commercial vehicles that have superior or inferior aggressivity characteristics compared with the average vehicle.

The relationship between vehicle crashworthiness and the year of manufacture of Australian passenger and light commercial vehicles manufactured from 1964 to 2005 was also investigated. Trends were examined by year of manufacture both for the fleet as a whole and by market group for vehicles manufactured from 1982 to 2005.

The results of this report are based on a number of assumptions and warrant a number of qualifications that should be noted.

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**Key Words: (IRRD except when marked\*)**

Injury, Vehicle Occupant, Collision, Passenger Car Unit, Passive Safety System, Statistics

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Monash University Accident Research Centre Building 70, Monash University  
Victoria 3800, Australia. Telephone: +61 3 9905 4371, Fax: +61 3 9905 4363

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## EXECUTIVE SUMMARY

This report describes the development of further updated vehicle safety ratings for 1982-2005 model vehicles. The ratings produced cover both vehicle crashworthiness and aggressivity. Crashworthiness ratings measure the relative safety of vehicles in preventing severe injury to their own drivers in crashes whilst aggressivity ratings measure the serious injury risk vehicles pose to other road users with which they collide. The aggressivity rating measure is based on collisions between the vehicle being rated and both other vehicles and unprotected road users. It was first developed and successfully applied in Newstead et al (2005b) and in the most recent ratings of Newstead et al (2006) and has been updated here. Both measures are estimated from data on real crashes reported to police. The update is based on crash data from Victoria and New South Wales during 1987-2005, from Queensland, Western Australia and New Zealand during 1991-2005 and for the first time from South Australia during 1995-2005. The rating of vehicle crashworthiness through analysis of real crash data, as carried out here, and through crash tests carried out by consumer groups such as the Australian New Car Assessment Program is aimed at informing consumers about relative vehicle safety performances as well as encouraging manufacturers to improve vehicle safety.

Crashworthiness ratings were measured by a combination of injury severity (of injured drivers) and injury risk (of drivers involved in crashes). Crashworthiness injury severity was based on 293,505 drivers injured in crashes in Victoria during 1987-2005, in New South Wales during 1987-1998, in South Australia during 1995-2005 and in Queensland, Western Australia and New Zealand during 1991-2005. Crashworthiness injury risk was based on 1,608,956 drivers involved in crashes in New South Wales during 1987-2005, in South Australia during 1995-2005 and Western Australia and Queensland during 1991-2005 where a vehicle was towed away or someone was injured. The crashworthiness ratings were adjusted for the driver sex and age, the speed limit at the crash location, the year in which the crash occurred, the jurisdiction in which the crash occurred and the number of vehicles involved in the crash. These factors were found to be strongly associated with injury risk and injury severity. Adjustments were made with the aim of measuring the effects of vehicle factors alone, uncontaminated by other non-vehicle related factors available in the data that affected crash severity and injury susceptibility.

The crashworthiness ratings estimate the risk of a driver of the focus vehicle being killed or admitted to hospital when involved in a tow-away crash, to a degree of accuracy represented by the confidence limits of the rating in each case. Crashworthiness ratings and their associated confidence limits were calculated for 381 individual vehicle models manufactured between the years 1982-2005. The estimates and their associated confidence limits were sufficiently sensitive that they were able to identify 180 models of passenger cars, four wheel drive vehicles, passenger vans and light commercial vehicles that have superior or inferior crashworthiness characteristics compared with the average crashworthiness across all vehicles in the data. Vehicles were classified into one of 10 market groups for presentation of the ratings with average crashworthiness of vehicles in each market group estimated.

The measure of aggressivity was calculated for 349 models of Australian and New Zealand passenger vehicles manufactured between the years 1982-2005. The aggressivity ratings estimate the risk of a vehicle driver or unprotected road user impacting with the focus

vehicle model being killed or admitted to hospital when involved in a crash. The estimates and their associated confidence limits were sufficiently sensitive that they were able to identify 145 vehicle models that have superior or inferior aggressivity characteristics compared with the average aggressivity across all vehicle models in the data. Average aggressivity for vehicles in each of the 10 defined market groups was also estimated. Estimated vehicle aggressivity towards drivers of other vehicles or unprotected road users was found to have little or no relationship with ratings of vehicle crashworthiness, demonstrating the independence of the two complementary measures.

For both crashworthiness and aggressivity, the expanded data set has been able to produce more up-to-date and reliable estimates of the crashworthiness of individual car models than those published previously.

The crashworthiness of passenger vehicles in the Australian vehicle fleet (cars, station wagons, four wheel drives and vans), has been estimated by year of manufacture for the years 1964 to 2005. This study further updates the original one by Cameron et al (1994a) for years of manufacture 1964 to 1992. Updated trends in Australian crashworthiness by year of manufacture show similar patterns as previously obtained with the greatest gains over the years 1970 to 1979 in which a number of new Australian Design Rules aimed at occupant protection took effect. Further significant gains in crashworthiness have also been observed over the years 1986 to 2005, with notable steady gains from 1985 to 1995 and since 2000. Trends in crashworthiness by year of vehicle manufacture from 1982 to 2005 for each of the 10 vehicle market groups were also estimated showing differential improvement in crashworthiness by market group by year of manufacture.

The results and conclusions are based on a number of assumptions and warrant a number of qualifications that should be noted.

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# CONTENTS

	Page No.
<b>1. INTRODUCTION.....</b>	<b>2</b>
1.1 CRASHWORTHINESS RATINGS.....	2
1.2 AGGRESSIVITY RATINGS .....	3
1.4 TRENDS IN VEHICLE SAFETY BY YEAR OF MANUFACTURE AND MARKET GROUP.....	4
1.5 PROJECT AIMS .....	5
<b>2. CRASH DATA .....</b>	<b>6</b>
2.1 VICTORIAN CRASHES.....	6
2.2 NEW SOUTH WALES CRASHES .....	8
2.3 QUEENSLAND CRASHES.....	9
2.4 WESTERN AUSTRALIA CRASHES.....	10
2.5 SOUTH AUSTRALIA CRASHES .....	11
2.6 CRASH AND REGISTRATION DATA FROM NEW ZEALAND .....	12
2.7 COMBINED DATA FROM THE SIX JURISDICTIONS .....	12
<b>3. MODELS AND MARKET GROUPS OF VEHICLES.....</b>	<b>14</b>
3.1 VEHICLE MODEL IDENTIFICATION .....	14
3.2 POOLED CAR MODELS .....	15
3.3 VEHICLE MARKET GROUPS .....	16
<b>4. ANALYSIS .....</b>	<b>18</b>
4.1 OVERVIEW OF ANALYSIS METHODS: CRASHWORTHINESS .....	18
4.2 OVERVIEW OF THE ANALYSIS METHODS: AGGRESSIVITY .....	19
<b>5. RESULTS .....</b>	<b>21</b>
5.1 VEHICLE CRASHWORTHINESS RATINGS.....	21
5.1.1 <i>Injury Risk</i> .....	21
5.1.2 <i>Injury Severity</i> .....	22
5.1.3 <i>Crashworthiness Ratings</i> .....	22
5.1.4 <i>Comparisons with the All Model Average Rating</i> .....	23
5.2 AGGRESSIVITY.....	38
5.2.1 <i>Aggressivity towards Other Car Drivers and Unprotected Road Users</i> .....	38
5.2.2 <i>Aggressivity Rating Statistically Significant Makes and Models</i> .....	40
5.2.5 <i>Relationship between Aggressivity and Crashworthiness</i> .....	53
5.3 PRESENTATION OF CRASHWORTHINESS AND AGGRESSIVITY RATINGS FOR CONSUMER INFORMATION.....	54
5.4 CRASHWORTHINESS BY YEAR OF MANUFACTURE OF THE AUSTRALIAN VEHICLE FLEET .....	56
5.4.1 <i>Injury Risk</i> .....	56
5.4.2 <i>Injury Severity</i> .....	56
5.4.3 <i>Crashworthiness by Year of Manufacture</i> .....	57
5.5 CRASHWORTHINESS BY YEAR OF MANUFACTURE AND MARKET GROUP FOR THE AUSTRALIAN VEHICLE FLEET.....	59
5.5.1 <i>Injury Risk</i> .....	59
5.5.2 <i>Injury Severity</i> .....	60
5.5.3 <i>Crashworthiness by Year of Manufacture and Market Group</i> .....	61
<b>6. CONCLUSIONS .....</b>	<b>64</b>

<b>7.</b>	<b>ASSUMPTIONS AND QUALIFICATIONS .....</b>	<b>65</b>
7.1	ASSUMPTIONS .....	65
7.2	QUALIFICATIONS .....	65
	<b>REFERENCES .....</b>	<b>66</b>

## **APPENDICES**

- APPENDIX 1.** Makes and models of cars involved in Victorian and New South Wales crashes during 1987-2005, South Australia crashes during 1995-2005 and Western Australia, Queensland and New Zealand crashes during 1991-2005
- APPENDIX 2.** Logistic regression estimates of crashworthiness injury risk by model and market group
- APPENDIX 3.** Logistic regression estimates of crashworthiness injury severity by model and market group
- APPENDIX 4.** Crashworthiness ratings of 1982-2005 models of cars involved in crashes during 1987-2005
- APPENDIX 5.** Aggressivity injury risk aggressivity injury severity and ratings of vehicle aggressivity (with 95% and 90% confidence limits), towards other vehicle drivers
- APPENDIX 6** Presentation of crashworthiness and aggressivity ratings for consumer information
- APPENDIX 7.** Crashworthiness, injury risk and injury severity estimates by year of vehicle manufacture for the Australian vehicle fleet
- APPENDIX 8.** Crashworthiness, injury risk and injury severity estimates by year of vehicle manufacture by market group for the Australian vehicle fleet



# **VEHICLE SAFETY RATINGS ESTIMATED FROM POLICE REPORTED CRASH DATA: 2007 UPDATE**

**AUSTRALIAN AND NEW ZEALAND CRASHES DURING 1987-2005**

# 1. INTRODUCTION

For over 15 years the Monash University Accident Research Centre (MUARC) has been involved in a program of research examining issues relating to vehicle safety in both Australia and New Zealand through the analysis of mass data records on crashes reported to police. Data on which the research to date is based has come from reports compiled by police in various States across Australia and in New Zealand. In Victoria, the police reported crash data has been augmented by data on injury compensation claims resulting from transportation crashes compiled by the Victorian Transport Accident Commission (TAC).

A principal focus of the research program has been to produce vehicle secondary safety ratings for specific makes and models of vehicles and by market group of vehicle. They focus on two aspects of vehicle safety performance: crashworthiness, being the ability of a vehicle to protect its own occupants in the event of a crash, and aggressivity, the ability of a vehicle to protect other road users with which it collides. The ratings have been published annually by the agencies supporting the research as a source of consumer information to aid the purchase of safe vehicles. They are marketed as the Used Car Safety Ratings reflecting the fact that ratings can only be produced some time after a vehicle is released for sale once sufficient real world crash experience has been accumulated. It also differentiates these ratings from those derived under the Australia New Car Assessment Program based on crash barrier testing results which are targeted largely at new vehicle buyers.

## 1.1 Crashworthiness Ratings

Crashworthiness ratings rate the relative safety of vehicles by examining injury outcomes to drivers in real crashes. The crashworthiness rating of a vehicle in the ratings system used in this report is a measure of the risk of death or serious injury to a driver of that vehicle when it is involved in a crash. This risk is estimated from large numbers of records of injury to drivers of that vehicle type involved in real crashes on the road. It is measured in two components:

1. Rate of injury for drivers involved in crashes where a vehicle is towed away or someone is injured (injury risk)
2. Rate of serious injury (death or hospital admission) for injured drivers (injury severity).

Multiplying these two rates together forms the crashworthiness rating. This is a measure of the risk of serious injury for drivers involved in crashes where a vehicle is towed away or someone is injured. Measuring crashworthiness as a product of two components, reflecting risk and severity of injury respectively, was first developed by Folksam Insurance, which publishes the well-known Swedish ratings (Gustafsson et al 1989) and were first published in Australia in Cameron et al (1994a,b) These ratings use an analysis method that was developed to maximise the reliability and sensitivity of the results from the available data whilst adjusting for the effects on injury outcome of non-vehicle factors that differ between vehicles. In addition to the speed zone and driver sex, the method of analysis adjusts for the effects of driver age and the number of vehicles involved, producing results with all those factors taken into account.

The ratings have been updated at regular intervals (Newstead et al 1996, Newstead et al 1997, Newstead et al 1998, Newstead et al 1999, Newstead et al 2000, Newstead et al 2003a, Newstead et al 2004b, Newstead et al 2005b, Newstead et al 2006). The most recent prior update covered vehicles manufactured over the period 1982-2004 and crashing during 1987-2004.

Progressive enhancement of the methods of statistical analysis has been incorporated through the ratings updates. From 1999 the ratings incorporated police-reported crash data from Queensland whereas previously only crash data from New South Wales and Victoria had been used. From 2003 the ratings also added police-reported crash data from Western Australia. From 2004 the ratings included police-reported crash data from New Zealand after a rigorous program of research establishing the comparability of vehicles between the Australian and New Zealand vehicle fleets in terms of their specification and secondary safety performance (Voyce, 2000; Robinson, 2000a,b, Newstead, 2000b, Newstead, 2002, Newstead et al 2003b). This ratings update includes for the first time police-reported crash data from South Australia. The crashworthiness ratings covered individual models of sedans, station wagons, four wheel drives, passenger vans and light commercial vehicles and are given as estimates of risk of severe injury for each model along with 90% and 95% confidence limits on each estimate.

## 1.2 Aggressivity Ratings

The aggressivity measure used in the Australian vehicle safety rating system estimates the risk of the driver of another car or an unprotected road user (pedestrian, bicyclist or motorcyclist) being killed or seriously injured when involved in a collision with the subject model vehicle. It is representative of the total aggressivity performance of the vehicles being rated across all potential collision partners. Like the crashworthiness measure, it is calculated as the product of two component measures, one measuring injury risk the other measuring injury severity.

Because an estimate of the risk of injury cannot be calculated for unprotected road users since crashes are generally not reported to the police when the unprotected road user is uninjured, the measure of aggressivity injury risk is based only on the injury risk to the drivers of other vehicles (ROU). It is defined as:

$$\text{Aggressivity Injury Risk} = \text{ROU} = \frac{\text{proportion of other vehicle drivers involved in crashes who were injured}}{\text{total number of other vehicle drivers}}$$

In contrast, complete records of both other drivers and unprotected road users injured in crashes are available in police reported crash data and can be used to examine injury severity outcomes in the aggressivity measure. The aggressivity injury severity measure (SOU) is defined as:

$$\text{Aggressivity Injury Severity} = \text{SOU} = \frac{\text{proportion of other vehicle drivers or unprotected road users who were killed or admitted to hospital.}}{\text{total number of other vehicle drivers and unprotected road users}}$$

The aggressivity measure for each subject car model is then calculated as:

$$\text{Aggressivity to other driver or unprotected road user} = \text{AOU} = \text{ROU} \times \text{SOU}.$$

Like the crashworthiness ratings, the aggressivity measure was adjusted for the effects of non-vehicle factors differing between the subject car models which may have affected injury outcome to the driver of the other vehicle. Non-vehicle factors available in the data included:

- speed limit at the crash location
- subject vehicle driver age (younger drivers may be driving at relatively fast speeds not fully represented by the speed limit)

- subject vehicle driver sex (male drivers may be driving at relatively fast speeds or more aggressively)
- other car occupant age (older occupants are more susceptible to injury)
- other car occupant sex (female occupants are more susceptible to injury, but males appear to be associated with relatively high injury severities)
- collision partner type (vehicle, pedestrian, bicyclist or motorcyclist) (injury severity analysis only)

#### **1.4 Trends in Vehicle Safety by Year of Manufacture and Market Group**

Another focus of the vehicle crashworthiness ratings study has been to track historical improvements in the average crashworthiness of the Australian vehicle fleet since 1964. In 1994, the Royal Automobile Club of Victoria (RACV) commissioned a study to investigate the effects of the year of manufacture of vehicles (vehicle year) on their road safety (Cameron et al 1994c). This project focused on investigating the relationship between crashworthiness and vehicle year of manufacture for the years 1964 to 1992. The aim of the original study of Cameron et al (1994c) was, to the extent possible, to measure the crashworthiness of vehicles of different years of manufacture. The method employed was designed to eliminate the influence of other key factors affecting the risk of injury that might also be associated with vehicle year (e.g. driver age and sex, use on high speed roads, etc.).

The original study of Cameron et al (1994c) showed that the crashworthiness of passenger vehicles in Australia has improved over the years of manufacture 1964 to 1992 with rapid improvement over the years from about 1970 to 1979. Drivers of vehicles manufactured during 1970 to 1979 could be expected to have benefited from the implementation of a number of Australian Design Rules (ADRs) for motor vehicle safety which previous research has shown to be effective in providing occupant protection. The study has been updated with each vehicle crashworthiness ratings update. The most recent analysis included vehicles with years of manufacture from 1964 to 2004 (Newstead et al 2006). Similar analyses have been undertaken for the New Zealand vehicle fleet by Newstead and Watson (2005a) showing quite different trends in crashworthiness by year of manufacture to that observed in the Australian fleet reflecting the different regulatory frameworks across the two countries and the significant used vehicle import program in operation in New Zealand.

Extending the basic analysis, Newstead and Cameron (2001) examined trends in vehicle crashworthiness by year of manufacture from 1982 to 1998 within specific vehicle market groups. Vehicles were grouped into 4 market categories: small cars (<1100kg), medium cars (1100-1400kg), large cars (>1400kg) and four wheel drive vehicles (Sports Utility Vehicles). Results of analysis found statistically significant differences in the trends in crashworthiness by year of manufacture between different market groups in both the injury risk and injury severity components of the crashworthiness measure. This analysis was most recently updated in Newstead et al (2006) for vehicles manufactured over the years 1982-2004 and grouped into 12 market classifications.

Using similar methods to those used for investigating trends in crashworthiness by year of manufacture, Newstead et al (2004a) has investigated trends in aggressivity by year of vehicle manufacture for the Australian fleet as a whole as well as by 8 broad market group classifications. Although differential trends in aggressivity were found between the various market groups of vehicle analysed, for the Australian vehicle fleet as a whole there has been no

significant trend to improving or worsening aggressivity over the years of manufacture studied from 1964 to 2000.

## **1.5 Project Aims**

The aim of this project was to update the previously published crashworthiness and aggressivity ratings of Newstead et al (2006) including additional crash data from the year 2005 for Victoria, NSW, Queensland, Western Australia and New Zealand. In addition crash data from South Australia was included for the first time for light passenger vehicles crashing during 1995 to 2005. The updated ratings aimed to cover the drivers of light passenger vehicles including cars, station wagons, four wheel drive vehicles, passenger vans, and light commercial vehicles manufactured during 1982-2005 and crashing in Victoria or NSW during 1987-2005 or South Australia during 1995-2005 or Queensland, Western Australia and New Zealand during 1991-2005.

This project also aimed to update the estimates of crashworthiness by vehicle year of manufacture for the Australian vehicle fleet to include vehicles manufactured over the years 1964 to 2005. For vehicle models from 1982 to 2005 that could be classified into a market grouping, the project also aimed to further investigate trends in crashworthiness of the Australian vehicle fleet by year of vehicle manufacture within each specific market group.

The study also aimed to further assess the relationships between vehicle crashworthiness and both the year of manufacture for all vehicles and the year of first registration for used vehicle imports in New Zealand. The study focused on light passenger vehicles manufactured from 1964 to 2005 and crashing in New Zealand during 1991 to 2005. The results are published separately in a supplement to this report.

## **2. CRASH DATA**

Data from Victoria, New South Wales, Queensland, Western Australia and New Zealand used to produce the crashworthiness ratings of Newstead et al (2006) covering vehicles manufactured over the period 1982-2004 and crashing during the years 1987-2004 was again used here. Data from South Australia covering vehicles manufactured over the period 1982-2005 and crashing during the years 1995-2005 was included for the first time. In addition, data for 2005 from each of the four previously included Australian states and New Zealand was obtained and integrated bringing the total period of crash data covered to 1987-2005. Subsets of these data were taken in order to estimate the aggressivity measures. Similarly, data from Victoria, New South Wales, Queensland and Western Australia used to produce the crashworthiness by year of manufacture estimates of Newstead et al (2006) covering vehicles manufactured over the period 1964-2004 and crashing during the years 1987-2004 was again used here. As for the crashworthiness ratings, data from 2005 from these four Australian states were also integrated for this analysis. In addition data from South Australia covering vehicles manufactured over the period 1964-2005 and crashing during the years 1995-2005 was included. The methods of selecting appropriate cases from each data source will be detailed here.

### **2.1 Victorian Crashes**

Transport Accident Commission (TAC) injury claims from all types of road users who were involved in crashes in the period 1987 to 1998 had been merged with Police crash reports for the previous crashworthiness ratings. The Police reports were for all persons involved in crashes regardless of the Police officer recording the person as injured or uninjured. This procedure was followed because it was possible for an injury claim to be made in circumstances where injury was not apparent at the time of the crash. Crashes are reported to the Police in Victoria if a person is killed or injured, if property is damaged but names and addresses are not exchanged, or if a possible breach of the Road Traffic Regulations has occurred (Green 1990). The levels of matching of TAC claims with persons recorded on Police reports for each year during 1987-1998 achieved by Newstead et al (2003a) are shown in Table 1. The methods of matching for the data are detailed in Cameron et al (1994b).

Due to a breakdown in the matching process from 1999 subsequent updates of the ratings have used police crash data unmatched with TAC claims, although matched data prior to 1999 was still used. Any inconsistencies in injury severity coding introduced by changing from matched to unmatched data were controlled for in the analysis methodology through compensating for year of crash differences.

**Table 1:** *TAC claims for injury compensation from crashes during 1987-2000*

<b>Year</b>	<b>TAC claims (all types of injured road users)</b>	<b>TAC claims matched with Police reports</b>	<b>Match rate (%)</b>
<b>1987</b>	30,892	17,509	56.7
<b>1988</b>	28,427	16,672	58.6
<b>1989</b>	25,399	17,494	66.3
<b>1990</b>	19,633	13,886	70.7
<b>1991</b>	19,538	12,774	65.4
<b>1992</b>	19,251	13,118	68.1
<b>1993</b>	18,590	12,618	67.8
<b>1994</b>	19,341	11,927	61.6
<b>1995</b>	20,189	12,452	61.7
<b>1996</b>	19,954	14,034	70.3
<b>1997</b>	18,754	13,036	69.5
<b>1998</b>	18,561	12,395	66.8

Changes to the police data collection system in Victoria during 2005 meant that only data to about September 2005 was available. The available unmatched Victorian crash data for 2005 represented 3,204 injured drivers of 1982-2005 model vehicles involved in a crash in Victoria. These records were combined with the merged files of TAC claims with Police reports for 1987-1998 and police reported data only from 1999-2004, which represented 102,559 injured drivers of 1982-2004 model vehicles crashing during 1987-2004. The resulting file covered 105,763 injured drivers of 1982-2005 model cars. The information on these drivers was combined with data on drivers injured in the other four jurisdictions (see Section 2.6) to produce the updated crashworthiness ratings. For the study of crashworthiness by year of vehicle manufacture the merged TAC claims for injury during 1987-98 and police crash records during 1999-2005 covered 150,969 injured drivers of cars, station wagons or taxis manufactured over the years 1964-2005.

Calculation of aggressivity ratings required selecting vehicles involved in two car crashes followed by matching of the vehicle and occupant injury details for the two cars involved in the crash. For those vehicles manufactured over the period 1982 to 2005 injury details for the driver of the other vehicle in the crash were matched by returning to the full Victorian Police reported crash data files for 1987-2005. The data matching process identified 60,244 vehicles manufactured between 1982 and 2005 that had been involved in a crash with one other vehicle where the other vehicle had no restriction on its year of manufacture. Of the drivers of these other vehicles, 33,314 were injured and 26,930 were uninjured. It was not possible to use the uninjured records from the Victorian data, as they are incomplete due to the fact that only crashes involving injury are reliably reported in Victoria. Hence only the 33,314 records of other driver injury were used for calculation of the injury severity component of the vehicle aggressivity ratings. Of the 33,314 injured drivers, 7,116 were severely injured.

Collisions between a single vehicle and an unprotected road user where the vehicles were restricted to those manufactured between 1982 and 2005 were also identified for calculation of the aggressivity ratings using a variable identifying accident type from records for the years

1987 to 2005. Vehicles were matched with the unprotected road user casualty records to obtain the unprotected road user injury level. For the period 1987 to 2005, 12,644 unprotected road users were matched with vehicle records with an identified make and model and manufactured between 1982 and 2005. Of these 12,644 unprotected road users, 7,581 were injured, 5,063 seriously.

## **2.2 New South Wales Crashes**

The Roads and Traffic Authority (RTA) in New South Wales supplied files covering 1,120,776 light passenger vehicles manufactured from 1982 to 2005 involved in Police reported crashes during 1987-2005 that resulted in death or injury or a vehicle being towed away. Model and year of manufacture have been added to each vehicle after matching with the NSW vehicle register via registration number and vehicle make. This was achieved using a procedure developed by the NRMA. The total crash files covered four wheel drive vehicles, passenger vans, and light commercial vehicles as well as cars and station wagons of all years of manufacture crashing in 1987 to 2005. The method of assembly of this data is given in Cameron et al (1994b).

NSW crash data files from 1987 to 1998 had injury severity of people involved in crashes coded using a four level scale. Levels used were: fatality, hospital admission, other injury and not injured. From 1998 onwards, the RTA identified inaccuracies by the Police in reporting injury severity that could not be rectified. In response, the RTA changed the injury severity coding in the NSW crash data to give only three levels: fatality; injury; and not injured. For the purpose of computing crashworthiness ratings, this meant the NSW data for 1999-2005 could not be used to estimate the injury severity measure in the same manner as previous rating updates.

Preparation of the NSW data for final analysis involved merging the files with vehicle information, including driver age and gender, with files supplied by NSW RTA covering details of the person casualties (killed and injured persons) and the reported crashes for the same years. Each vehicle/driver matched uniquely with the corresponding crash information, but only injured drivers could match with persons in the casualty files. A driver who did not match was considered to be uninjured. Of the 1,120,776 drivers involved in tow-away crashes, 186,372 were injured. Of the injured drivers, 72,678 were injured in crashes from 1987 to 1998 and had a valid injury severity level coded (serious or other injury).

Of the 1,120,776 1982-2005 model year vehicles involved in crashes in NSW, 657,529 were coded as being involved in crashes with one other traffic unit (i.e. the crash involved a total of two traffic units). In order to compare occupant injury levels in crashes involving two vehicles, it was necessary to match the crash and occupant injury information for each of the two vehicles involved in the crash.

The data used for calculation of the crashworthiness ratings covered only vehicles manufactured from 1982 to 2005. Consequently, initial matching of only the crashworthiness data to determine pairs of vehicles involved in a crash identified both the vehicles in the crash when both vehicles were manufactured from 1982 to 2005. A second matching stage was then required to identify the details of drivers of vehicles manufactured before 1982 that had collided with the unmatched 1982-2005 model year vehicles in the crashworthiness file. This required retrieval of the remaining crash records in the 1987-2005 NSW crash files not used for crashworthiness ratings in order to match vehicles manufactured prior to 1982. The two-stage data matching process identified 324,500 matched records of vehicles manufactured between 1982 and 2005 that had

been involved in a crash with one other vehicle where the other vehicle had no restriction on its year of manufacture. Of the drivers of these other vehicles, 45,374 were injured. Of the injured drivers, 19,922 were injured in crashes from 1987 to 1998 and had a valid injury severity level coded (serious or other injury).

Calculation of the aggressivity rating also required the identification of crashes between a single light vehicle and an unprotected road user where the vehicles were restricted to those manufactured between 1982 and 2005. The required crashes were identified using a variable identifying accident type. Casualty records for the crash years 1987 to 2005 were used to identify unprotected road users injured in a collision with one vehicle. The vehicles were then matched with the unprotected road user casualty records to obtain the pedestrian, bicyclist or motorcyclist injury level. For the period 1987 to 2005, 46,495 unprotected road users were matched with vehicle records. Of these 46,495 unprotected road users, 26,869 were injured in crashes from 1987 to 1998 and had a valid injury severity level coded. Of these, 8,486 were seriously injured.

For the study of crashworthiness by vehicle year of manufacture, the NSW data represented 1,384,257 drivers of cars, station wagons or taxis manufactured from 1964 to 2005 who were involved in tow-away crashes. Of these drivers, 226,993 were injured, 119,503 of these during 1987-1998 and with a valid injury severity code.

The presence of uninjured drivers in the merged data file meant that it was suitable for measuring the risk of driver injury (in cars sufficiently damaged to require towing). This contrasted with the Victorian and New Zealand data files, which could not be used to measure injury risk directly because not all uninjured drivers were included.

### **2.3 Queensland Crashes**

Queensland Transport supplied files covering 337,362 light passenger vehicles involved in Police reported crashes during 1991-2005 that resulted in death or injury or a vehicle being towed away. The files supplied covered years of vehicle manufacture from 1982-2005 including models of four wheel drive vehicles, passenger vans, and light commercial vehicles as well as cars and station wagons for which a model could be identified.

The vehicle files, which also contained links to separate files with driver age and sex, were merged with files supplied by Queensland Transport covering details of the person casualties (killed and injured persons) and the reported crashes for the same years. Each vehicle/driver matched uniquely with the corresponding crash information, but only injured drivers could match with persons in the casualty files. As for NSW, a driver who did not match was considered to be uninjured. Out of the 337,362 drivers involved in tow-away crashes, 86,526 were injured.

Of the 337,362 vehicles reported as crashed in Queensland and used in estimation of crashworthiness ratings, 225,386 were coded as being involved in crashes with one other traffic unit (i.e. the crash involved a total of two traffic units). In order to compare occupant injury levels between two vehicles involved in a crash, it was necessary to match the crash and occupant injury information for each of the two vehicles involved in the crash in the same manner as for NSW. Using the same two stage data matching process as used for NSW and described above, the process identified 112,224 vehicles manufactured between 1982 and 2005

that had been involved in a crash with one other vehicle where the other vehicle had no restriction on its year of manufacture. Of the drivers of these other vehicles, 29,363 were injured, 6,495 seriously. These records were used for calculation of vehicle aggressivity ratings toward drivers of other vehicles.

Records on unprotected road users involved in a crash with one light vehicle unit were retrieved and identified using variables classifying unit type and number of units in the crash. Single vehicle collisions were identified using a variable identifying unit type and number of vehicles in the crash. These vehicles were then matched with the unprotected road user casualty records to obtain the injury level. A total of 17,476 unprotected road users were matched with records on 1982-2005 year passenger vehicles with model details identified. Of these 17,476 unprotected road users, 17,063 were injured, 7,181 seriously.

For the study of crashworthiness by vehicle year of manufacture, the Queensland data represented 298,741 drivers of cars, station wagons or taxis manufactured from 1964 to 2005 who were involved in tow-away crashes. Of these drivers, 77,414 were injured. The number of vehicles crashing in Queensland and available for the year of manufacture analysis was less than expected. This is because a large proportion of the vehicles in the Queensland data from 1997 and 1998 had year of manufacture missing due to difficulties in accessing the vehicle register to determine vehicle details at the time of assembling the data from these two years. Some of the vehicles with missing year of manufacture could, however, be assigned an accurate model code though the VIN decoding process described below despite the missing field.

As with the data from NSW, the presence of uninjured drivers in the data file meant that it was also suitable for measuring the risk of driver injury (in cars sufficiently damaged to require towing).

## **2.4 Western Australia Crashes**

The Western Australian Department of Main Roads maintains a database of all crashes in Western Australia reported to the police. Crashes in Western Australia must be reported to police if anyone involved is killed or injured or the crash results in property damage greater than \$1,000 (Road Safety Council of Western Australia, 2001). This means that, like New South Wales, South Australia and Queensland, both injury and non-injury crashes are reported making the data suitable for inclusion in estimating both the injury risk and injury severity components of the vehicle safety ratings. Although the Western Australia crash data is held as a relational database, Western Australia Department of Main Roads supplied the data in a single flat file with a record for each person involved in a reported crash. Data covered the period 1991 to 2005. The data was re-issued in 2005 for the period 1991 to 2003 due to a change in database structure and variable definitions in 1995 that may have caused some inconsistency in the data over the entire time period. In 2006 the data was re-issued for the period 1991 to 2005 to include registration plates of crashed vehicles. This registration plate detail was used for matching to Western Australian registration data to obtain VIN data for vehicle decoding as discussed in Section 3.1.1.

The files supplied covered 815,514 light passenger vehicles manufactured between 1982 and 2005 involved in Police reported crashes during 1991-2005 that resulted in death or injury or a vehicle being towed away. The files supplied covered models of four wheel drive vehicles,

passenger vans, and light commercial vehicles as well as cars and station wagons. Out of the 815,514 drivers involved in tow-away crashes, 113,103 were injured.

Of the 815,514 vehicles reported as crashed in WA and used in estimation of crashworthiness ratings, 616,501 were involved in crashes with one other traffic unit. Of the drivers of the matched vehicles, 59,289 were injured. These records were used for calculation of vehicle aggressivity ratings toward drivers of other vehicles.

Records on unprotected road users involved in a crash with one vehicle unit for the period 1991 to 2005 were retrieved and identified using variables classifying unit type and number of units in the crash. 29,214 unprotected road users in the Western Australia crash records were identified as colliding with a 1982-2005 year of manufacture passenger vehicle with model details identified. Of the 20,134 unprotected road users who were injured, 7,693 were severely injured.

For the study of crashworthiness by vehicle year of manufacture, the Western Australia data represented 732,218 drivers of cars, station wagons or taxis manufactured from 1964 to 2005 who were involved in tow-away crashes. Of these drivers, 97,094 were injured.

## **2.5 South Australia Crashes**

The Road Crash Information Unit of the Department of Transport, Energy and Infrastructure maintains a database of all crashes in South Australia reported to the South Australian Police via vehicle crash reports. Crashes included involved at least one person being killed or injured, or a vehicle towed away, or total property damage of \$3,000 or greater. Prior to 01 July 2003 the Department processed 'property damage only' crashes with an aggregated damage value of \$1000 or greater. This change in property damage value occurred as data processing costs and budget reductions had reached an unsustainable level. The decision was made to process all casualty crashes, property damage only greater than \$3000, and tow-away crashes regardless of value. Crash data was provided for the years 1995 to 2005 with three files provided for each year. The three files provided contain detail on the crash, traffic unit and casualties. In addition, data files have been provided with road and Local Government Area details. Like NSW, Queensland and Western Australia, both injury and non-injury crashes are reported making the data suitable for inclusion in estimating both the injury risk and injury severity components of the vehicle safety ratings.

The files supplied covered 543,087 light passenger vehicles manufactured between 1982 and 2005 involved in Police reported crashes during 1995-2005 that resulted in death or injury or a vehicle being towed away. The files supplied covered models of four wheel drive vehicles, passenger vans, and light commercial vehicles as well as cars and station wagons. Out of the 543,087 drivers involved in tow-away crashes, 44,083 were recorded as injured.

Of the 543,087 vehicles reported as crashed in South Australia and used in estimation of crashworthiness ratings, 419,802 were involved in crashes with one other traffic unit. Of the drivers of the matched vehicles, 22,939 were injured. These records were used for calculation of vehicle aggressivity ratings toward drivers of other vehicles.

Records on unprotected road users involved in a crash with one vehicle unit for the period 1995 to 2005 were retrieved and identified using variables classifying unit type and number of units in the crash. 15,914 unprotected road users in the South Australia crash records were identified as

colliding with a 1982-2005 year of manufacture passenger vehicle with model details identified. Of the 10,376 unprotected road users who were injured, 2,614 were severely injured.

For the study of crashworthiness by vehicle year of manufacture, the SA data represented 634,356 drivers of cars, station wagons or taxis manufactured from 1964 to 2005 who were involved in tow-away crashes. Of these drivers, 53,466 were injured.

## **2.6 Crash and Registration Data from New Zealand**

Two sources of data from New Zealand were used in the calculation of vehicle crashworthiness and aggressivity ratings. The first data source provided was a crash file showing the registration, vehicle, driver and various crash characteristics for all police reported crashes in New Zealand for the years 1991 to 2005. The second data source was registration data giving details of all crash involved vehicles on the NZ register in each year from 1991 to 2005. Extracts from both data sources supplied for estimation of vehicle safety ratings are described below. The method of assembly of this data is given in Cameron et al (1994b) and in the most recent used car safety ratings of Newstead et al (2006).

After assembling the data, 181,880 light passenger vehicles manufactured between 1982 and 2005 were used in the crashworthiness analysis. Of the drivers of these vehicles 87,262 were not injured or had unknown injury status, whilst the remaining 94,618 were injured to some degree. The injury details of the 94,618 injured drivers were used for estimation of the crashworthiness injury severity measure in conjunction with the Australian data. Records on the uninjured drivers in the New Zealand injury crash data could not be used in the calculation of the injury risk component of the crashworthiness ratings. This was because non-injury crashes in New Zealand, and hence uninjured drivers involved in these crashes, were not suitable for use in the analysis and therefore records on all uninjured drivers in all crashes in New Zealand were incomplete.

A subset of the New Zealand data described above and used for estimation of crashworthiness injury severity formed the basis of the data used in the calculation of the aggressivity ratings. For calculation of aggressivity ratings, vehicles involved in two vehicle crashes were identified. Of the drivers of vehicles colliding with the vehicles identified, 30,448 were injured whilst 24,297 were uninjured. Information on the injury level of the 30,448 injured drivers, 4,989 of whom were seriously injured, was used in conjunction with the Australian data to estimate the injury severity component of the aggressivity ratings.

Records on unprotected road users involved in a crash with one light vehicle unit for the period 1991 to 2005 were retrieved and identified using variables classifying unit type and number of units in the crash. 19,856 unprotected road users were identified as impacting with a 1982-2005 year of manufacture passenger vehicle with model details identified. Of the 19,665 unprotected road users who were injured, 5,672 were severely injured.

## **2.7 Combined Data from the Six Jurisdictions**

When the data on the injured drivers was combined for analysis, it covered 630,465 drivers of 1982-2005 model vehicles who were injured in crashes in Victoria or New South Wales during 1987-2005 or in South Australia during 1995-2005 or in Western Australia, Queensland or New Zealand during 1991-2005. Of these 516,771 had a valid injury severity code, with 113,694

drivers injured in crashes in NSW during 1999-2005 excluded because of missing injury severity. Information on the 516,771 injured drivers was used to assess the injury severity of the injured drivers of the different makes and models when computing crashworthiness ratings. The information on the 2,816,739 drivers involved in tow-away crashes in NSW during 1987-2005 or South Australia during 1995-2005 or Western Australia and Queensland during 1991-2005 was used to assess the injury rate of drivers of the different makes and models for computing crashworthiness ratings.

The combined data on drivers injured in crashes between two light vehicles used for estimation of vehicle aggressivity ratings covered 220,715 drivers of vehicles colliding with 1964-2005 model vehicles. These drivers were injured in two car crashes in Victoria during 1987-2005 or NSW during 1987-1998 or in South Australia during 1995-2005 or in Western Australia, Queensland and New Zealand during 1991-2005. Excluding the 25,434 injured drivers from NSW during 1999-2005 without a valid injury severity code left 195,281 cases for analysis. This information was used to assess the injury severity of the injured drivers colliding with the different makes and models when computing aggressivity ratings. The aggressivity injury risk component was estimated from data including information on the 1,312,042 drivers involved in two-car tow-away crashes in NSW during 1987-2005 or in South Australia during 1995-2005, or Western Australia and Queensland during 1991-2005.

The combined data on unprotected road users used for estimation of aggressivity covered 106,751 injured unprotected road users, of whom 36,709 were seriously injured. These unprotected road users were involved in a collision with a 1982-2005 model vehicle in Victoria or NSW during 1987-2005, or in South Australia during 1995-2005 or in Western Australia or Queensland or New Zealand during 1991-2005.

For the study of crashworthiness by year of vehicle manufacture, the combined data covered 498,446 drivers of vehicles manufactured between 1964 and 2005 who were injured in crashes, 109,821 severely, in Victoria during 1987-2005, NSW during 1987-1998, in South Australia during 1995-2005 and Western Australia and Queensland during 1991-2005. For the assessment of injury risk by year of vehicle manufacture, the combined data covered 3,049,572 drivers involved in tow-away crashes in NSW during 1987-2005 or in South Australia during 1995-2005 or Western Australia and Queensland during 1991-2005.

### **3. MODELS AND MARKET GROUPS OF VEHICLES**

#### **3.1 Vehicle Model Identification**

A procedure initially developed by the NRMA based on decoding Vehicle Identification Numbers (VIN) or chassis numbers was extended and used as the primary means to determine the models of light passenger vehicles. The decoding identified some light truck and unusual commercial models that were not considered further. Of the light passenger vehicles manufactured during 1982-2005 around 95% had their model identified by the VIN decoder. Further details of the VIN decoding process are given by Pappas (1993). The VIN decoding procedure was used to identify all vehicle models in the New South Wales and Queensland data and 1989 year of manufacture vehicles onwards in the Victorian data from 1994. For the first time VINs were obtained from the Western Australian vehicle register, managed by the WA Department of Transport. This meant the VIN decoding system used on data from the other four states to identify vehicle model details was used for some of the Western Australia crash data. Because only a recent snapshot of the registration file was obtained registration details of expired registrations was not available. The VIN decoding system was also used to identify make and model details for vehicles sold new in New Zealand with a valid ISO VIN recorded.

For those vehicles in Western Australia without a VIN available, the previous decoding method based on make, model and year of manufacture codes held in the vehicle register and described in Newstead et al (2006) was used. A similar system was used to classify new vehicles in the New Zealand crash data without a valid ISO VIN and for used imported vehicles from Japan. For Victorian vehicles in the pre 1994 data without a VIN, a system of decoding based on vehicle mass and power was used. This is also described in Newstead et al (2006).

South Australia registration data was matched to crash data by the Driver and Vehicle Licensing section of the Department of Transport, Energy and Infrastructure using an extract comprising of the crash date and six character plate detail of the crashed vehicle from the crash data provided to MUARC by the Transport Services Division of the same Department. The vehicles were selected on the basis that the plate was registered as being on the vehicle as at the crash date and the vehicle was registered by the client as at the crash date and was described by the extracted vehicle details. Plate detail in the provided crash data was only six characters whilst the plate numbers on the South Australia register can be longer than six characters, so the numbers were used "as they are" to extract the data. Plates are identified on the South Australia register using plate type and plate number. This resulted in some plate/crash date combinations being extracted more than once. These were excluded from the analysis. Where no match has been possible, the original plate and crash date remain with no extract details populated. Other vehicle details including make, year of manufacture and model which is a free format field on the register and as such, doesn't contain codified or verified data were supplied. This meant the VIN decoding system used on data from the other four states to identify vehicle model details was able to be used for the South Australia crash data.

RACV, NRMA, the Australian Transport Safety Bureau (ATSB, formerly FORS) and VicRoads provided advice on the particular models that had experienced substantial changes in design (and hence potential crashworthiness) and in which years the design was relatively constant. This resulted in certain models being split into ranges of years of manufacture. Where the new model was introduced near the beginning or end of a year (up to two months either way), this process

was relatively straightforward (accepting a small mis-classification in some circumstances). However, when the model changed near the middle of the year, the model for that year was kept separate and potentially treated as a "mixed" model (e.g. the Daihatsu Charade 1987 models). Where exact model decoding was possible from the VIN, without using year of vehicle manufacture, this was used. They also provided advice on vehicle models that could be combined with each other (sometimes only for specific years) because they were essentially the same design or construction but registered as having different manufacturers.

As in previous crashworthiness ratings, models were excluded with fewer than 20 injured drivers and/or fewer than 100 involved drivers appearing in the crash data. The same selection criteria were also used for aggressivity ratings except exclusion was based on the number of road users colliding with the focus vehicle model. These selection criteria were used to ensure stability in fitting the logistic regression models along with suitably small confidence limits on the estimated crashworthiness ratings.

### 3.2 Pooled Car Models

Vehicle model sharing amongst manufacturers retailing in the Australian market has been relatively common. Because shared models are generally identical, particularly with respect to safety performance, it is possible to pool such models for safety rating, allowing a more precise estimate of the safety of models for which data is pooled rather than considering each separately. Pooled models are indicated in Table 2.

**Table 2:** *Pooled Models of Cars*

Ford Laser 82-89	with	Mazda 323 / Familia 82-88
Ford Laser 99-03	with	Mazda 323 99-03
Ford Telstar 83-87	with	Mazda 626 / MX6 / Capella 83-86
Ford Telstar 88-91	with	Mazda 626 / MX6 / Capella 88-91
Ford Telstar 92-97	with	Mazda 626 / MX6 / Capella / Cronos 92-97
Ford Corsair 89-92	with	Nissan Pintara / Bluebird 89-92
Holden Commodore VR/VS	with	Toyota Lexcen 93-97
Holden Commodore VN-VP	with	Toyota Lexcen 89-93
Holden Nova 89-92	with	Toyota Corolla 88-92
Holden Nova 93-96	with	Toyota Corolla 93-97
Holden Astra 84-86	with	Nissan Pulsar / Langley 83-86
Holden Astra 88-90	with	Nissan Pulsar / Sentra 87-91
Holden Barina 85-88	with	Suzuki Swift / Cultus 86-88
Holden Barina 89-93	with	Suzuki Swift / Cultus 89-00
Holden Apollo JK/JL 89-92	with	Toyota Camry / Vista 90-93
Holden Apollo JM/JP 93-97	with	Toyota Camry / Sceptor 94-97
Ford Maverick 88-97	with	Nissan Patrol 88-97
Suzuki Scurry 85-87	with	Holden Carry 85-90
Suzuki Samurai / SJ410 / SJ413 82-00	with	Holden Drover 85-87
Nissan XFN Utility	with	Ford Falcon Utility 82-95
Ford Festiva WA 91-93	with	Mazda 121 87-90
Ford Courier 98-02	with	Mazda B-Series 98-02
Ford Courier 03-05	with	Mazda Bravo 03-05
Ford Escape 01-05	with	Mazda Tribute 01-05

It should be noted that some of the vehicle models identified in the Victorian, New South Wales, South Australia, Western Australia, Queensland and New Zealand crash data have optional safety equipment, such as air bags, which could significantly alter the crashworthiness rating of the vehicle model when fitted. It is, however, generally not possible to identify which particular vehicles of a model series do and do not have such optional safety equipment installed using the model decoding procedures described above. Consequently, for those vehicle models with optional safety equipment, the estimated crashworthiness rating represents an average of the safety performance for vehicles with and without the optional safety equipment weighted by the number of each in the crash data.

As the ratings only measure the outcome of drivers involved in a crash, the effect of fitment of active or crash avoidance safety features such as anti-lock braking or electronic stability control systems on crash avoidance was not measured by these ratings. As only drivers were considered, optional or standard safety features for the front or rear seat passengers, such as passenger frontal airbag systems, would also not have affected the ratings.

### 3.3 Vehicle Market Groups

Previous updates of the vehicle safety ratings have classified vehicle models, for the purpose of publication, into one of a number of market groups. The market groups defined are based heavily on those used by the Federal Chamber of Automotive Industries (FCAI) for reporting Australian vehicle sales as part of their VFACTS publication (see [www.fcai.com.au](http://www.fcai.com.au) for further details). In the most recent update of the vehicle safety ratings (Newstead et al, 2006) rated vehicles were classified into one of 12 market group classifications, comprising 7 classes of regular passenger car, 3 classes of four wheel drive (4WD) vehicle (also known as Sport Utility Vehicles) and 2 classes of light commercial vehicle. For this update the previously defined luxury and sports market groups were distributed across the remaining 5 classes of regular passenger cars, reducing the number of market groups to 10. The resulting 10 market groups were defined as follows.

#### Passenger Cars

- Light Passenger car, hatch, sedan, coupe or convertible 3 or 4 cylinder engine, up to 1,500 cc.
- Small Passenger car, hatch, sedan, wagon, coupe or convertible 4 cylinder engine, 1,501 cc - 1,900 cc.
- Medium Passenger car, hatch, sedan, wagon, coupe or convertible 4 cylinder engine, 1,901 cc upward.
- Large Passenger car, hatch, sedan, wagon, coupe or convertible 6 or 8 cylinder engine.
- People Movers Passenger usage seating capacity > 5 people.

#### Four Wheel Drive Vehicles (high ground clearance, off road wagon)

- 4WD Compact Index rating < 550 (typically less than 1700kg tare mass)
- 4WD Medium Index rating 550 - 700 (typically between 1700kg and 2000kg tare mass)
- 4WD Large Index rating > 700 (typically greater than 2000kg tare mass)

#### Light Commercial Vehicles

- Van Blind & window vans.

Utility Two and four wheel drive, normal control (bonnet), utility, cab chassis and crew-cabs.

The classification of 4WD vehicles is based on an index developed by VFACTS that considers gross vehicle mass, maximum engine torque and the availability of a dual range transmission. The index typically classifies the vehicles roughly by tare mass as indicated on the classifications above. Some departures from the VFACTS classification have been made in presenting the ratings in this study. VFACTS defines a luxury 4WD category based on vehicle price as well as classifying sports cars priced above the luxury car tax threshold as luxury vehicles. Here, the luxury 4WDs have been distributed amongst the 3 defined 4WD categories based on tare mass, as the information for computing the classification index used by VFACTS was not available at the time of the study.

There have also been some departures from the classification principles defined above for certain vehicle models that have a range of engine sizes and hence fall across two different defined categories. These are typically passenger vehicles and include, for example, cars like the Toyota Camry that come fitted with a large 4 cylinder engine in some variants and a 6 cylinder engine in other variants. In these cases, a value judgement has been made for each vehicle model individually based on the other vehicle models with which each typically competes in the market place.

## 4. ANALYSIS

### 4.1 Overview of Analysis Methods: Crashworthiness

The crashworthiness rating (C) is a measure of the risk of serious injury (hospitalisation or death) to a driver of a car when it is involved in a crash. It is defined to be the product of two probabilities (Cameron et al, 1992):

- i) the probability that a driver involved in a crash is injured (injury risk), denoted by R; and
- ii) the probability that an injured driver is hospitalised or killed (injury severity), denoted by S.

That is

$$C = R \times S.$$

Folksam Insurance, who publishes the well-known Swedish ratings, first measured crashworthiness in this way (Gustafsson et al, 1989).

In the present report, each of the two components of the crashworthiness rating was obtained by logistic regression modelling techniques (Hosmer & Lemeshow, 1989). Such techniques are able to simultaneously adjust for the effect of a number of factors (such as driver age and sex, number of vehicles involved, etc.) on probabilities such as the injury risk and injury severity whilst estimating the role of vehicle model, market group or year of manufacture in the injury outcome. This method, described fully in Newstead et al (2006), has previously been used to produce the Australian and New Zealand vehicle fleet crashworthiness ratings. For estimation of the crashworthiness ratings, factors in the logistic model included the available non-vehicle factors influencing injury outcome as well as the variable indicating vehicle model, market group or year of manufacture. Newstead et al (2006) details how confidence limits on the regression estimates of injury risk and severity are calculated with these techniques also being used here.

A stepwise procedure was used to identify which non-vehicle factors and their interactions had an important influence on driver injury outcome. Logistic models were obtained separately for injury risk and injury severity because it was likely that the various factors would have different levels of influence on these two probabilities. The non-vehicle factors considered in the analysis for both injury risk and injury severity were

- **sex:** driver sex (male, female)
- **age:** driver age ( $\leq 25$  years; 26-59 years;  $\geq 60$  years)
- **speedzone:** speed limit at the crash location ( $\leq 75$  km/h;  $\geq 80$  km/h)
- **nveh:** the number of vehicles involved (one vehicle;  $> 1$  vehicle)
- **state:** jurisdiction of crash (Victoria, NSW, SA, QLD, WA, NZ)
- **year:** year of crash (1987, 1988, ... ,2005)

These variables were chosen for consideration because they were part of the Victorian, Queensland, New South Wales, South Australia, Western Australia and New Zealand databases. Other variables were only available from one source and their inclusion would have drastically reduced the number of cases that could have been included in the analysis. All data were

analysed using the Logistic Regression procedure of the SAS statistical package (SAS, 1989). Some model exclusions were made from the analysis by make and model of vehicle for vehicle model classifications that had no practical interpretation or where there were too few cases for inclusion. This included models in a particular year where there was a change from one series to the next and year of manufacture was necessary to determine the series break (such as Mitsubishi Pajero 1991). It also included some groups of highly aggregated models that would be of no intrinsic interest to consumers using the ratings (such as Jeep Others or Mazda Commercials). After exclusion, the regression analyses were performed on 381 individual car models (or pooled similar models). A list of all vehicle models considered, with those with sufficient data for analysis indicated, is given in Appendix 1.

These techniques were applied to produce estimates of injury risk, injury severity and crashworthiness by vehicle make and model, market group or year of manufacture.

#### 4.2 Overview of the Analysis Methods: Aggressivity

The aggressivity rating estimates the risk of death or admission to hospital to both the drivers of the other cars and to unprotected road users when involved in a collision with the subject model car. Unprotected road users include pedestrians, bicyclists and motorcyclists. Because an estimate of the risk of injury cannot be calculated for unprotected road users as explained above the measure of aggressivity injury risk used was based only on the injury risk to the other driver (ROU). It is defined as:

Aggressivity Injury Risk = ROU = proportion of other vehicle drivers involved in crashes who were injured

In contrast, complete records of both other drivers and unprotected road users injured in crashes are available and can be used to examine injury severity outcomes in the aggressivity measure. The aggressivity injury severity measure (SOU) is defined as:

Aggressivity Injury Severity = SOU = proportion of other vehicle drivers or unprotected road users who were killed or admitted to hospital.

Based on the definition of ROU and SOU above, an aggressivity measure for each subject car model was then calculated as before:

Aggressivity to other driver or unprotected road user = AOU = ROU x SOU.

Consideration was given to taking into account likely differences between the crash circumstances of the subject car models, which may result in a distorted view of its aggressivity only partly related to the characteristics of the subject cars. Factors available in the data to consider such differences were as follows.

- **agefcd** : age of driver of subject car (<=25 years, 26-59 years, >=60 years)
- **sexfcd** : sex of driver of subject car
- **ageoo** : other car driver age (<=25 years, 26-59 years, >=60 years)
- **sexoo** : other car driver sex (male, female)
- **speedzone**: speed limit at the crash location (≤75 km/h; ≥80 km/h)
- **state**: jurisdiction of crash (Victoria, NSW, SA, QLD, WA, NZ)

- **year:** year of crash (1987, 1988, ... ,2005)
- **crash type:** collision partner type (vehicle, pedestrian, bicyclist or motorcyclist) (injury severity only)

Estimation of the aggressivity measure has utilised logistic regression techniques to adjust ROU and SOU separately for any major differences that emerge between models of the subject cars regarding these factors. The adjusted ROU and SOU have been multiplied together for each subject car model to provide the final measure of aggressivity, AOU. Full details of the analysis techniques are given in Newstead et al (2006). Analyses by make and model of vehicle were performed on 349 individual car models for calculation of the aggressivity rating. Estimates were also obtained by market group.

## 5. RESULTS

### 5.1 Vehicle Crashworthiness Ratings

#### 5.1.1 Injury Risk

Injury risk was estimated from the data on 2,816,739 drivers involved in tow-away crashes in New South Wales, South Australia, Queensland and Western Australia during 1987-2005. This data set is referred to as the "involved drivers". Because of missing values in one or more of the covariates driver sex and age, speed zone and number of vehicles involved in the crash amongst the 2,816,739 involved drivers and vehicle models of interest, the final file used for analysis consisted of the 1,608,956 drivers for which all the covariate data was complete. Of these drivers 263,978 were injured. The following non-vehicle related factors and their interactions were significantly associated with injury risk and were included in the logistic model:

<b>Base effect terms</b>	<b>First order interactions</b>	<b>Second order interactions</b>
Sex	Speedzone*Nveh	Age*Speedzone*Nveh
Speedzone	Sex*Nveh	Sex*Speedzone*Nveh
Age	Sex*Age	Speedzone*Year*Nveh
Nveh	Age*Nveh	Sex*Speedzone*State
State	Speedzone*Age	Speedzone*Nveh*State
Year	State*Year	State*Year*Nveh
	Nveh*State	Age*State*Nveh
	Year*Nveh	Age*Speedzone*State
	Age*State	Age*Sex*Speedzone
	Age*Year	Age*Sex*State
	Speedzone*Year	Sex*State*Nveh
	Speedzone*State	
	Sex*Speedzone	
	Sex*Year	
	Sex*State	

The overall (average) injury risk for involved drivers in tow-away crashes in NSW, South Australia, Western Australia and Queensland was 16.41 injuries per 100 involved drivers. Appendix 2 gives the estimates of injury risk derived by logistic regression for the 381 individual car models that were rated. Injury risk ranged from 6.87% for the 1996-2004 Peugeot 406 to 41.24% for the 1982-1990 Daihatsu Hi Jet. An estimate of the variability in the injury risk estimates was calculated from the width of the corresponding 95% confidence intervals. Individual confidence interval widths ranged from 0.70% for the 1989-1993 Holden Commodore VN/VP, Toyota Lexcen to 16.99% for the 1982-1991 Porsche 944. The small variability for the Holden Commodore and Toyota Lexcen series sedan is not surprising due to the large number of cars of this model in the data set and precision is known to improve with increasing sample size.

The estimated injury risk for each market group is also given in Appendix 2. The large four wheel drive vehicles had the lowest injury risk (12.22%) and the light car market group had the highest (21.47%).

### 5.1.2 Injury Severity

The data on "injured drivers" covered 516,771 drivers of 1982-2005 model vehicles who were injured in crashes in Victoria, New South Wales, South Australia, Western Australia, Queensland or New Zealand during 1987-2005. Because of missing values in one or more of the covariates amongst the 516,771 injured drivers, the final file used for analysis consisted of the 293,505 drivers for which all the covariate data was complete. Of these drivers 59,273 were seriously injured. The following non-vehicle related factors and their interactions were significantly associated with injury severity and were included in the logistic model:

Base effect terms	First order interactions	Second order interactions	Third order interactions
Sex	Sex*State	Speedzone*Nveh*State	Speedzone*State*Year*Nveh
Speedzone	Speedzone*Nveh	Speedzone*State*Year	
Age	Age*Sex	Age*State*Nveh	
Nveh	Nveh*State	Age*State*Year	
State	Speedzone*Age	State*Year*Nveh	
Year	Age*State	Speedzone*Year*Nveh	
	Age*Nveh		
	State*Year		
	Speedzone*Year		
	Age*Year		
	Year*Nveh		
	Speedzone*State		

The average injury severity for injured drivers in the data analysed was 20.19 deaths or serious injuries per 100 injured drivers. Appendix 3 gives the estimates of injury severity derived by logistic regression for 381 individual car models, or sets of combined models. Of the cars analysed, injury severity ranged from 4.00% for the 1998-2005 Volkswagen Passat to 48.37% for the 1982-1984 Alfa Romeo GTV. An estimate of the variability in the estimates of injury severity was calculated from the width of the corresponding 95% confidence intervals. Individual confidence interval widths ranged from 1.86% for the 1982-88 Ford Laser and Mazda 323 / Familia to 41.77% for the 1982-1991 Porsche 944.

The estimated injury severity for each market group is also given in Appendix 3. Compact four wheel drive vehicles performed best with respect to injury severity, having the lowest average injury severity of 18.82%. The light car market group had the highest average injury severity of 21.35%.

### 5.1.3 Crashworthiness Ratings

The crashworthiness ratings for each car model and market group were obtained by multiplying the individual injury risk and injury severity estimates. Because each of the two components had been adjusted for the confounding factors, the resultant crashworthiness rating was also adjusted for the influence of these factors.

Crashworthiness ratings were obtained for each individual model and market group after adjusting for the confounding factors. Appendix 4 gives the crashworthiness ratings and the associated 95% confidence intervals for each of the 381 car models included in the analyses. Appendix 4 also gives the crashworthiness ratings with 90% confidence limits for each of the 381 vehicle models. Each rating is expressed as a percentage, representing the number of drivers killed or admitted to hospital per 100 drivers involved in a tow-away crash. Overall ratings for the market groups are also given.

Each crashworthiness rating is an *estimate* of the true risk of a driver being killed or admitted to hospital in a tow-away crash and, as such, each estimate has a level of uncertainty about it. This uncertainty is indicated by the confidence limits in Appendix 4. There is 95% probability that the confidence interval will cover the true risk of serious injury (death or hospital admission) to the driver of the particular model of vehicle. Unlike in previous updates no ratings have been excluded at this stage as it was considered useful for consumer information to present them.

Table 3 gives a summary of the estimated ratings for each of the 10 defined vehicle market groups. It shows the estimated injury risk and severity components, and the resulting crashworthiness rating with upper and lower 95% confidence limits, and the width of the 95% confidence limit. The relative ranking of the crashworthiness rating on each market group is also given in Table 3 although this should be interpreted with care as there is not necessarily a statistically significant difference between the average crashworthiness of vehicle market groups with different rankings. Statistical significance in average crashworthiness between market groups at the 5% level is only achieved when the 95% confidence limits do not overlap. Similar comments apply to interpreting results in Appendix 4.

**Table 3:** *Estimated Vehicle Crashworthiness by Market Grouping*

Market Group	Injury Risk (%)	Injury Severity (%)	Crashworthiness Rating*	Overall rank order	Lower 95% Confidence limit	Upper 95% Confidence limit	Width of Confidence interval
<b>Overall Average</b>	<b>16.41</b>	<b>20.19</b>	<b>3.31</b>				
COMPACT FOUR WHEEL DRIVE	17.74	18.82	3.34	6	3.13	3.57	0.44
MEDIUM FOUR WHEEL DRIVE	12.80	19.22	2.46	1	2.26	2.68	0.41
LARGE FOUR WHEEL DRIVE	12.22	20.97	2.56	2	2.42	2.71	0.29
COMMERCIAL - VAN	17.60	20.53	3.61	7	3.41	3.83	0.43
COMMERCIAL - UTE	15.24	20.78	3.17	4	3.06	3.28	0.22
LARGE	15.38	19.81	3.05	3	2.98	3.11	0.13
MEDIUM	16.71	19.76	3.30	5	3.22	3.39	0.17
PEOPLE MOVERS	17.89	20.81	3.72	8	3.50	3.96	0.45
LIGHT	21.47	21.35	4.58	10	4.46	4.71	0.25
SMALL	18.74	20.00	3.75	9	3.66	3.84	0.17

\* Serious injury rate per 100 drivers involved

### 5.1.4 Comparisons with the All Model Average Rating

Based on the average injury risk and injury severity values in the data used to compute the ratings estimate, the average crashworthiness of all vehicles appearing in the data was 3.31% (3.31 serious driver injuries per 100 crash involvements). Computing the all model average in this way gives more weight to vehicles with greater representation in the crash data. Another way of computing the all model average rating is to simply take an un-weighted numerical average of the 381 vehicles for which a crashworthiness rating was calculated. This method

gives equal weight to each vehicle in the average. For the 381 vehicles rated in this study, the un-weighted numerical average crashworthiness is 3.57 (3.57 serious driver injuries per 100 crash involvements).

Ultimately the point against which ratings for individual vehicles are compared is arbitrary, whether it is either of the averages described above or some other point. For the purpose of comparing the crashworthiness ratings to an average value in this study, the un-weighted numerical average of all vehicles included in the analysis (3.57) was used. This was chosen as it gave better distribution of the vehicles into the five rating categories used for presentation of the ratings for consumer information (see Section 5.3). Any other comparison value could be used with equal legitimacy.

90% confidence limits were used to judge whether the true risk of death or hospitalisation for a driver of a specific model car involved in a tow-away crash is really different from the defined average for all models, i.e. 3.57 per 100 involved drivers. An upper limit below the average is indicative of superior crashworthiness, whereas a lower limit above the average suggests inferior crashworthiness. Other models also have crashworthiness ratings at the low or high end of the scale, but their confidence limits overlap the all model average. Although such models may also have superior or inferior crashworthiness characteristics, the database did not contain sufficient numbers of these models for the data to represent scientific evidence that this is the case.

In terms of statistical significance, it should be noted that classifying vehicles as having inferior or superior crashworthiness compared to the defined average means only that vehicle models with 'superior' crashworthiness have statistically significantly better crashworthiness than vehicles in the defined 'inferior' group. It is possible that vehicles within the inferior and superior crashworthiness categories also had statistically significant differences in crashworthiness. This could be assessed by examining overlap in the statistical confidence limits for any pair wise comparison of two vehicles. One of the main points in defining groups of vehicles with inferior and superior crashworthiness is to show that the analysis can differentiate with statistical precision crashworthiness between groups of vehicles within the rated vehicle population.

Ninety models had ratings representing evidence of superior crashworthiness because their upper 90% confidence limits were less than the average rating. These were distributed across market group classifications as follows:

Compact Four Wheel Drives	6
Medium Four Wheel Drives	8
Large Four Wheel Drives	7
Commercial – Vans	3
Commercial – Utes	10
Large cars	24
Medium cars	22
People Movers	5
Small cars	5

The specific models were (in order of estimated risk of serious driver injury in a crash, from lowest to highest):

- Volkswagen Passat (1998-2005)

- Mazda MPV (1994-1999)
- Ford Explorer (2001-2005)
- Audi A3/S3 (1997-2004)
- Ford Transit (2001-2005)
- Peugeot 406 (1996-2004)
- Lexus IS200 / IS300 (1999-2004)
- BMW 7 Series E38 (1995-2001)
- Subaru Forester (2002-2005)
- Kia Carnival (1999-2005)
- Toyota Landcruiser Prado (2003-2005)
- Chrysler Voyager (1997-2005)
- Mercedes Benz M-Class W163 (1998-2005)
- Mitsubishi Magna TL/TW / Verada KL/KW (2003-2005)
- Saab 900 (1986-1997)
- Nissan Pathfinder / Terrano / Regulus (1995-2005)
- Volkswagen Caravelle / Transporter (1995-2004)
- Nissan Maxima (2000-2002)
- BMW 5 Series E39 (1996-2003)
- Toyota Landcruiser Prado (1996-2003)
- Holden Rodeo (2003-2004)
- Ford Falcon Panel Van (1996-1999)
- Honda CR-V (2002-2005)
- Peugeot 306 (1994-2001)
- Mitsubishi Pajero NM / NP (2000-2005)
- Jaguar XJ6 (1987-1994)
- Honda CR-V (1997-2001)
- Land Rover Discovery (1991-2002)
- Ford Falcon Ute BA/BF (2003-2005)
- Volkswagen Golf / Bora (1999-2004)
- Honda Odyssey (1995-2000)
- Kia Sportage (1998-2003)
- Saab (1990/9-3 (1994-2002)
- Honda Accord (1999-2002)
- Honda Prelude (1997-2002)
- Nissan Patrol / Safari (1998-2004)
- Ford Falcon BA/BF (2002-2005)
- Holden Statesman/Caprice WH (1999-2003)
- Toyota Camry (2002-2005)
- BMW 3 Series E46 (1999-2004)
- Ford Mondeo (1995-2001)
- Mercedes Benz C-Class W202 (1995-2000)
- Subaru Liberty / Legacy / Outback (1999-2003)
- Holden Commodore VY/VZ Ute (2002-2005)
- Nissan Navara (1997-2005)
- Holden Commodore VY/VZ (2002-2005)
- Toyota Landcruiser (1998-2005)
- Mercedes Benz E-Class W124 (1986-1994)
- Subaru Forester (1997-2002)
- Volvo 700/900 Series (1984-1992)
- Ford Falcon Ute AU (2000-2002)
- Holden Vectra (1997-2003)
- Nissan / Ford Patrol / Maverick / Safari (1988-1997)
- Peugeot 505 (1982-1993)
- Mitsubishi Pajero (1992-1999)
- Ford F-Series (1982-1992)
- Holden / Isuzu Jackaroo / Bighorn (1992-1997)
- Land Rover Range Rover (1982-1994)

- Honda Legend (1986-1995)
- Peugeot 405 (1989-1997)
- Ford Falcon AU (1998-2002)
- Jeep Cherokee XJ (1996-2000)
- Toyota Cressida / Mark II (1989-1993)
- Volvo (19850/S70/V70/C70 (1992-2004)
- Toyota RAV4 (1994-2000)
- Toyota Tarago / Previa / Estima (1991-1999)
- Toyota Hilux (1998-2002)
- Nissan Navara (1992-1996)
- Ford Fairlane N & LTD D (1995-1998)
- Holden Commodore VT/VX (1997-2002)
- Toyota Avalon (2000-2005)
- Toyota Corolla (1998-2001)
- Holden Rodeo (1999-2002)
- Toyota Landcruiser (1990-1997)
- Honda Accord (1994-1998)
- Ford Fairlane N & LTD D (1988-1994)
- Holden Astra TS (1998-2005)
- Toyota Camry (1998-2002)
- Mitsubishi Magna TE/TF/TH/TJ / Verada KE/KF/KH/KJ / Diamante (1996-2003)
- Ford Falcon Ute (1996-1999)
- Honda Accord (1991-1993)
- Subaru Liberty / Legacy / Outback (1994-1998)
- Volvo 200 Series (1982-1993)
- Ford Falcon EF/EL (1994-1998)
- BMW 3 Series E36 (1992-1998)
- Holden / Toyota Commodore VR/VS / Lexcen (1993-1997)
- Mitsubishi Magna TR/TS / Verada KR/KS / V3000 / Diamante (1991-1996)
- Ford Falcon EB Series II / Falcon ED Apr (1992-1994)
- Subaru Liberty / Legacy (1989-1993)
- Ford Falcon EA / Falcon EB Series I (1988-Mar 1992)

Ninety models had ratings representing evidence of inferior crashworthiness because their lower confidence limits were greater than the average rating. These were distributed across market group classifications as follows:

Compact Four Wheel Drives	2
Commercial – Vans	7
Commercial – Utes	5
Large cars	7
Medium cars	12
People Movers	3
Light cars	26
Small cars	28

The specific models were (in order of estimated risk of serious driver injury in a crash, from highest to lowest):

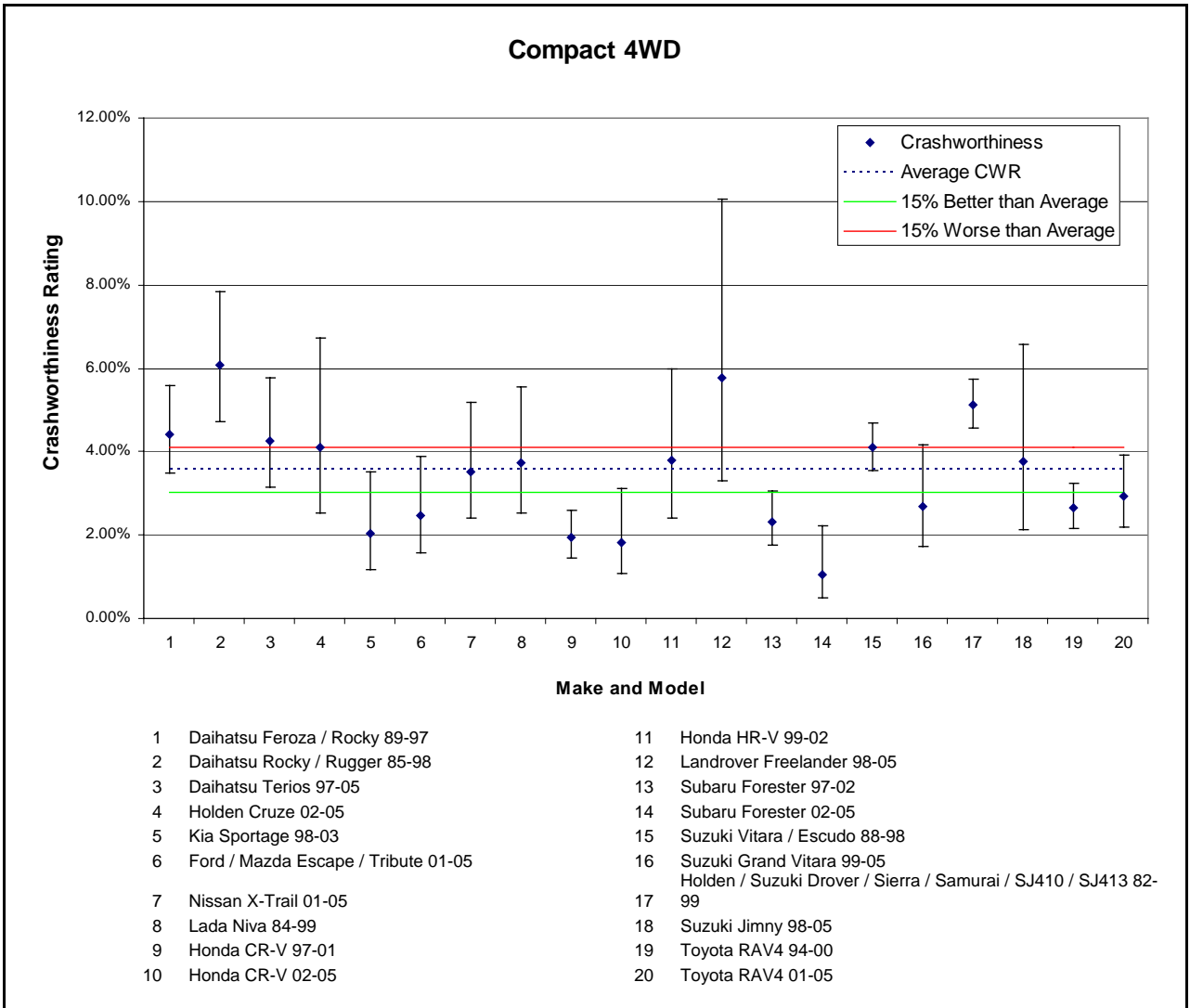
- Daihatsu Hi-Jet (1982-1990)
- Suzuki Alto (1985-2000)
- Holden / Suzuki Scurry / Carry (1982-2000)
- Daihatsu Mira (1990-1996)
- Suzuki Hatch / Alto (1982-1984)

- Suzuki Mighty Boy (1985-1988)
- Mitsubishi Starion (1982-1987)
- Subaru Sherpa / Fiori / 700 / Rex (1989-1992)
- Daihatsu Handivan (1982-1990)
- Suzuki Swift (1982-1985)
- Alfa Romeo GTV (1982-1984)
- Nissan Exa (1983-1986)
- Daihatsu Charade (1982-1986)
- Daewoo Kalos (2003-2004)
- Mitsubishi Starwagon / L300 (1983-1986)
- Holden / Suzuki Barina / Swift / Cultus (1986-1988)
- Honda City (1983-1986)
- Volkswagen Golf (1982-1994)
- Toyota MR2 (1987-1990)
- Hyundai Getz (2002-2005)
- Daihatsu Rocky / Rugger (1985-1998)
- Holden Statesman/Caprice WB (1982-1985)
- Nissan Micra (1995-1997)
- Honda CRX (1987-1991)
- Holden Shuttle / WFR Van (1982-1987)
- Nissan NX/NX-R (1991-1996)
- Hyundai Excel (1986-1990)
- Subaru Brumby (1982-1992)
- Daihatsu Charade (1988-1992)
- Peugeot 206 (1999-2005)
- Daewoo Espero (1995-1997)
- Toyota Supra (1982-1990)
- Ford / Mazda Festiva WA / 121 (1987-1990)
- Mitsubishi Cordia (1983-1987)
- Honda Civic / Ballade / Shuttle (1984-1987)
- Holden / Nissan Astra / Pulsar / Langley (1984-1986)
- Ford Festiva WD/WH/WF (1994-2001)
- Daihatsu Charade (1993-2000)
- Kia Ceres (1992-2000)
- Mitsubishi Mirage / Colt (1982-1988)
- Nissan Gazelle / Silvia (1984-1986)
- Toyota Tarago (1983-1989)
- Ford Capri (1989-1994)
- Holden / Suzuki Drover / Sierra / Samurai / SJ410 / SJ413 (1982-1999)
- Holden / Suzuki Barina / Swift / Cultus (1989-1999)
- Toyota Hiace/Liteace (1982-1986)
- Ford / Mazda Laser / 323 / Familia (1982-1988)
- Hyundai Excel (1990-1994)
- Holden Gemini RB (1986-1987)
- Holden Gemini (1982-1984)
- Holden WB Series (1982-1985)
- Honda Civic (1982-1983)
- Holden Camira (1982-1989)
- Hyundai Coupe (1996-2000)
- Nissan Bluebird (1982-1986)
- Mazda RX7 (1982-1985)
- Toyota Corolla (1982-1984)
- Mitsubishi Lancer / Mirage CB (1991-1992)
- Daewoo Lanos (1997-2003)
- Honda Accord (1982-1985)
- Hyundai S Coupe (1990-1996)
- Toyota Starlet (1996-1999)

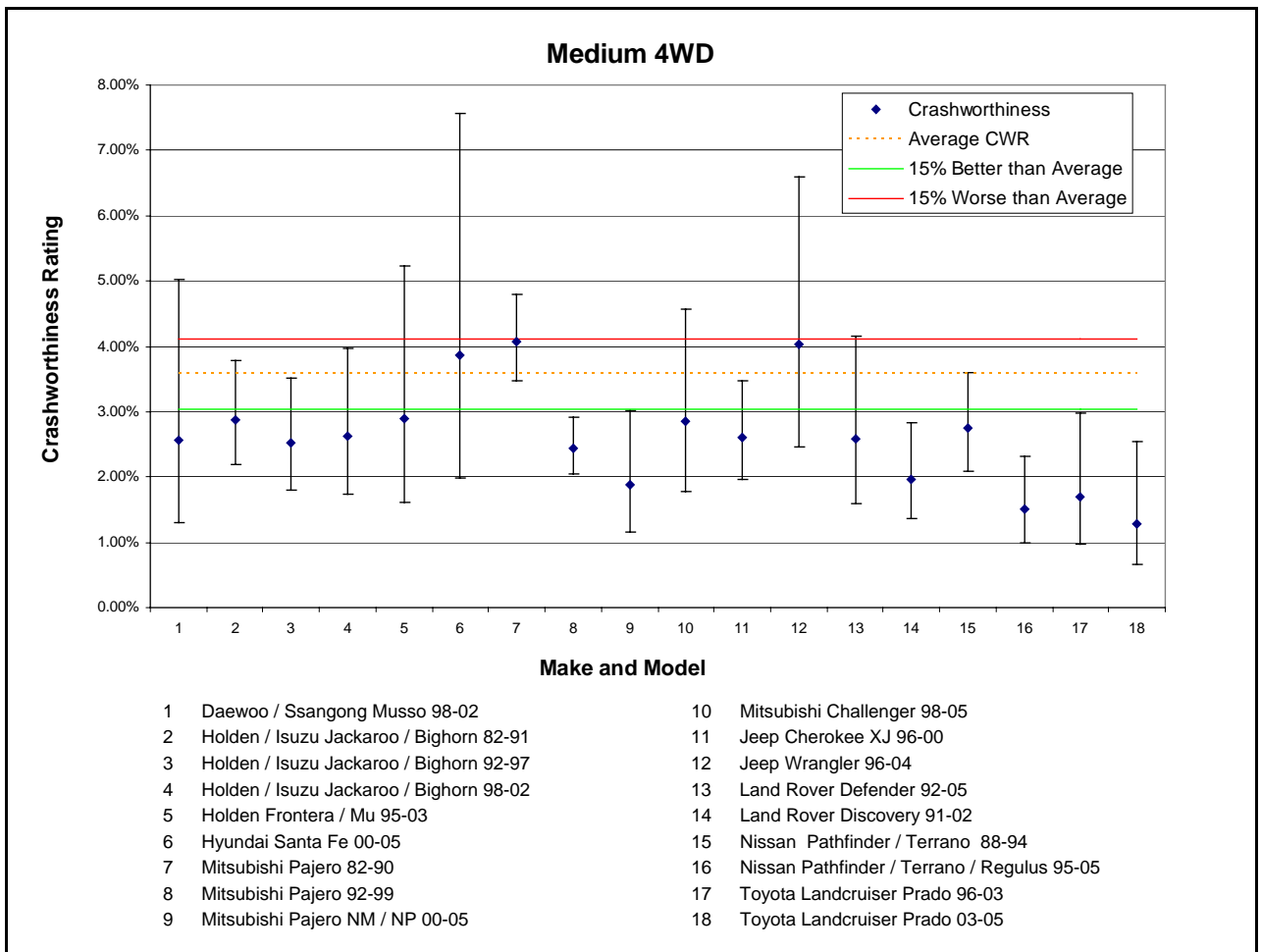
- Holden / Nissan Astra / Pulsar / Vector / Sentra (1988-1990)
- Toyota Corolla (1986-1988)
- Mitsubishi Starwagon / Delica Starwagon (1987-1993)
- Hyundai Excel / Accent (1995-2000)
- Subaru 1800 / Leone / Omega / 4WD Wagon (1982-1993)
- Toyota Hiace/Liteace (1987-1989)
- Toyota Corona (1982-1988)
- Holden Barina SB (1995-2000)
- Hyundai Lantra (1991-1995)
- Mitsubishi Sigma / Galant / Sapporo / Lambda (1982-1984)
- Honda Civic / Shuttle (1988-1991)
- Toyota Camry (1983-1986)
- Holden Commodore VB-VL (1982-1988)
- Mazda 121 / Autozam Review (1994-1996)
- Nissan / Ford Pintara / Corsair / Bluebird (1989-1992)
- Subaru Impreza (1993-2000)
- Toyota Hiace/Liteace (1990-1995)
- Nissan Pulsar (2000-2005)
- Mazda 929 / Luce (1982-1990)
- Toyota 4Runner/Hilux (1982-1985)
- Mitsubishi Magna TM/TN/TP / Sigma / V3000 (1985-1990)
- Toyota / Holden Corolla / Nova (1989-1993)
- Nissan Pulsar / Vector / Sentra (1996-1999)
- Mitsubishi Lancer / Mirage CE (1996-2003)
- Ford Laser (1991-1994)
- Ford / Mazda Telstar / 626 / MX6 / Capella (1983-1986)
- Ford Falcon XE/XF (1982-1988)
- Holden / Toyota Commodore VN/VP / Lexcen (1989-1993)

Figures 1 to 10 display for each of the market groups the crashworthiness ratings of vehicles together with their 90% confidence limits. Also displayed on each graph is a line representing the average crashworthiness rating of 3.57% and two lines at 3.03% and 4.11% representing 15% better than average or 15% worse than average respectively.

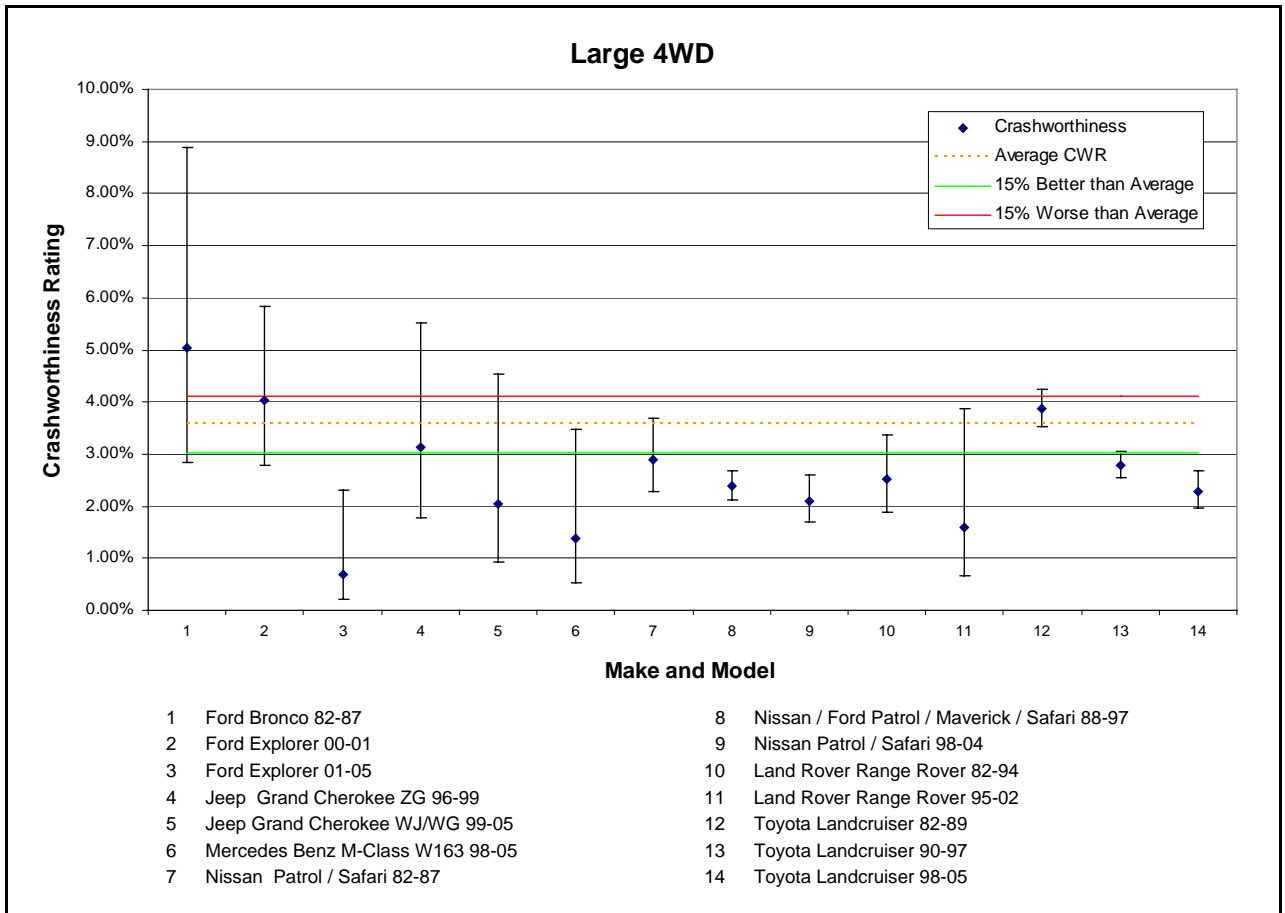
**Figure 1:** *Crashworthiness Ratings for Compact Four Wheel Drive vehicles (with 90% confidence limits)*



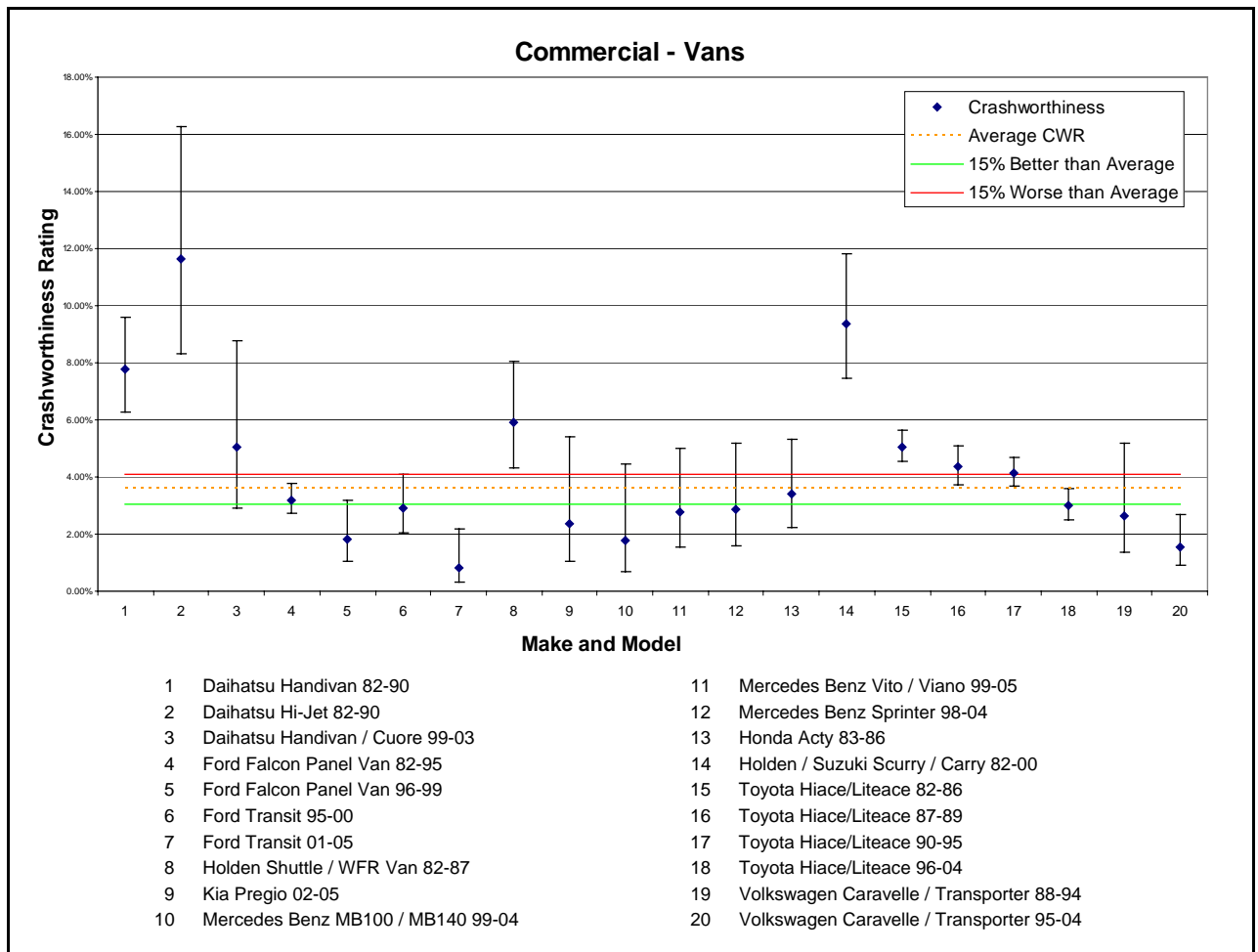
**Figure 2:** *Crashworthiness Ratings for Medium Four Wheel Drive vehicles (with 90% confidence limits)*



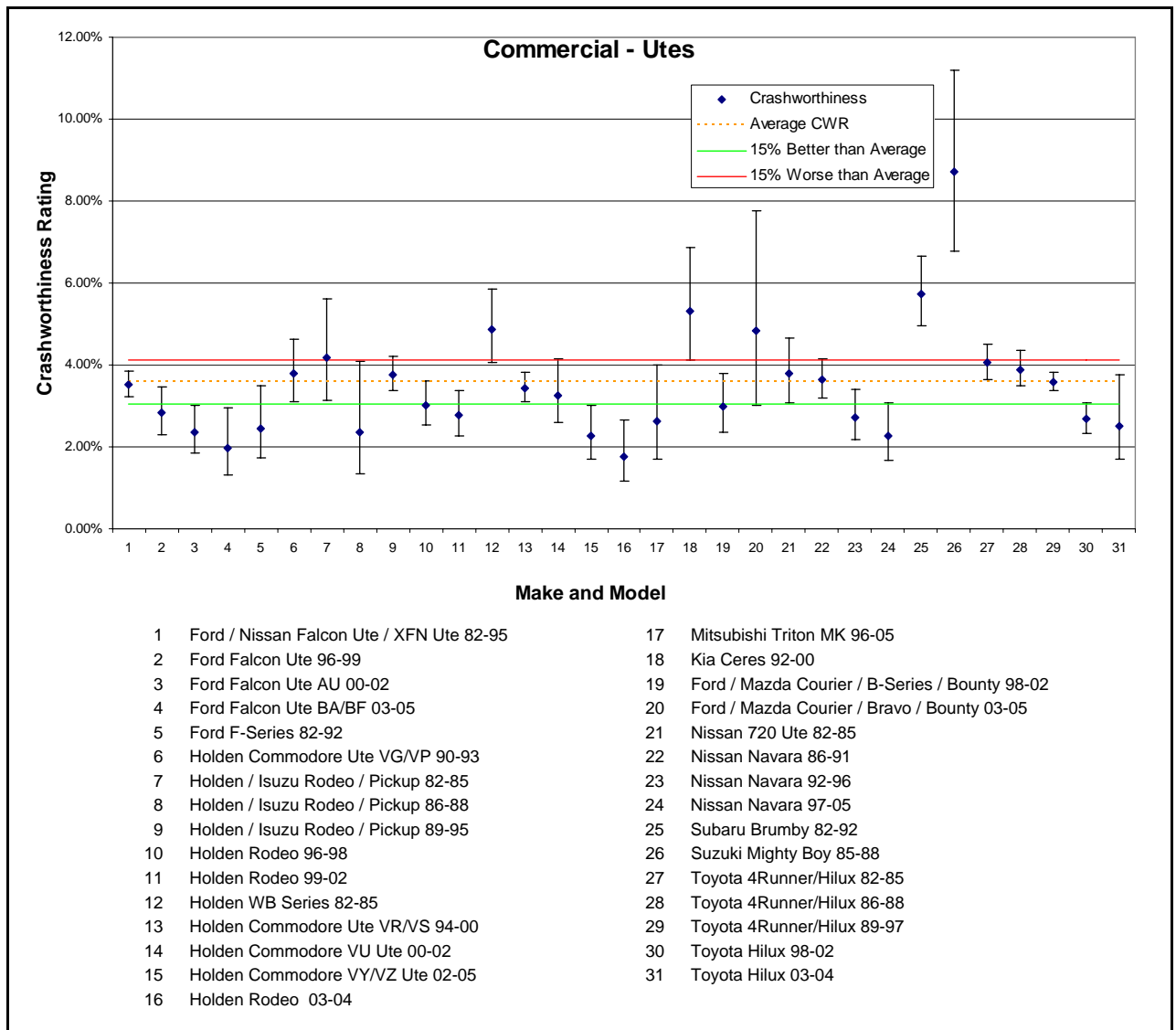
**Figure 3:** *Crashworthiness Ratings for Large Four Wheel Drive vehicles (with 90% confidence limits)*



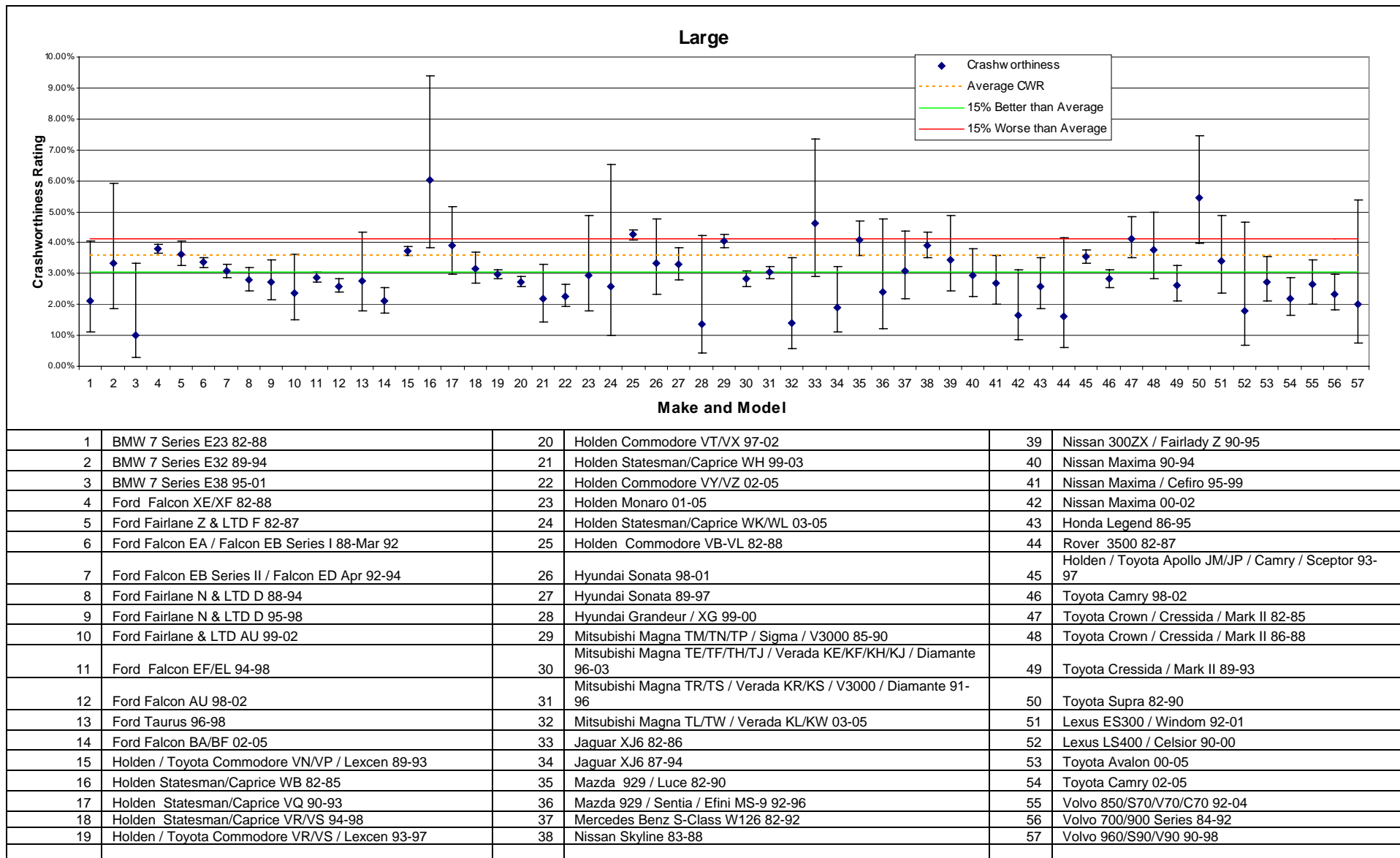
**Figure 4:** *Crashworthiness Ratings for Commercial Vans (with 90% confidence limits)*



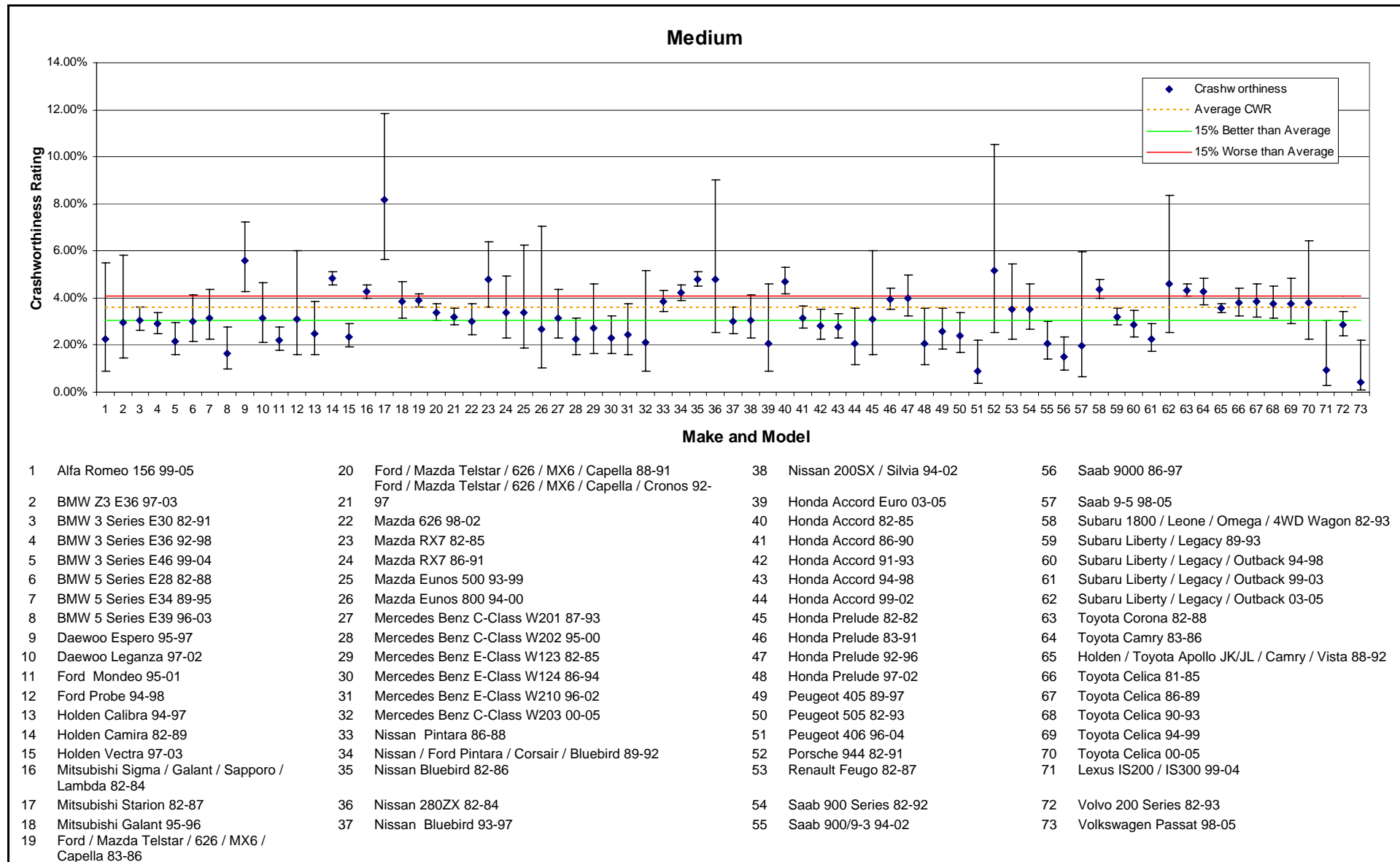
**Figure 5:** *Crashworthiness Ratings for Commercial Utes (with 90% confidence limits)*



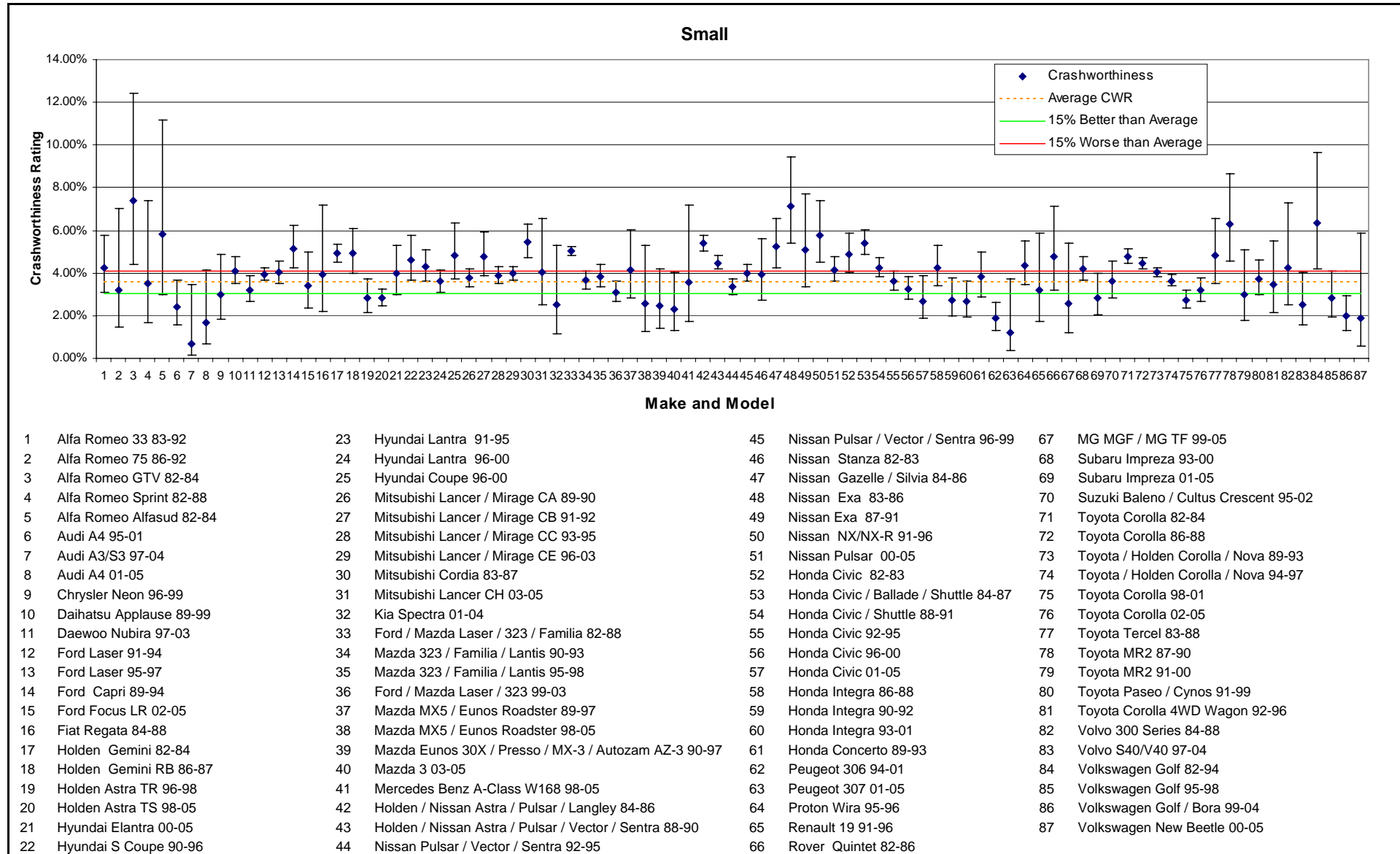
**Figure 6:** Crashworthiness Ratings for Large cars (with 90% confidence limits)



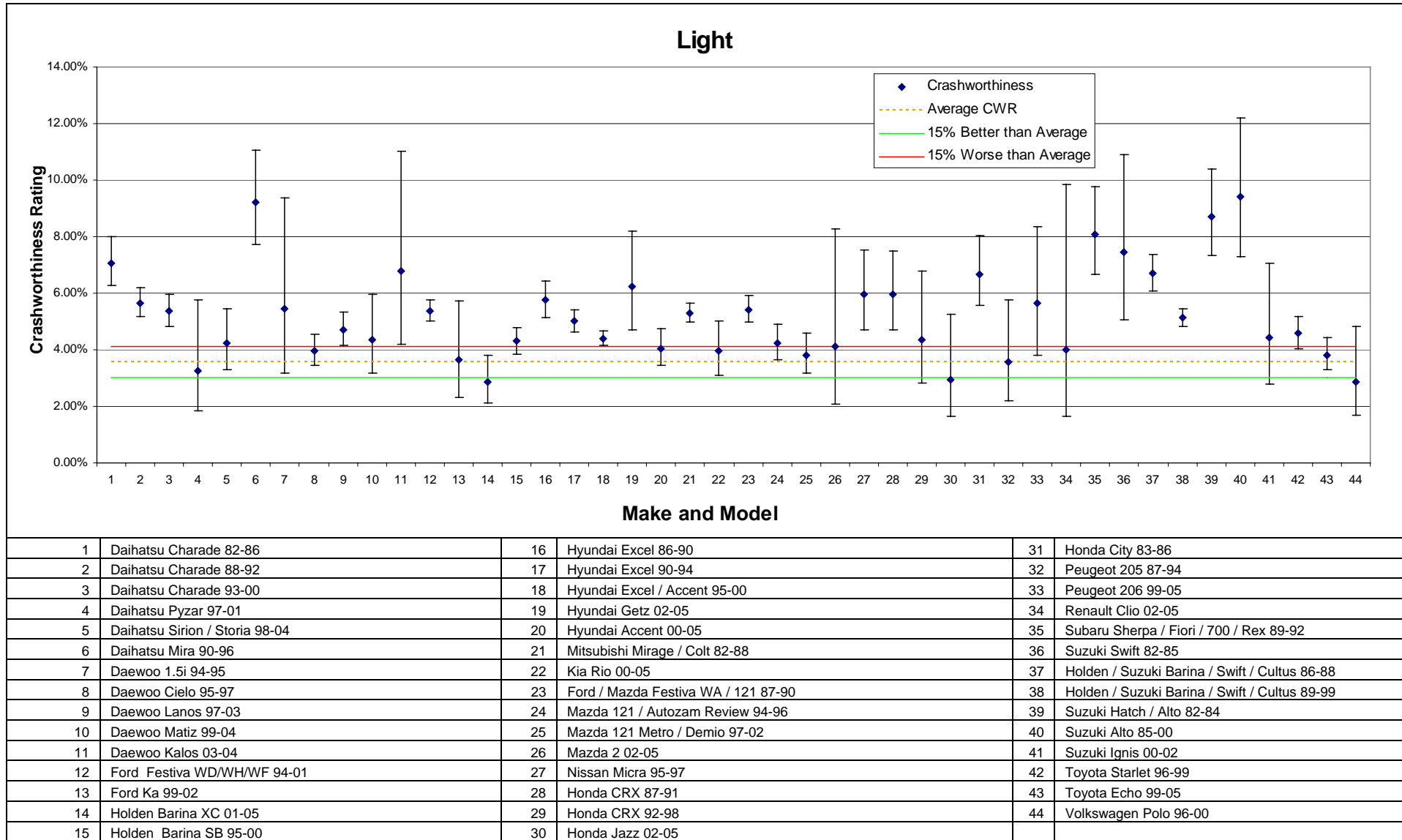
**Figure 7:** Crashworthiness Ratings for Medium cars (with 90% confidence limits)



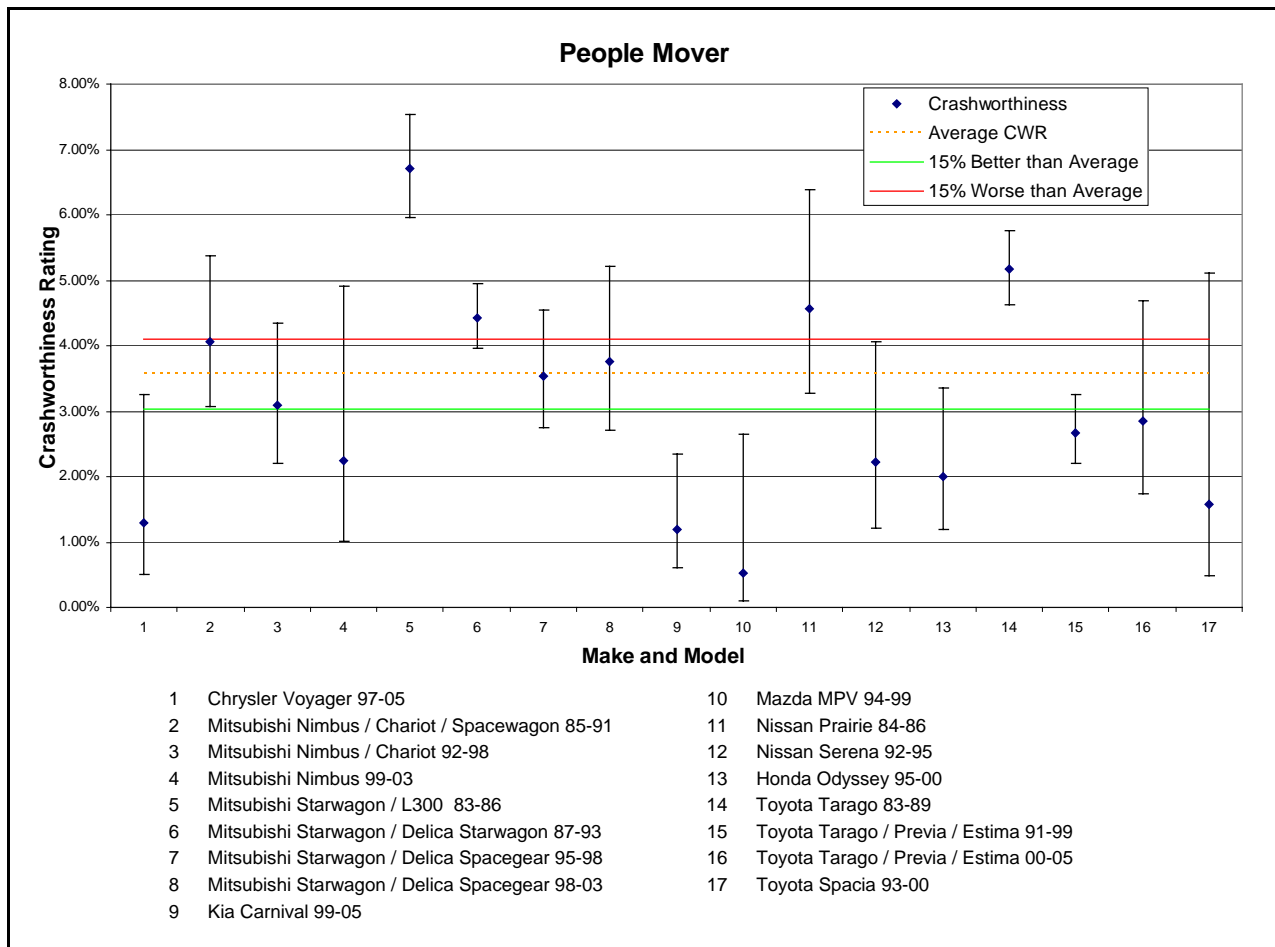
**Figure 8:** Crashworthiness Ratings for Small cars (with 90% confidence limits)



**Figure 9:** Crashworthiness Ratings for Light cars (with 90% confidence limits)



**Figure 10:** *Crashworthiness Ratings for People Movers (with 90% confidence limits)*



## 5.2 Aggressivity

### 5.2.1 Aggressivity towards Other Car Drivers and Unprotected Road Users

Using the methods described in Section 4.2, logistic regression models of the injury risk and injury severity of the focus road user were built separately as functions of both vehicle model and market group of the focus vehicle colliding with the other road user whose injury outcome is being modelled. Variations in the other factors listed in Section 4.2, including other road user type, were adjusted in the model by including them as predictors in the logistic regression models along with the focus vehicle model or market group. The aggressivity injury risk measure is based only on the injury outcome to drivers of other vehicles.

The logistic regression models of aggressivity injury risk showed the following non-vehicle factors and their interactions to be statistically significant predictors of injury risk (factors age and sex refer to focus driver whose injury outcome is being modelled). The average aggressivity injury risk in the data was 14.63%.

<b>Base effect terms</b>	<b>First order interactions</b>	<b>Second order interaction</b>
Sex	Sex*Year	Sex*State*Year
Speedzone	Age*Speedzone	
Age	Age*Sex	
State	Age*Year	
Year	Speedzone*Year	
	Speedzone*State	
	Age*State	
	State*Year	
	Sex*State	
	Sex*Speedzone	

The logistic regression models of aggressivity injury severity users showed the following non-vehicle factors and their interactions to be statistically significant predictors of injury severity. These factors were included in the logistic model (factors age and sex refer to the age and sex of the other driver or unprotected road user). The average aggressivity injury severity in the data was 22.51%.

<b>Base effect terms</b>	<b>First order interactions</b>	<b>Second order interaction</b>
Sex	Sex*State	Age*Sex*State
Speedzone	Sex*Crashtype	Speedzone*State*Crashtype
Age	Age*Sex	Speedzone*State*Year
State	Age*Crashtype	Age*State*Crashtype
Year	Year*Crashtype	Speedzone*Year*Crashtype
Crashtype	Speedzone*State	
	Age*State	
	State*Crashtype	
	State*Year	
	Speedzone*Year	
	Speedzone*Crashtype	

Final estimates of vehicle aggressivity towards other road users were obtained by multiplying the estimated injury risk and injury severity components for each vehicle. Confidence limits on each of the estimated aggressivity ratings were calculated. The average aggressivity rating in the data, used for comparisons against aggressivity of individual vehicle models was 3.44%.

Aggressivity ratings were obtained for 349 different vehicle models that satisfied the inclusion criteria for analysis. The estimated aggressivity ratings and their injury risk and injury severity components for individual vehicle models are given in Appendix 5 along with (95% confidence limits on the estimated aggressivity ratings).

Table 4 summarises the estimated injury risk, injury severity and aggressivity ratings by the 10 broad market groups along with the estimated (95% confidence limits on the aggressivity ratings). The estimated aggressivity rating is the expected number of road users killed or seriously injured per 100 involved in two-car tow-away collisions where their vehicle impacts with one of the designated models or market groups. Table 4 shows large four wheel drive vehicles to be the most aggressive towards drivers of other vehicles, with an average of 5.04 unprotected road users or drivers being killed or seriously injured for every 100 tow-away crashes with a large four wheel drive. Similarly, Table 4 shows light cars to be the least

aggressive towards unprotected road users or drivers of other vehicles, with an average aggressivity rating of 2.21.

**Table 4:** *Estimated Vehicle Aggressivity towards Other Drivers and Unprotected Road Users by Market Grouping*

Market Group	Other Driver Injury Risk (%)	Other Driver Injury Severity (%)	Aggressivity Rating *	Overall rank order	Lower (1995% Confidence limit)	Upper (1995% Confidence limit)	Width of Confidence interval
<b>Overall Average</b>	<b>14.63</b>	<b>22.51</b>	<b>3.29</b>				
COMPACT FOUR WHEEL DRIVE	13.45	21.84	2.94	4	2.71	3.18	0.46
MEDIUM FOUR WHEEL DRIVE	16.77	23.07	3.87	7	3.59	4.17	0.59
LARGE FOUR WHEEL DRIVE	18.42	27.39	5.04	10	4.81	5.29	0.48
COMMERCIAL - VAN	17.70	23.20	4.10	9	3.87	4.35	0.48
COMMERCIAL - UTE	16.03	24.46	3.92	8	3.78	4.06	0.29
LARGE	14.23	21.81	3.10	5	3.03	3.17	0.14
MEDIUM	12.99	20.93	2.72	3	2.64	2.80	0.16
PEOPLE MOVERS	15.83	22.53	3.57	6	3.34	3.81	0.48
LIGHT	11.07	19.97	2.21	1	2.13	2.30	0.16
SMALL	11.51	20.48	2.36	2	2.29	2.42	0.13

\* Serious injury rate per 100 drivers of other vehicles and unprotected road users involved in collisions with vehicles from the given market group

### 5.2.2 Aggressivity Rating Statistically Significant Makes and Models

Appendix 5 shows the estimated aggressivity ratings towards drivers of other vehicles and unprotected road users for the 349 individual vehicle models rated. Ratings ranged from a minimum of 0.75 serious injuries per 100 crashes for the 2000-2005 Mercedes Benz C-Class W203 to a maximum of 7.44 serious injuries per 100 crashes for the 1982-1985 Holden Statesman/Caprice WB. Of the 349 individual vehicle models for which an aggressivity rating was calculated, 83 models had an aggressivity rating which was significantly less (better) than the overall average of 3.44 serious injuries per 100 tow-away crashes. These eighty-three vehicle models were distributed across market group classifications as follows:

Compact Four Wheel Drives	3
Commercial – Vans	1
Large cars	1
Medium cars	13
Light cars	25
Small cars	40

The models were, in order of increasing aggressivity:

- Rover Quintet (1982-1986)
- Daihatsu Pyzar (1997-2001)
- Honda Acty (1983-1986)
- Suzuki Baleno / Cultus Crescent (1995-2002)
- Daihatsu Sirion / Storia (1998-2004)
- Suzuki Grand Vitara (1999-2005)
- Alfa Romeo 33 (1983-1992)
- Daewoo Matiz (1999-2004)

- Mazda 121 Metro / Demio (1997-2002)
- Mazda 121 / Autozam Review (1994-1996)
- Chrysler Neon (1996-1999)
- Subaru Impreza (2001-2005)
- Honda Integra (1986-1988)
- Volkswagen Polo (1996-2000)
- Holden Barina XC (2001-2005)
- Honda Civic (2001-2005)
- Hyundai S Coupe (1990-1996)
- Subaru Sherpa / Fiori / 700 / Rex (1989-1992)
- Honda City (1983-1986)
- Ford / Mazda Escape / Tribute (2001-2005)
- Subaru Forester (1997-2002)
- Saab 900 Series (1982-1992)
- Daihatsu Charade (1988-1992)
- Honda Civic (1982-1983)
- Toyota Echo (1999-2005)
- Mazda 323 / Familia / Lantis (1995-1998)
- Mitsubishi Lancer / Mirage CC (1993-1995)
- Honda Accord (1982-1985)
- Mazda 323 / Familia / Lantis (1990-1993)
- Peugeot 405 (1989-1997)
- Daihatsu Mira (1990-1996)
- Holden / Suzuki Barina / Swift / Cultus (1989-1999)
- Honda Civic (1996-2000)
- Honda Integra (1993-2001)
- Ford / Mazda Laser / 323 (1999-2003)
- Holden / Suzuki Barina / Swift / Cultus (1986-1988)
- Honda Accord (1991-1993)
- Daewoo Cielo (1995-1997)
- Volkswagen Golf / Bora (1999-2004)
- Mercedes Benz C-Class W202 (1995-2000)
- Toyota / Holden Corolla / Nova (1994-1997)
- Daihatsu Charade (1993-2000)
- Toyota Corolla (1982-1984)
- Holden Gemini RB (1986-1987)
- Subaru 1800 / Leone / Omega / 4WD Wagon (1982-1993)
- Ford / Mazda Festiva WA / 121 (1987-1990)
- Toyota Starlet (1996-1999)
- Daewoo Nubira (1997-2003)
- Daihatsu Applause (1989-1999)
- Toyota Cressida / Mark II (1989-1993)
- Mitsubishi Lancer / Mirage CA (1989-1990)
- Nissan Bluebird (1993-1997)
- Ford / Mazda Telstar / 626 / MX6 / Capella / Cronos (1992-1997)
- Hyundai Accent (2000-2005)
- Honda Civic / Shuttle (1988-1991)
- Ford Festiva WD/WH/WF (1994-2001)
- Mitsubishi Lancer / Mirage CE (1996-2003)
- Nissan Pulsar / Vector / Sentra (1996-1999)
- Ford Capri (1989-1994)
- Daihatsu Charade (1982-1986)
- Holden Gemini (1982-1984)
- Holden Astra TS (1998-2005)
- Ford Laser (1995-1997)
- Holden Barina SB (1995-2000)
- Hyundai Excel / Accent (1995-2000)

- BMW 3 Series E30 (1982-1991)
- Toyota Corolla (2002-2005)
- Hyundai Excel (1990-1994)
- Ford / Mazda Laser / 323 / Familia (1982-1988)
- Ford Laser (1991-1994)
- Honda Civic / Ballade / Shuttle (1984-1987)
- Toyota Corolla (1986-1988)
- Mitsubishi Mirage / Colt (1982-1988)
- Toyota / Holden Corolla / Nova (1989-1993)
- Nissan Bluebird (1982-1986)
- Subaru Liberty / Legacy (1989-1993)
- Honda Civic (1992-1995)
- Toyota Corolla (1998-2001)
- Honda Prelude (1983-1991)
- Ford / Mazda Telstar / 626 / MX6 / Capella (1983-1986)
- Nissan Pulsar / Vector / Sentra (1992-1995)
- Holden / Nissan Astra / Pulsar / Langley (1984-1986)
- Holden / Nissan Astra / Pulsar / Vector / Sentra (1988-1990)

Similarly, 62 models had an aggressivity rating which was significantly greater (worse) than the overall average of 3.44 serious injuries per 100 tow away crashes. These sixty-two vehicle models were distributed across market group classifications as follows:

Compact Four Wheel Drives	1
Medium Four Wheel Drives	8
Large Four Wheel Drives	8
Commercial – Van	6
Commercial – Ute	18
Large cars	14
People Mover	4
Light cars	1
Small cars	2

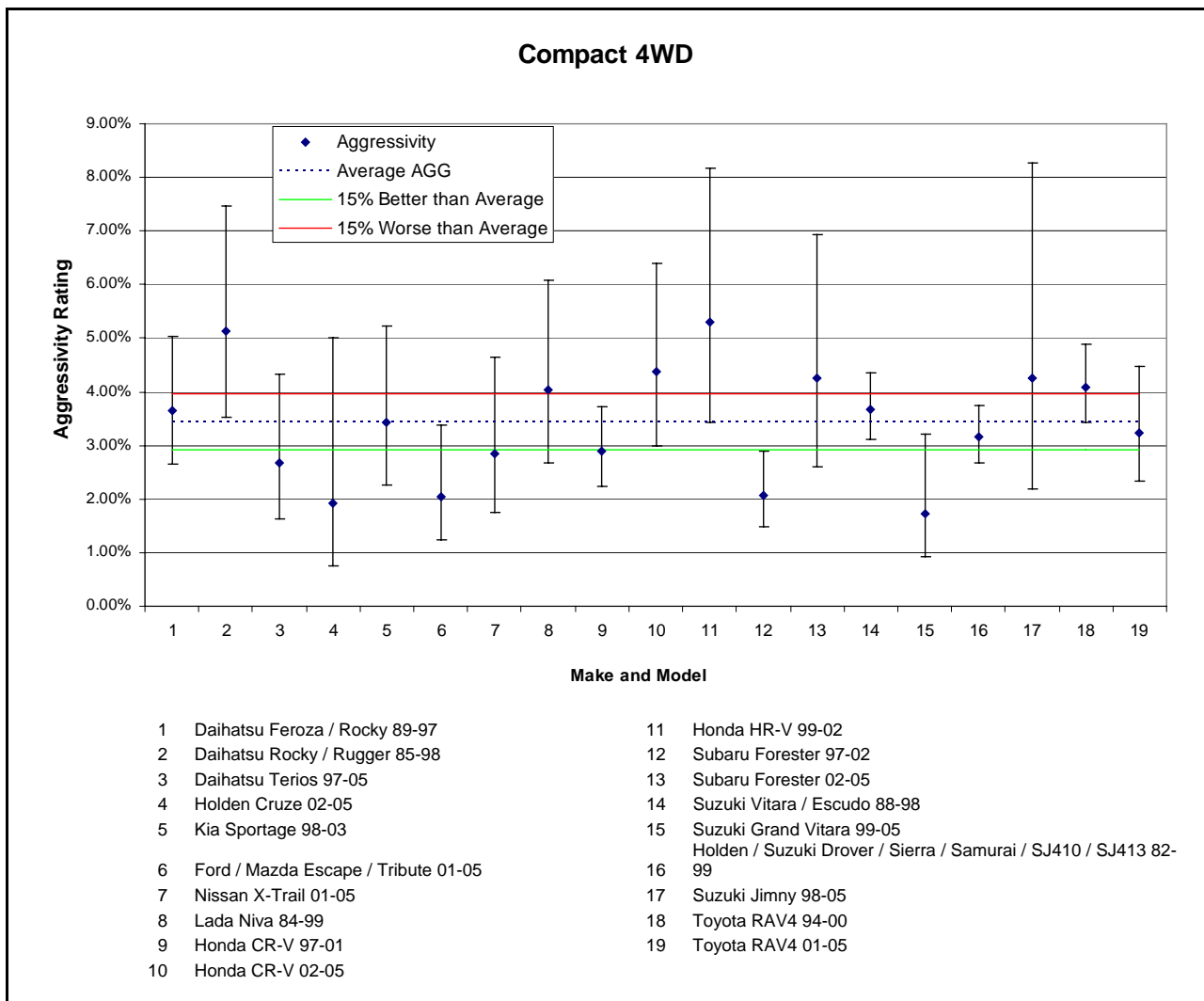
The models were, in order of decreasing aggressivity:

- Holden Statesman/Caprice WB (1982-1985)
- Ford Bronco (1982-1987)
- Mazda (19929 / Sentia / Efina MS-9 (1992-1996)
- Toyota Supra (1982-1990)
- Toyota Landcruiser Prado (1996-2003)
- Toyota Landcruiser (1982-1989)
- Holden Monaro (2001-2005)
- Ford F-Series (1982-1992)
- Toyota Landcruiser (1990-1997)
- Nissan Patrol / Safari (1982-1987)
- Land Rover Range Rover (1982-1994)
- Holden Commodore VY/VZ Ute (2002-2005)
- Nissan Patrol / Safari (1998-2004)
- Mercedes Benz Vito / Viano (1999-2005)
- Holden / Isuzu Jackaroo / Bighorn (1998-2002)
- Volkswagen Caravelle / Transporter (1995-2004)
- Jeep Wrangler (1996-2004)
- Toyota Landcruiser (1998-2005)
- Jaguar XJ6 (1982-1986)

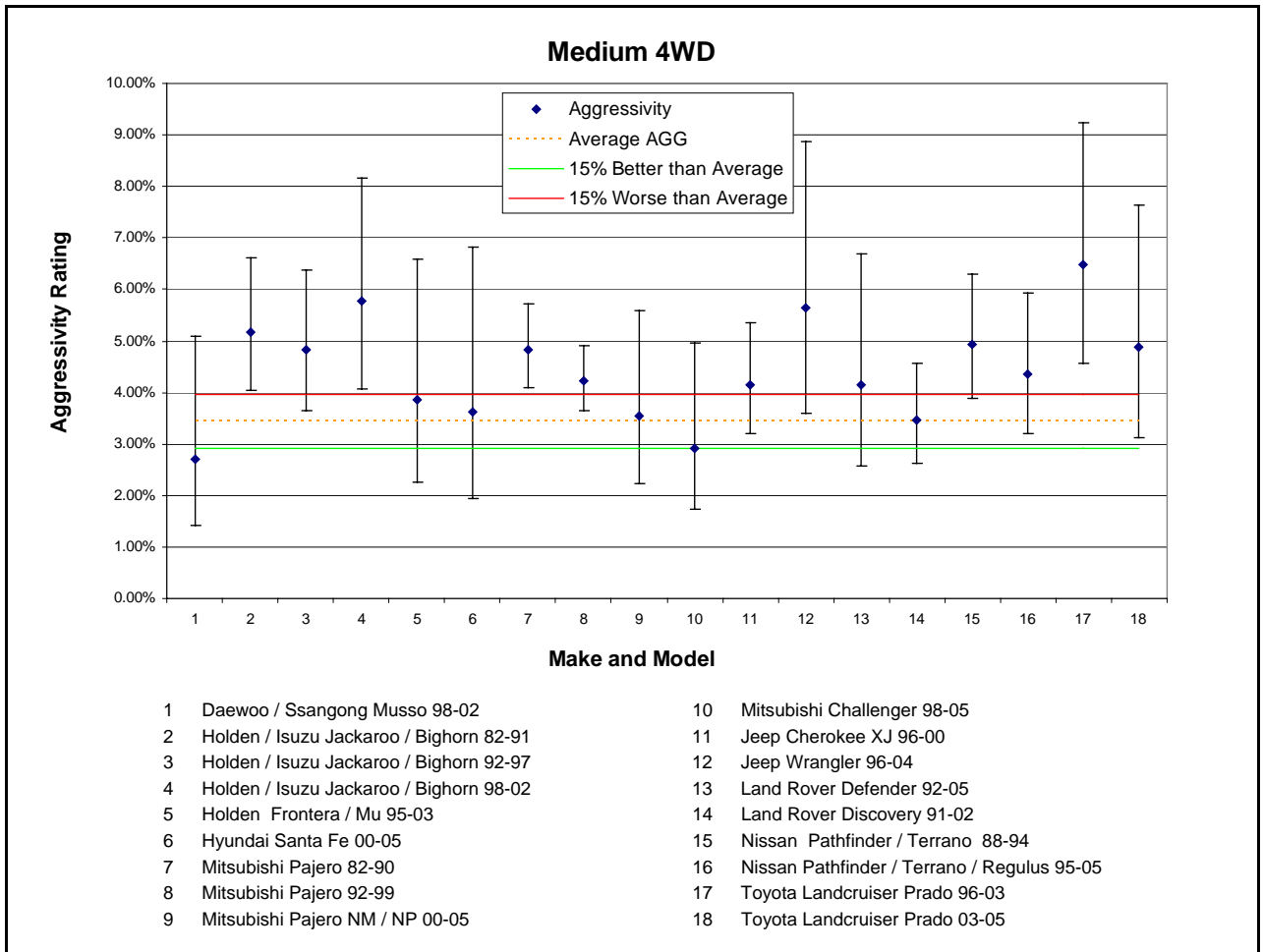
- Toyota Hiace/Liteace (1982-1986)
- Chrysler Voyager (1997-2005)
- Toyota Hiace/Liteace (1990-1995)
- Hyundai Getz (2002-2005)
- Toyota Hiace/Liteace (1987-1989)
- Nissan Exa (1983-1986)
- Holden / Isuzu Jackaroo / Bighorn (1982-1991)
- Nissan 300ZX / Fairlady Z (1990-1995)
- Daihatsu Rocky / Rugger (1985-1998)
- Toyota 4Runner/Hilux (1982-1985)
- Nissan / Ford Patrol / Maverick / Safari (1988-1997)
- Ford Falcon Ute BA/BF (2003-2005)
- Holden Rodeo (1999-2002)
- Holden / Isuzu Rodeo / Pickup (1989-1995)
- Nissan Pathfinder / Terrano (1988-1994)
- Toyota Hilux (1998-2002)
- Mitsubishi Starwagon / L300 (1983-1986)
- Mitsubishi Pajero (1982-1990)
- Holden / Isuzu Jackaroo / Bighorn (1992-1997)
- Toyota Hiace/Liteace (1996-2004)
- Toyota 4Runner/Hilux (1986-1988)
- Holden WB Series (1982-1985)
- Ford Falcon Ute AU (2000-2002)
- Toyota Avalon (2000-2005)
- Toyota 4Runner/Hilux (1989-1997)
- Holden Rodeo (1996-1998)
- Nissan Navara (1986-1991)
- Holden Commodore Ute VR/VS (1994-2000)
- Nissan Navara (1992-1996)
- Nissan Navara (1997-2005)
- Volvo 850/S70/V70/C70 (1992-2004)
- Ford Falcon Ute (1996-1999)
- Mitsubishi Cordia (1983-1987)
- Mitsubishi Pajero (1992-1999)
- Mitsubishi Starwagon / Delica Starwagon (1987-1993)
- Ford / Nissan Falcon Ute / XFN Ute (1982-1995)
- Toyota Tarago (1983-1989)
- Ford Falcon XE/XF (1982-1988)
- Ford Falcon EB Series II / Falcon ED Apr (1992-1994)
- Holden Commodore VT/VX (1997-2002)
- Ford Falcon EA / Falcon EB Series I (1988-Mar 1992)
- Ford Falcon EF/EL (1994-1998)
- Ford Falcon AU (1998-2002)

Figures 11 to 20 display for each of the market groups the aggressivity ratings of vehicles together with their 90% confidence limits. Also displayed on each graph is a line representing the average aggressivity rating of 3.44% and two lines at 2.92% and 3.96% representing 15% better than average or 15% worse than average respectively.

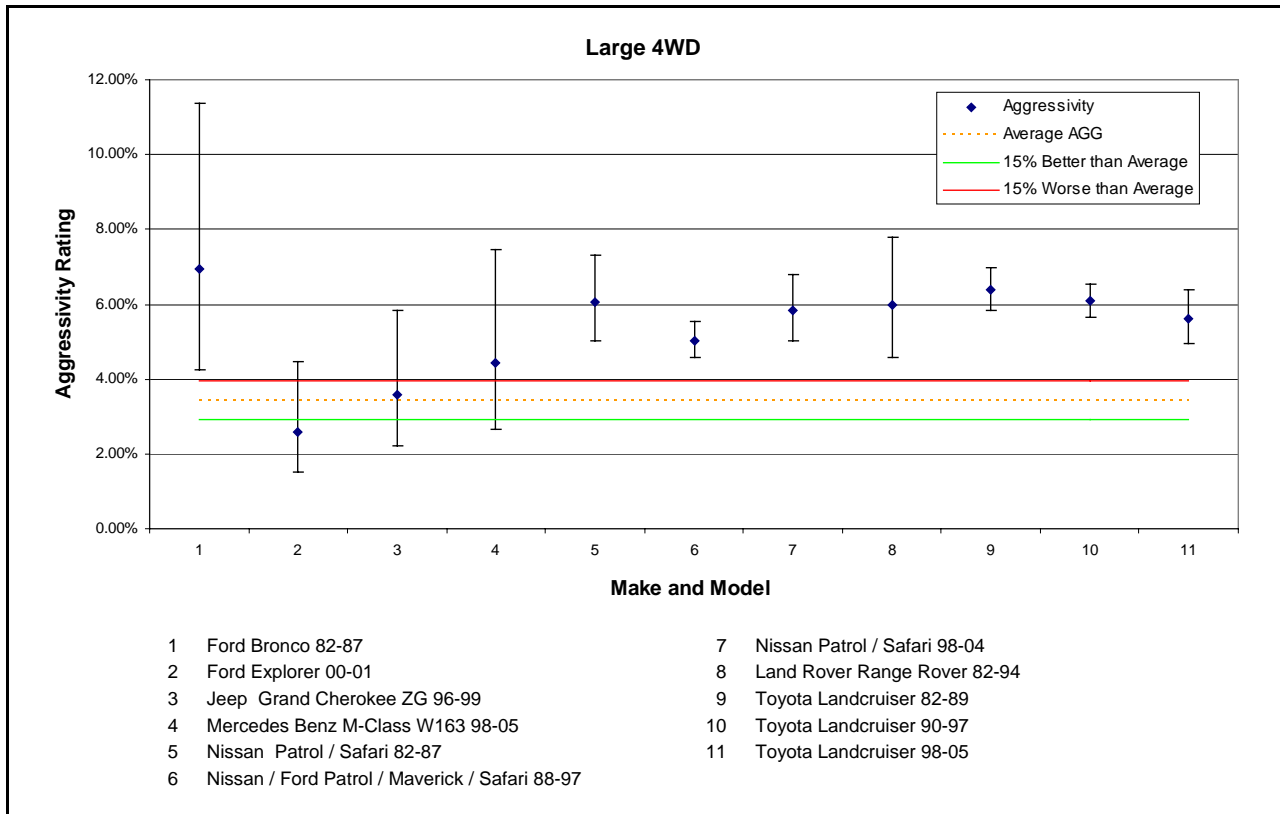
**Figure 11:** *Aggressivity Ratings for Compact Four Wheel Drive vehicles (with 90% confidence limits)*



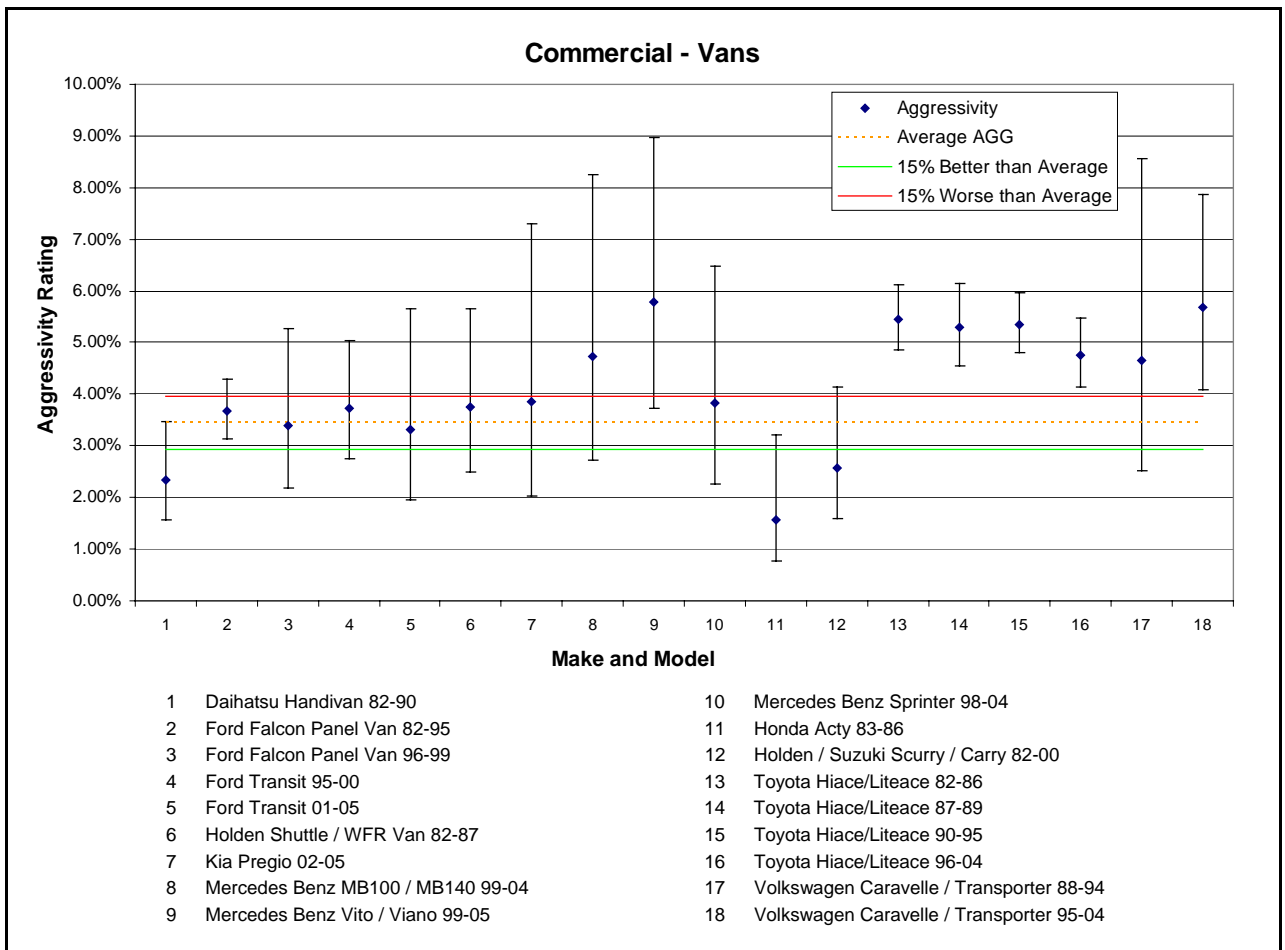
**Figure 12:** *Aggressivity Ratings for Medium Four Wheel Drive vehicles (with 90% confidence limits)*



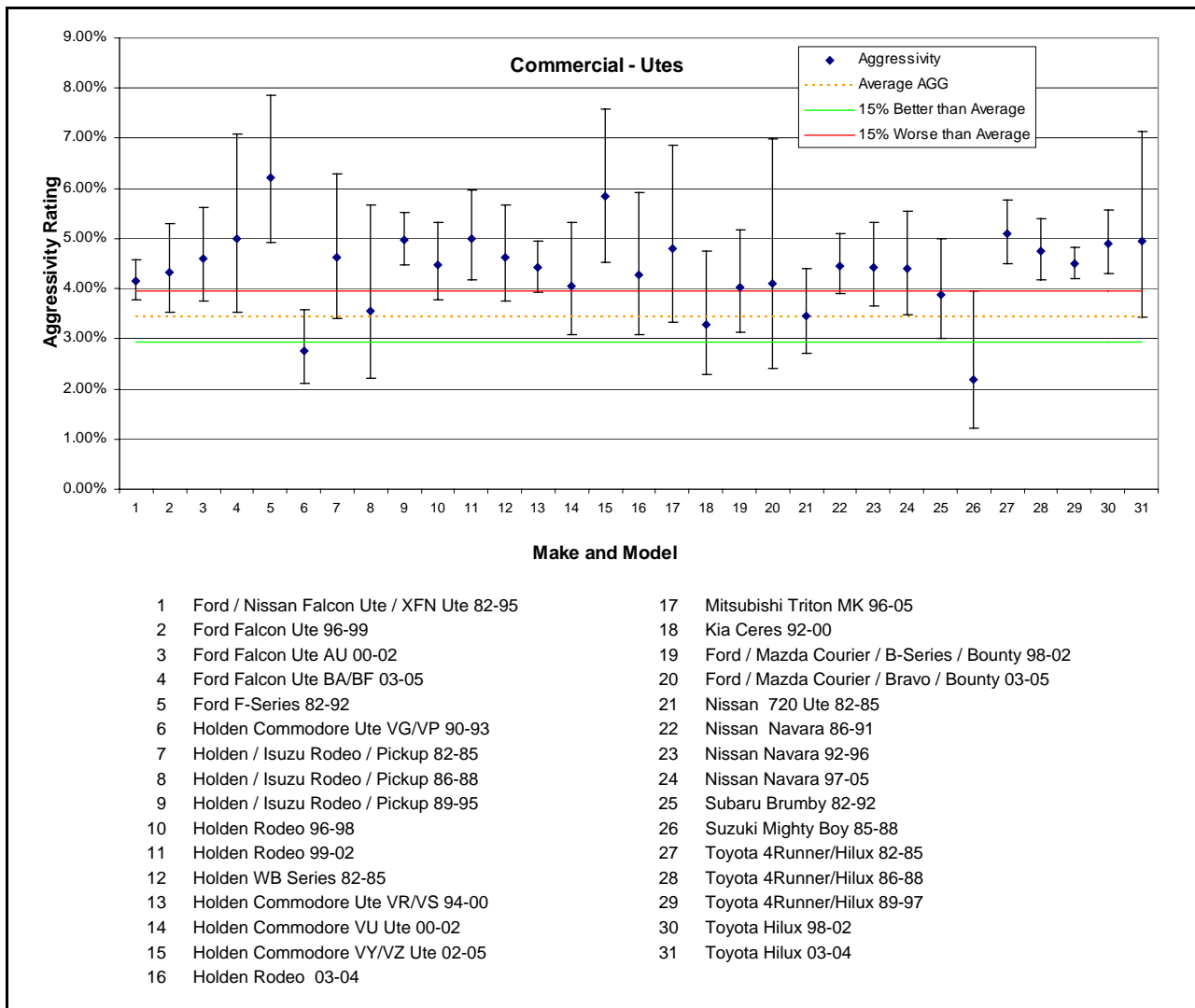
**Figure 13:** *Aggressivity Ratings for Large Four Wheel Drive vehicles (with 90% confidence limits)*



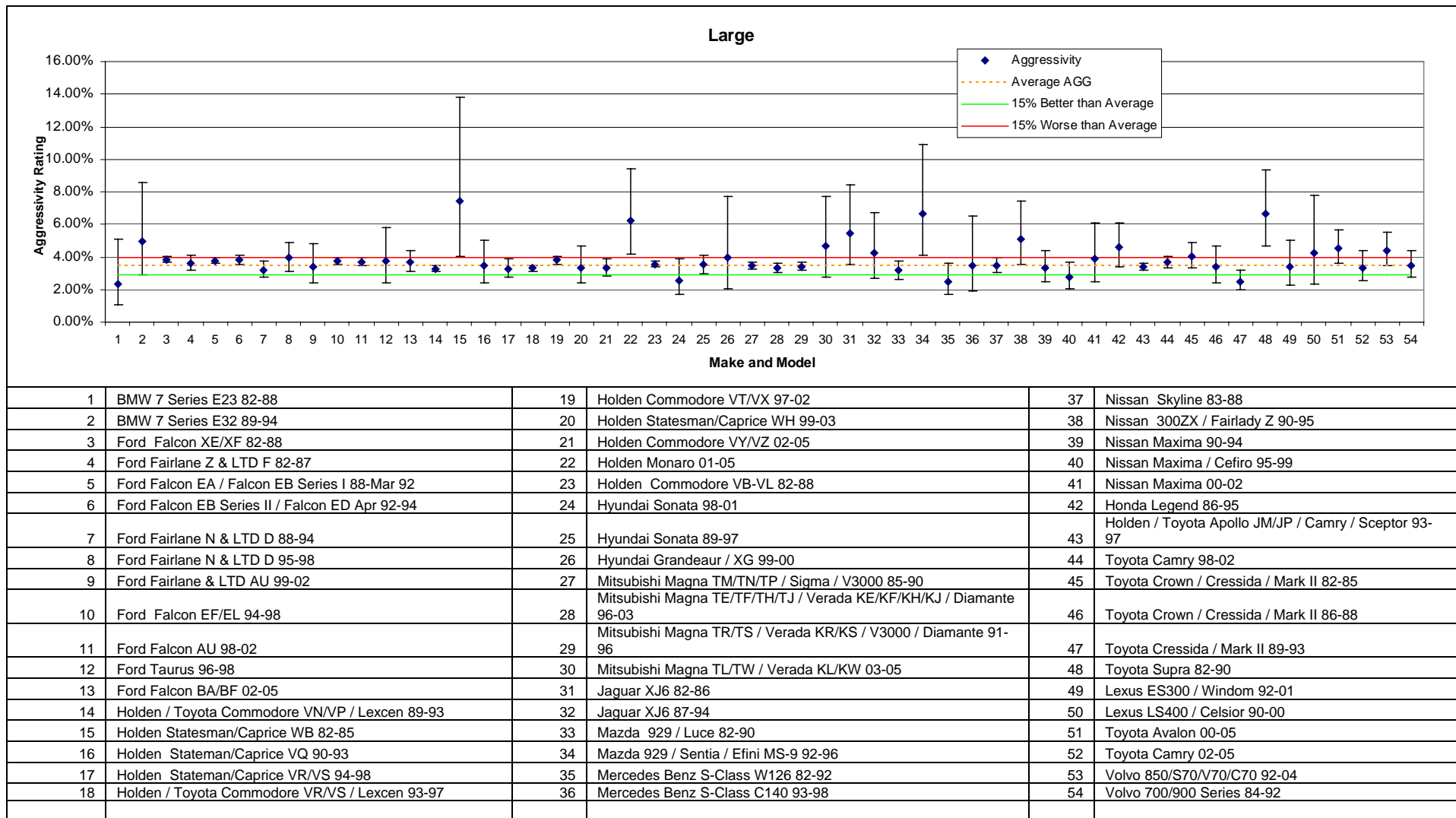
**Figure 14:** *Aggressivity Ratings for Commercial Vans (with 90% confidence limits)*



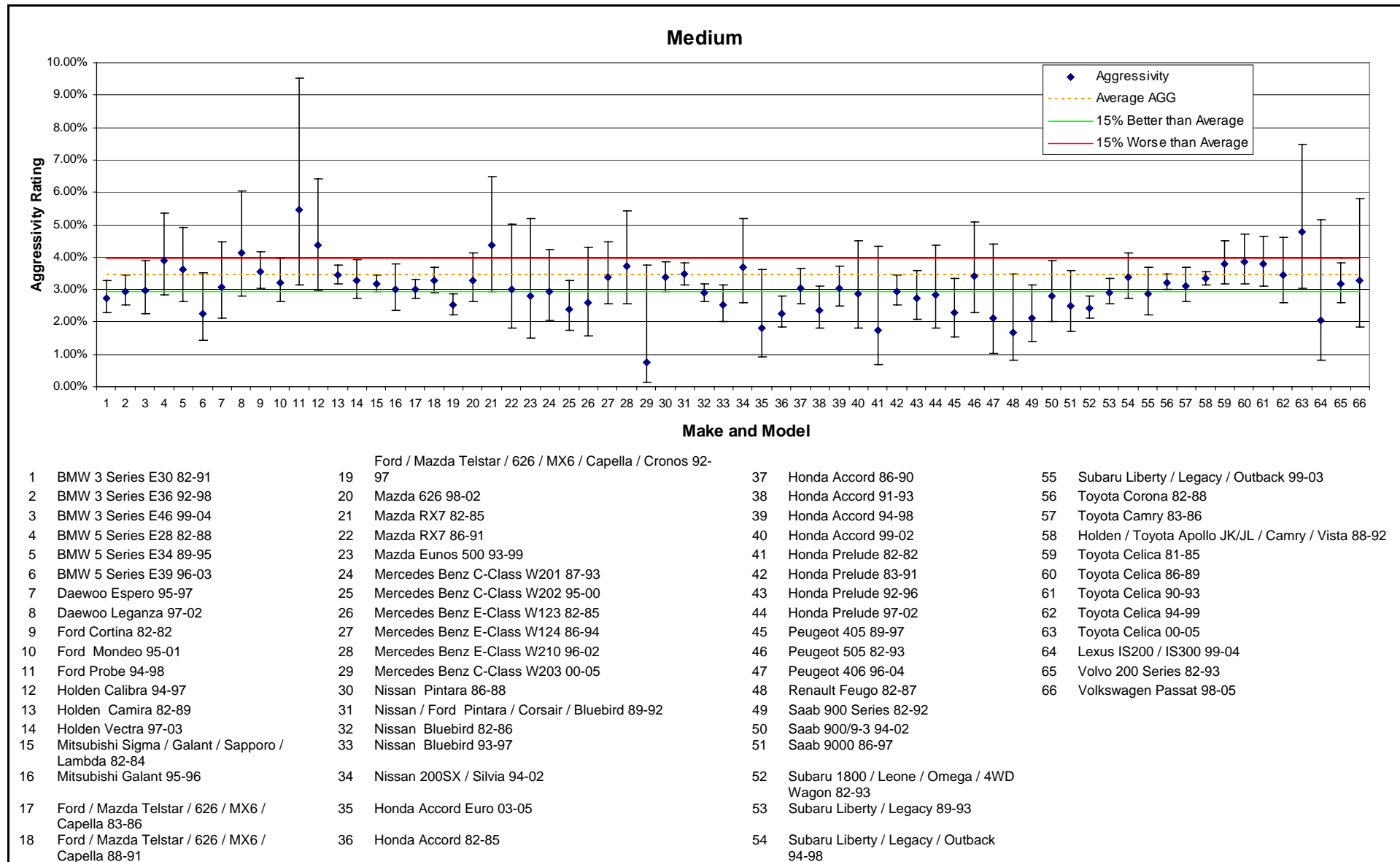
**Figure 15:** *Aggressivity Ratings for Commercial Utes (with 90% confidence limits)*



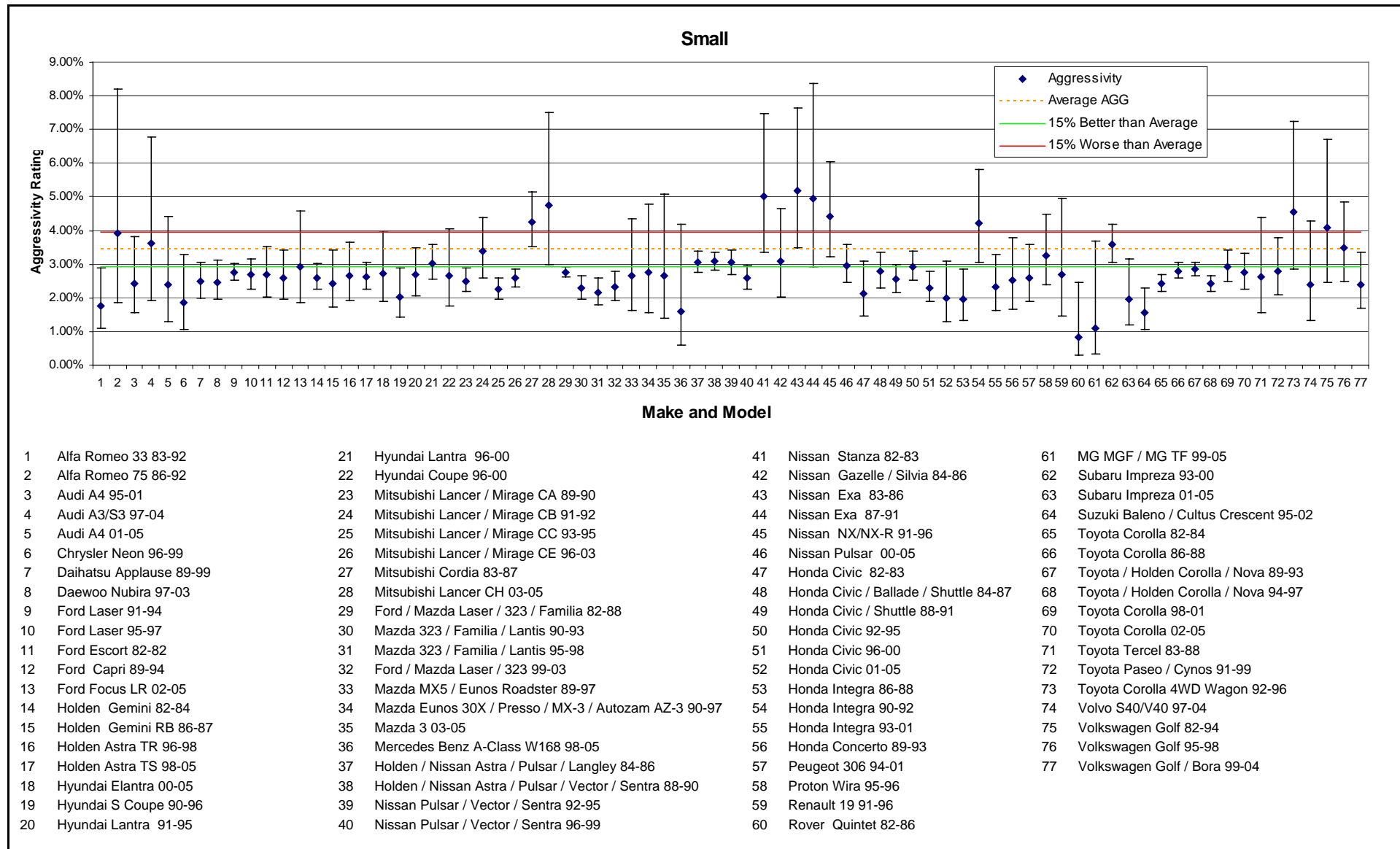
**Figure 16:** Aggressivity Ratings for Large cars (with 90% confidence limits)



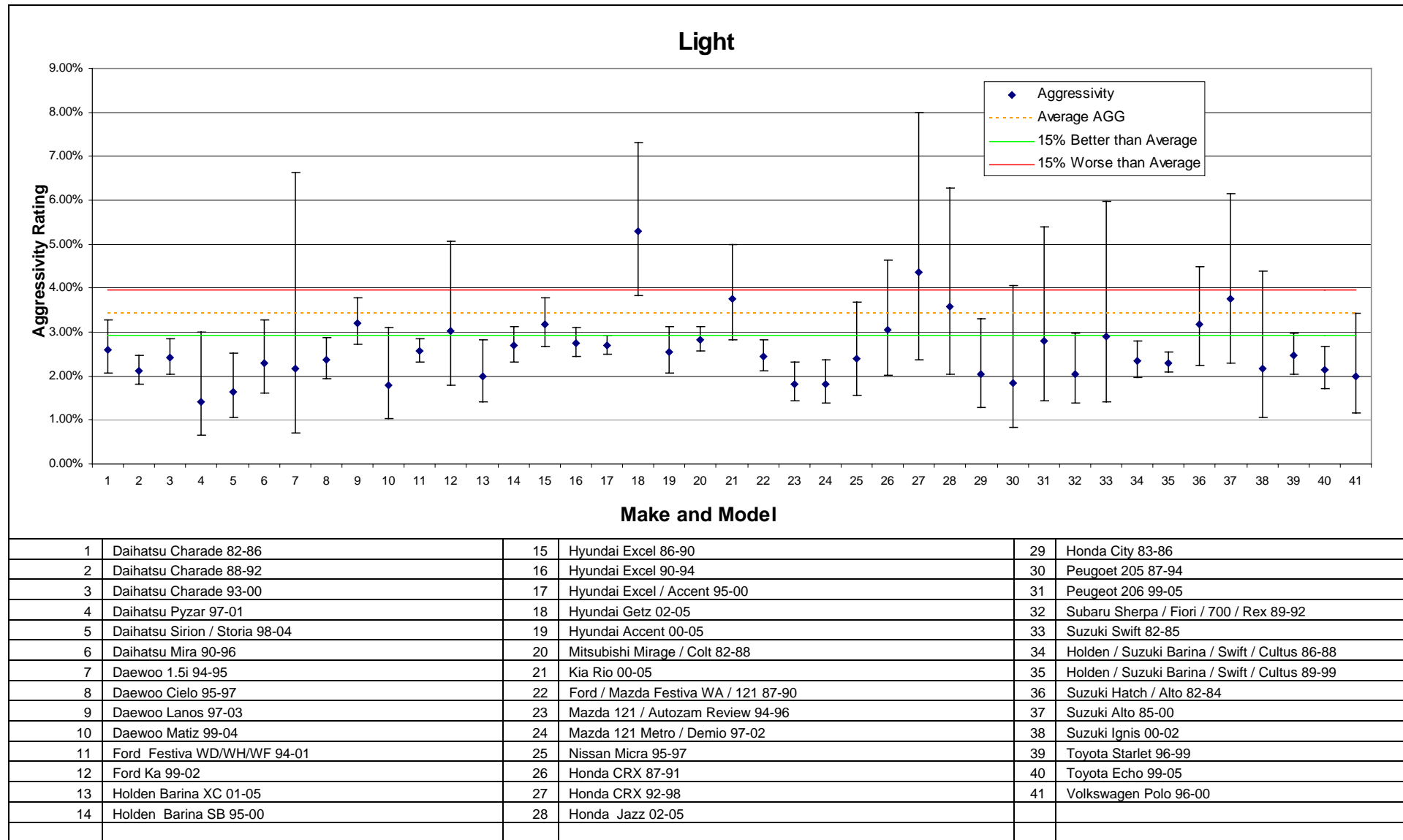
**Figure 17:** Aggressivity Ratings for Medium cars (with 90% confidence limits)



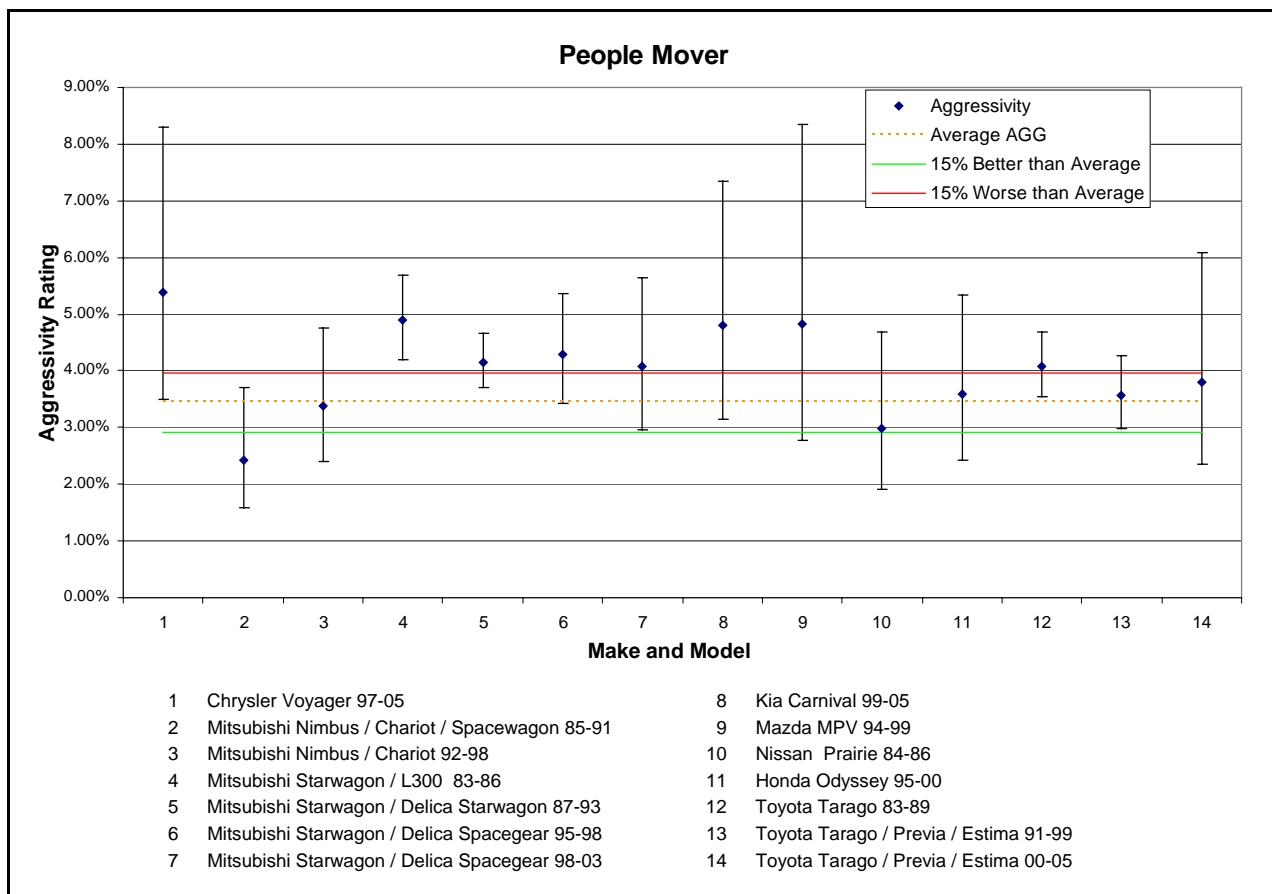
**Figure 18:** *Aggressivity Ratings for Small cars (with 90% confidence limits)*



**Figure 19:** Aggressivity Ratings for Light cars (with 90% confidence limits)



**Figure 20:** *Aggressivity Ratings for People Movers (with 90% confidence limits)*

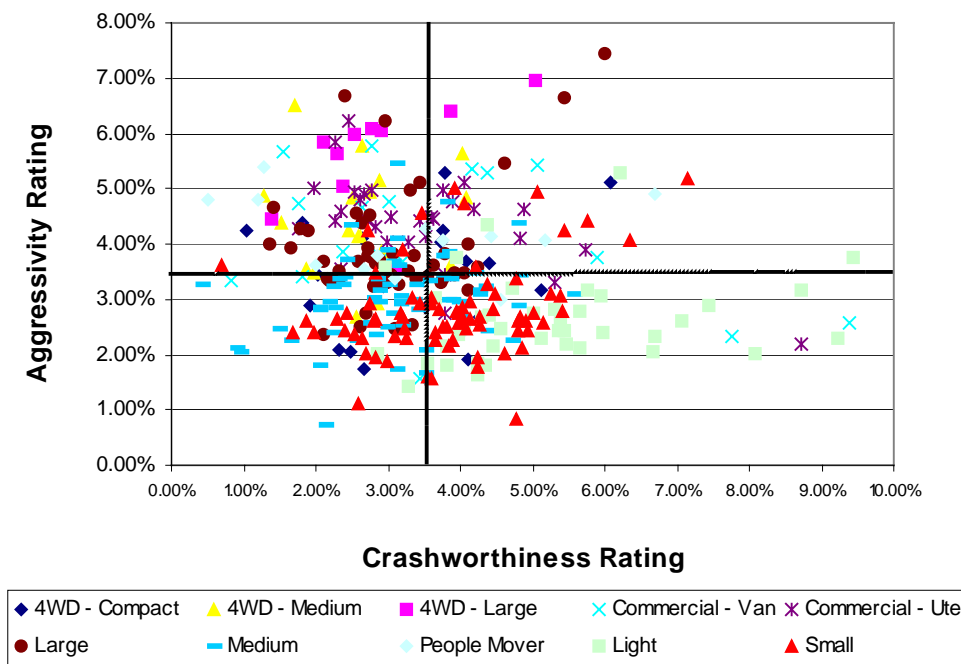


### 5.2.5 Relationship between Aggressivity and Crashworthiness

In assessing the British vehicle safety indices, Broughton (1996) found a strong inverse relationship between the indices for crashworthiness and aggressivity. Figure 21 shows the aggressivity measure plotted against crashworthiness for those vehicle models with both ratings. As Figure 21 shows, the inverse relationship between the two measures is not particularly strong. The dotted lines in Figure 21 represent the average aggressivity and crashworthiness of the vehicles assessed. Points in the lower left quadrant defined by the dotted lines represent vehicles with relatively low aggressivity as well as good (low) estimated crashworthiness. This area is populated by a number of small and medium vehicle models as well as some compact 4WDs. In contrast, vehicle models in the upper right quadrant of Figure 21 defined by the dotted lines show relatively poor crashworthiness and high aggressivity. There are a number of commercial vans and utilities in this quadrant along with some small vehicle models, people movers and compact 4WDs. The remaining two quadrants are populated with vehicles that only perform well on either crashworthiness or aggressivity measures. Light cars tend to have low aggressivity but also poor crashworthiness whilst large and medium 4WDs tend to exhibit converse traits.

Absence of a strong relationship between the measures of aggressivity and crashworthiness confirms that the two quantities considered here are measuring two different aspects of a vehicle’s safety performance. Whilst one would expect some relationship between the two measures given their common but opposite relationships with mass (Broughton, 1996; Cameron et al 1998), the lack of a strong relationship suggests vehicle mass is only playing a small part in aggressivity rating relative to vehicle total safety design. The independence of these two measures does not seem to have been achieved to the same degree under other systems (Broughton, 1996).

**Figure 21:** *Estimated Vehicle Aggressivity towards Other Drivers and Unprotected Road Users vs. Crashworthiness Rating*



### 5.3 Presentation of Crashworthiness and Aggressivity Ratings for Consumer Information

Discussion in the previous work of Cameron et al (1998) noted, for simplicity of presentation and interpretation, particularly in the area of consumer safety advice, effort needed to be made to find a method of simultaneously using the information on vehicle crashworthiness and aggressivity. Possible solutions discussed included development of a single measure of total vehicle safety or, alternatively, development of some other cohesive method of summary presentation that reflects overall vehicle safety. In Newstead et al (2000), a method of presentation of the estimated crashworthiness ratings for Australian vehicles was devised that is similar in philosophy to the presentation method devised by Folksam Insurance for presentation of Swedish ratings. The method takes into account both the rating point estimate and confidence limits, but removes the emphasis from the point estimate.

The ratings presented for consumer information exclude those models where:

- the vehicle was manufactured prior to 1986 (related to the introduction of unleaded petrol and key regulatory changes in New Zealand), or
- the width of the 90% two-sided confidence interval was greater than 3.00% and the comparison average crashworthiness rating was within the 90% confidence interval (see section 5.1.4 for the definition of the comparison average crashworthiness), or
- the ratio of the confidence interval width to the rating score (coefficient of variation) exceeded 1.6 and the comparison average crashworthiness rating was within the 90% confidence interval.

The criteria above differ from those used in previous updates. The decision was made to alter the criteria to avoid publishing ratings for vehicles based on relatively limited quantities of data. Vehicles are included which have a rating significantly different to the average crashworthiness

rating although the confidence interval width exceeds 3% or the coefficient of variation exceeds 1.6. These vehicles whose confidence limit does not overlap the average can be classified statistically as either better or worse than average which is considered useful for consumer information. The criteria now exclude only those vehicles that are not statistically significantly different from average due to excessive variation in the estimated rating or the vehicle was manufactured prior to 1986.

In addition, as in previous updates, rated vehicles have been classified into five categories based on the range in which the confidence limits on the estimated ratings lie. The five categories are defined as follows.

- At least 15% safer than average: if the upper confidence limit on the estimated rating is less than 0.85 times the average crashworthiness rating for the vehicle fleet.
- At least safer than average: if the upper confidence limit on the estimated rating is less than the average crashworthiness rating for the vehicle fleet.
- Average: if the confidence interval on the estimated rating overlaps the average crashworthiness rating for the vehicle fleet.
- At least less safe than average: if the lower confidence limit on the estimated rating is greater than the average crashworthiness rating for the vehicle fleet.
- At least 15% less safe than average: if the lower confidence limit on the estimated rating is greater than 1.15 times the average crashworthiness rating for the vehicle fleet.

Presentation of the estimated crashworthiness ratings in this way is shown in Appendix 6. This presentation style has the advantage that it combines information about both the rating point estimate and confidence limit to classify the safety performance of the vehicle. This method of presentation takes the potential emphasis of the consumer off comparison of only the point estimate ratings, an emphasis that can be potentially misleading from the point of view of statistical confidence. Rather, the presentation method categorises vehicles according to the statistical significance of the difference of their estimated safety rating from defined points. Colour coding of the categories would typically be used with green depicting the safest category through blue, orange and brown to red depicting the least safe category. 90% two-sided confidence limits have been used to categorise the crashworthiness ratings in Appendix 6. These are equivalent to 95% one-sided confidence limits if a directional hypothesis of crashworthiness greater or less than the average is being assumed.

A single column at the right of the table in Appendix 6 summarises the aggressivity ratings for each vehicle. In a manner similar to the classification of crashworthiness ratings, the estimated aggressivity ratings have been classified into five categories with each represented by a symbol in the final column of the table. These are:

- **xx**: Much more aggressive than average – if the lower confidence limit on the estimated rating is greater than 1.15 times the average aggressivity rating for the vehicle fleet.
- **x**: More aggressive than average - if the lower confidence limit on the estimated aggressivity rating is greater than the average aggressivity rating for the vehicle fleet.
- **o**: Average - if the confidence interval on the estimated rating overlaps the average aggressivity rating for the vehicle fleet.
- **+**: Less aggressive than average - if the upper confidence limit on the estimated rating is less than the average aggressivity rating for the vehicle fleet.
- **++**: Much less aggressive than average – if the upper confidence limit on the estimated rating is less than 0.85 times the average aggressivity rating for the vehicle fleet.

Some vehicle models in Appendix 6 have no symbol in the aggressivity rating column. These vehicles have been involved in an insufficient number crashes with other road user crashes to have an aggressivity rating estimated for them. Assignment of vehicle aggressivity ratings to categories in Appendix 6 is based on the 90% two-sided (95% one-sided) confidence limits on the ratings to be consistent with the assignment of crashworthiness ratings to categories.

## 5.4 Crashworthiness by Year of Manufacture of the Australian Vehicle Fleet

### 5.4.1 Injury Risk

Injury risk was estimated from the data on 3,049,572 drivers involved in tow-away crashes in New South Wales, South Australia, Western Australia and Queensland during 1987 to 2005. This data set is referred to as the "involved drivers". Because of missing values of some of the factors to be included in the logistic regression, and the exclusion of pre-1964 vehicles and unknown years, analysis was performed on data relating to 2,605,087 involved drivers, 429,303 of whom were injured. The following non-vehicle factors and their interactions were statistically significantly associated with injury risk and were included in the logistic regression model.

Base effect terms	First order interactions	Second order interactions	Third order interactions
Sex	Sex*Speedzone	Sex*Speedzone*Nveh	Age*Speedzone*Nveh*State
Nveh	Speedzone*Nveh	Sex*State*Year	
Speedzone	Sex*Nveh	Age*Speedzone*Nveh	
Age	Speedzone*Age	Age*Sex*Speedzone	
State	Age*Sex	Age*Sex*Year	
Year (of crash)	Year*State	Age*Nveh*State	
	Age*Nveh	Nveh*State*Year	
	Nveh*State	Speedzone*Nveh*State	
	Nveh*Year	Speedzone*State*Year	
	Age*State	Age*State*Year	
	Age*Year	Speedzone*Nveh*Year	
	Speedzone*State	Age*Sex*State	
	Sex*Year	Sex*Speedzone*State	
	Speedzone*Year	Age*Speedzone*State	
	Sex*State	Age*Speedzone*Year	
		Age*Sex*Nveh	
		Age*Nveh*Year	
		Sex*Nveh*Year	
		Sex*Nveh*State	

The overall (average) injury risk for involved drivers in tow-away crashes in NSW, Western Australia and Queensland was 16.48%. Appendix 7 gives the estimates of injury risk derived by logistic regression for the individual years of manufacture. The variability in the injury risk estimates relative to the year of manufacture can be seen from the width of the corresponding 95% confidence intervals.

### 5.4.2 Injury Severity

The data on "injured drivers" covered 498,446 drivers who were injured in crashes in Victoria or New South Wales during 1987-2005 or South Australia during 1995-2005 or Queensland and Western Australia during 1991-2005. Because of missing values of some of the associated crash

factors and the exclusion of pre-1964 vehicles and unknown years, logistic regression was performed on data relating to 479,598 injured drivers, 107,523 of whom were severely injured (killed or admitted to hospital). The analysis identified a number of statistically significant non-vehicle factor and their interactions associated with injury severity. These were:

Base effect terms	First order interactions	Second order interactions	Third order interactions
Sex	Sex*Speedzone	Speedzone*Nveh*Year	Speedzone*Nveh*State*Year
Nveh	Speedzone*Nveh	Age*Speedzone*Nveh	Age*Nveh*State*Year
Speedzone	Speedzone*State	Age*Sex*Year	
Age	Speedzone*Age	Age*State*Year	
State	Age*Sex	Age*Sex*State	
Year (of crash)	Year*State	Speedzone*Nveh*State	
	Age*Nveh	Speedzone*State*Year	
	Nveh*State	Sex*State*Year	
	Speedzone*Year	Nveh*State*Year	
	Age*State	Sex*Nveh*State	
	Age*Year	Age*Sex*Nveh	
	Sex*State	Age*Speedzone*State	
	Sex*Year	Sex*Speedzone*Nveh	
	Nveh*Year	Age*Nveh*Year	
	Sex*Nveh	Age*Nveh*State	

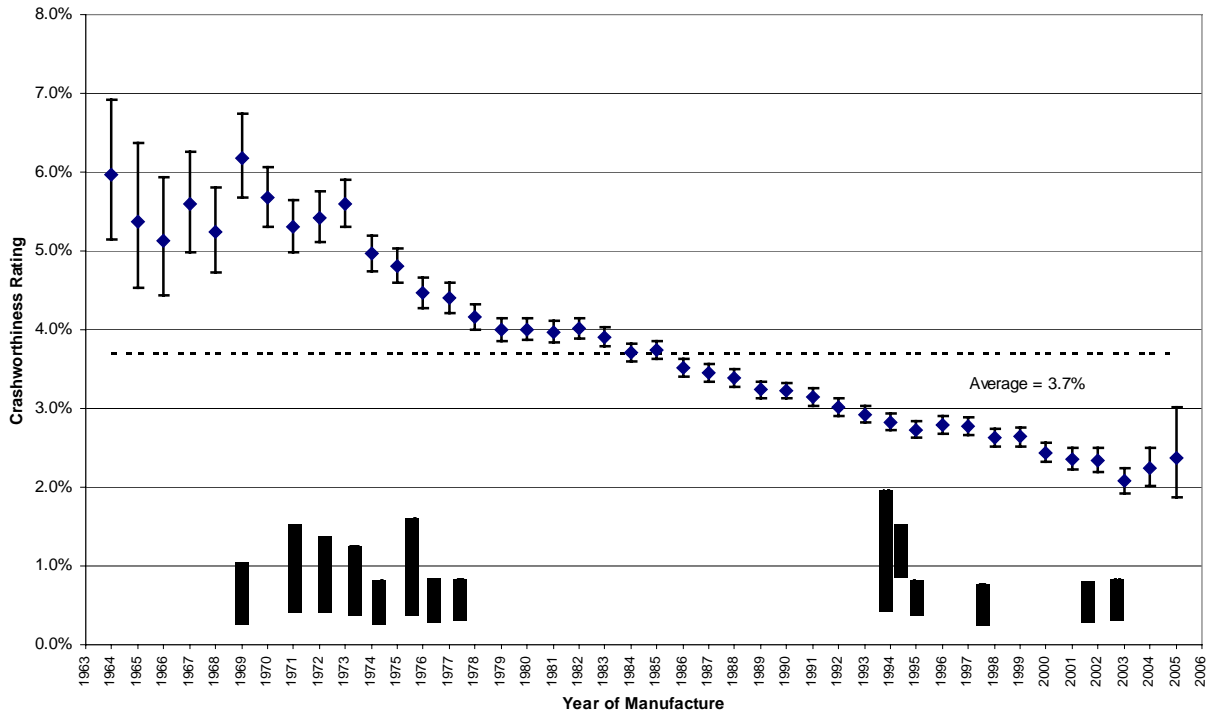
The overall (average) injury severity for injured drivers was 22.42%. Appendix 7 gives the estimates of injury severity derived by logistic regression for the individual years of manufacture. The variability in the estimates of injury severity relative to year of manufacture can be seen from the width of the corresponding 95% confidence intervals.

### 5.4.3 Crashworthiness by Year of Manufacture

The crashworthiness estimates for each year of manufacture were obtained by multiplying the individual injury risk and injury severity estimates. Because each of the two components has been adjusted for the confounding factors, the resultant crashworthiness estimate is also adjusted for the influence of them. Appendix 7 gives the crashworthiness estimates and the associated 95% confidence intervals for each of the 42 years of manufacture included in the analysis. Each estimate is expressed as a percentage, representing the number of drivers killed or admitted to hospital per 100 drivers involved in a tow-away crash. 95% confidence limits on the estimates are also given.

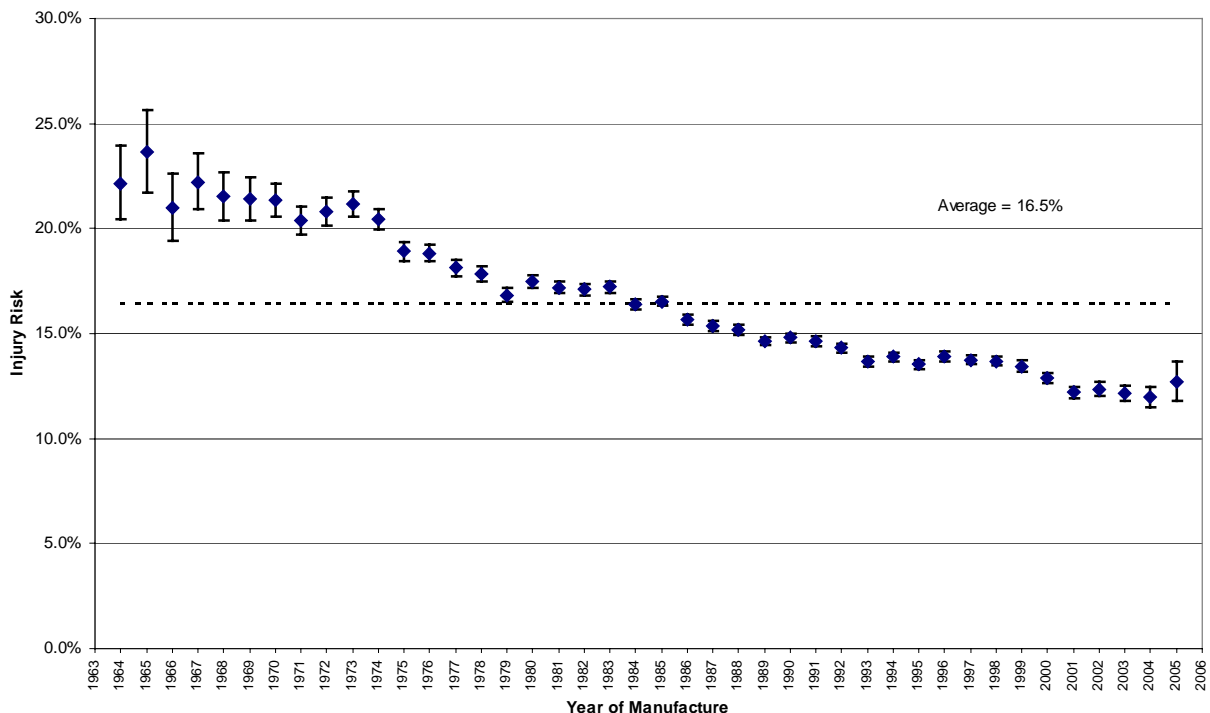
The crashworthiness estimates and their confidence limits are plotted for each year of manufacture in Figure 22. The relatively wide confidence intervals observed on the estimates of crashworthiness for years of manufacture 1964 to 1969 and 2005 are a reflection of the smaller numbers of crashes involving vehicles manufactured in these years appearing in the data. Introduction of key safety related Australian Design Rules as well as consumer information programs likely to have influenced levels of vehicle safety are also shown on Figure 22. Full details of these initiatives are given in Newstead et al (2006).

**Figure 22:** *Crashworthiness by year of manufacture (with 95% confidence limits)*

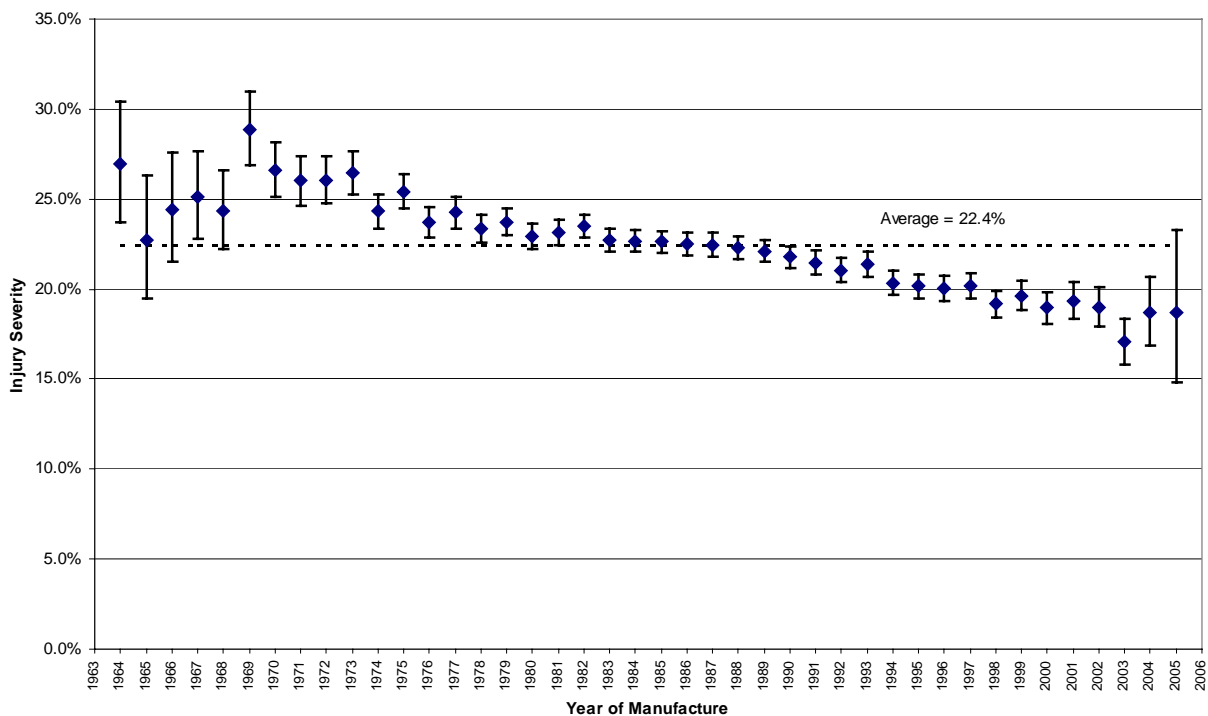


The injury risk component of the crashworthiness estimate, together with its 95% confidence limits, is plotted in Figure 23. In a similar way, the injury severity component is plotted in Figure 24.

**Figure 23:** *Injury risk by year of manufacture (with 95% confidence limits)*



**Figure 24:** *Injury severity by year of manufacture (with 95% confidence limits)*



## 5.5 Crashworthiness by Year of Manufacture and Market Group for the Australian Vehicle Fleet

Using the methods of Newstead and Cameron (2001), trends in vehicle crashworthiness by year of manufacture have been estimated separately for each of the 10 defined vehicle market groups. Because vehicle model information was required to assign a market grouping, analysis of trends by year of manufacture within market group could only be carried out for vehicles manufactured from 1982 to 2005. In contrast to estimation of crashworthiness ratings by vehicle model, there was no minimum data requirement for a particular model to be included in the analysis. Hence all vehicle models for which a market group could be assigned were included. However, despite aggregation over vehicle models, it was not possible to estimate crashworthiness estimates for particular years of manufacture in certain market groups due to insufficient data quantities.

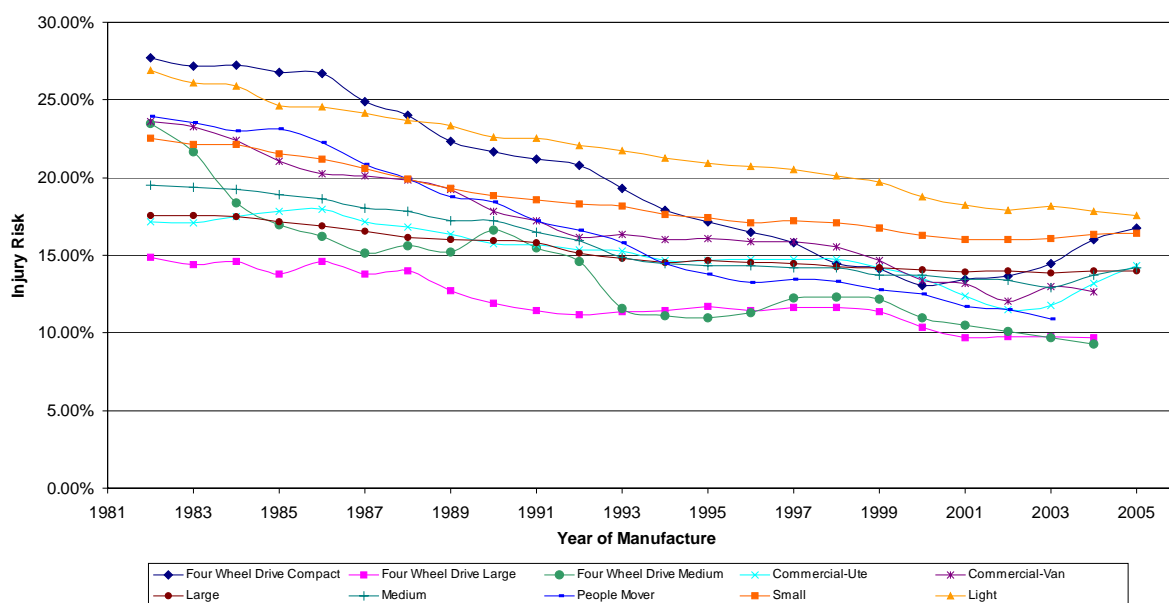
### 5.5.1 Injury Risk

Injury risk was estimated from the data on 1,909,893 drivers of 1982 to 2005 vehicles with identified model and market group details involved in tow-away crashes in New South Wales, South Australia, Western Australia and Queensland during 1987 to 2005. The following non-vehicle factors and their interactions were statistically significantly associated with injury risk and were included in the logistic regression model.

Base effect terms	First order interactions	Second order interactions	Third order interactions
Sex	Sex*Speedzone	Sex*Speedzone*Nveh	Speedzone*Nveh*State*Year
Nveh	Speedzone*Nveh	Age*Speedzone*Nveh	Age*Speedzone*Nveh*State
Speedzone	Sex*Nveh	Age*Nveh*State	
Age	Speedzone*Age	Nveh*State*Year	
State	Age*Sex	Speedzone*Nveh*State	
Year (of crash)	Year*State	Age*Speedzone*State	
	Age*Nveh	Age*Speedzone*Year	
	Nveh*State	Speedzone*Nveh*Year	
	Nveh*Year	Speedzone*State*Year	
	Age*State		
	Age*Year		
	Speedzone*State		
	Speedzone*Year		

Figure 25 shows the estimates of injury risk by year of vehicle manufacture for each of the 10 market groups considered. Estimates have been smoothed using a linear smoothing function over a window of three years (the central year and a year either side). Smoothing of the estimates was carried out to better identify the trends in the data. Smoothing in this way also compensates for known error in the recording of the year of vehicle manufacture, an error typically up to one year from the true date of manufacture.

**Figure 25:** *Estimated injury risk by year of vehicle manufacture and market group*



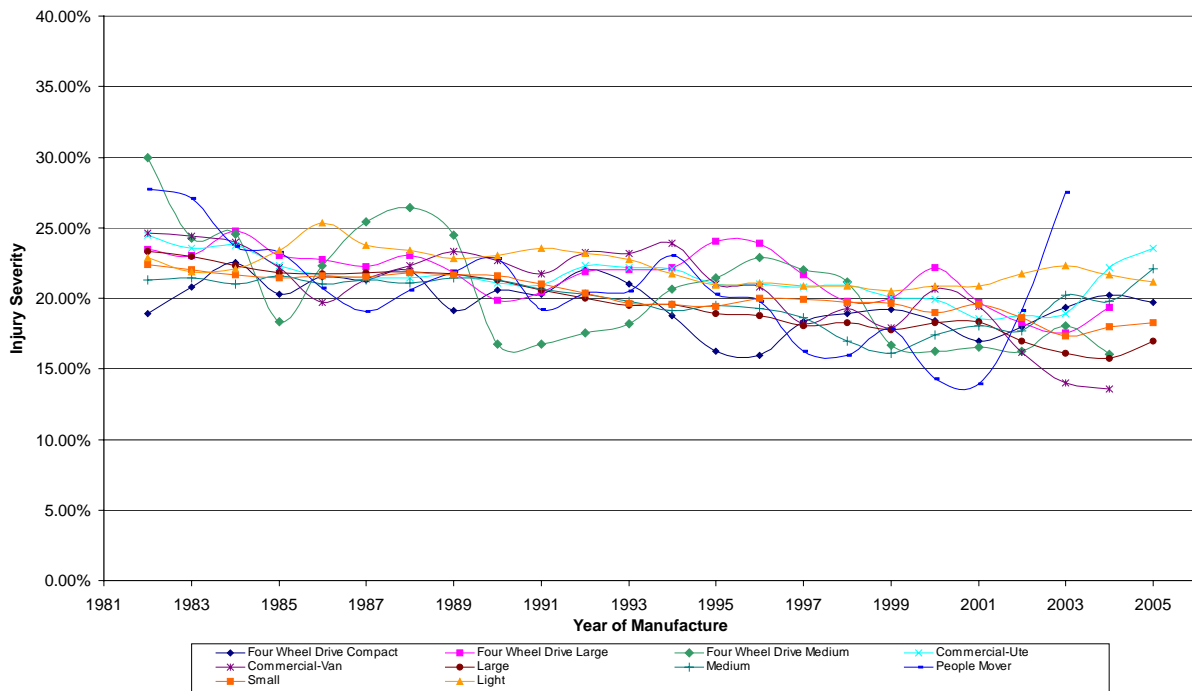
### 5.5.2 Injury Severity

The data for computation of injury severity covered 269,155 drivers of 1982-2005 model vehicles who were injured in crashes in Victoria or New South Wales during 1987-2005, South Australia during 1995-2005 or Queensland or Western Australia during 1991-2005. The following non-vehicle factors and their interactions were significantly associated with injury severity:

Base effect terms	First order interactions	Second order interactions
Sex	Speedzone*Nveh	Speedzone*Nveh*State
Nveh	Sex*State	Speedzone*State*Year
Speedzone	Age*Sex	Age*Nveh*State
Age	Nveh*State	
State	Speedzone*State	
Year (of crash)	Year*State	
	Age*Nveh	
	Age*State	
	Age*Year	
	Speedzone*Year	

Figure 26 shows the estimates of injury severity by year of vehicle manufacture for each of the 10 market groups considered. Estimates have again been smoothed to better identify the trends in the data.

**Figure 26:** Estimated injury severity by year of vehicle manufacture and market group



### 5.5.3 Crashworthiness by Year of Manufacture and Market Group

The crashworthiness estimates for each year of manufacture were obtained by multiplying the individual injury risk and injury severity estimates. Appendix 8 gives the crashworthiness estimates and the associated 95% confidence intervals for each of the years of manufacture from 1982 to 2005 by each of the 10 vehicle market groups considered. Each estimate is expressed as a percentage, representing the number of drivers killed or admitted to hospital per 100 drivers involved in a tow-away crash. The crashworthiness estimates are plotted for each year of manufacture and vehicle market group in Figure 27. Again, the values in Figure 27 have been smoothed for reasons given above.

**Figure 27:** *Estimated crashworthiness by year of vehicle manufacture and market group*

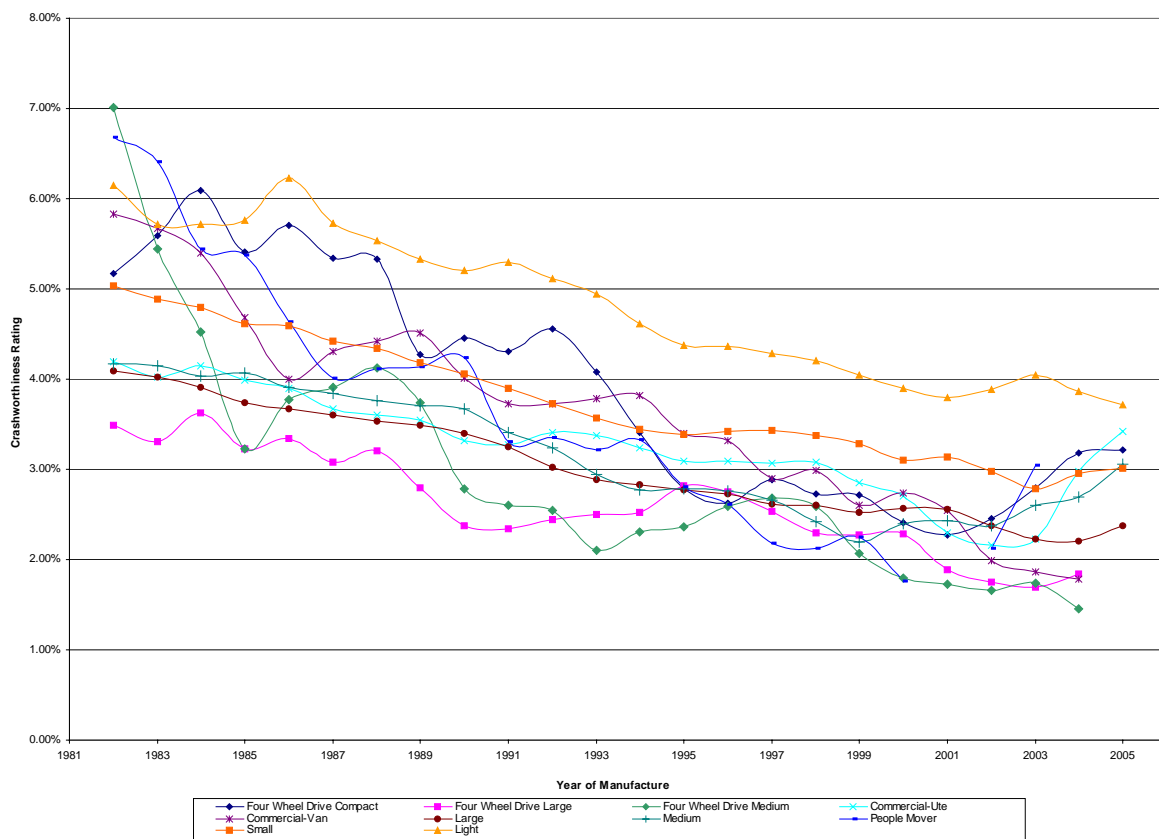


Figure 27 clearly shows differential performance in crashworthiness between vehicle market groups, reflecting the same differences seen in average crashworthiness by market groups found in the make and model specific ratings presented above (see Appendix 4). It is, however, difficult from Figure 27 to gauge differential improvements in crashworthiness over time. This is due to the complexity of the figure with 10 market groups as well as the relatively high variance in some of the year to year estimates despite smoothing. To try and better measure differential time based safety improvements by market group, Figure 28 presents average crashworthiness by 5-year time blocks of manufacture for the periods 1982-1986, 1987-1991, 1992-1996 and 1997-2001 and by a 4-year time block for the period 2002-2005. In addition, estimates have been scaled to be relative to the first time block (1982-1986) for each market groups. Whilst Figure 28 no longer reflects average differences in crashworthiness between market groups, it more clearly demonstrates differential performance between market groups in improving crashworthiness over time.

**Figure 28:** Average crashworthiness by year of manufacture and market group by year range relative to the 1982-1986 average

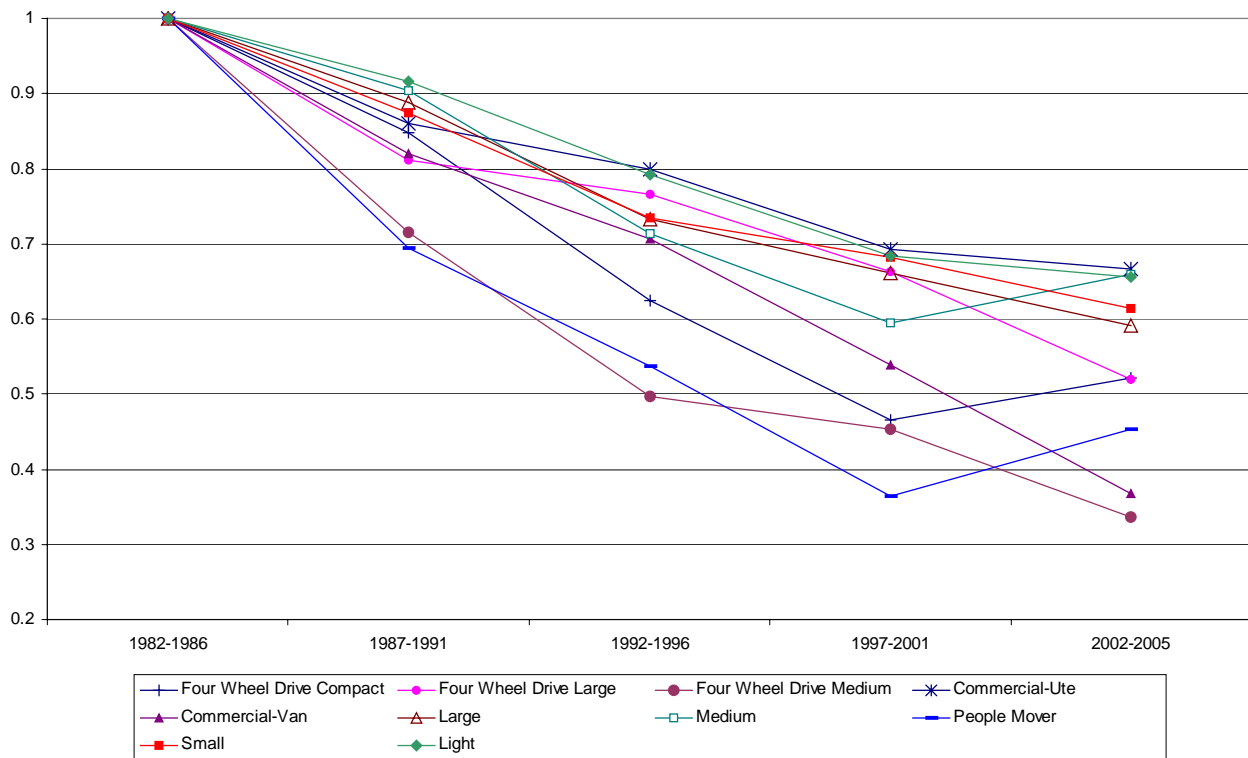


Figure 28 shows that certain vehicle market groups have experienced greater relative improvements in crashworthiness over the study period than others. The medium 4WDs and commercial van market groups have shown the greatest improvement in crashworthiness over the study period of between 63 and 66 percent. The people mover market group had the next greatest improvement in crashworthiness of 55%, a reversal of the 74% improvement to 2001. The compact and large 4WD market groups have shown the next greatest improvement in crashworthiness over the study period of almost 50 percent. Gains were consistent across time in all these market groups apart from the compact 4WD market group that did not appear to improve in crashworthiness between the most recent two time blocks. The large market group has shown the next greatest improvement in crashworthiness over the study period of over 40 percent with gains consistent across time. The medium, commercial ute, small and light market groups have shown the most modest gains over the study period of between 33 and 39 percent. Gains were consistent across time in all these market groups apart from the medium market group that did not appear to improve in crashworthiness between the most recent two time blocks.

## 6. CONCLUSIONS

Additional crash data, including for the first time crash data from South Australia, has enabled the crashworthiness ratings to be obtained for a larger range of car models than in previous studies with the ratings now covering 381 different vehicle models manufactured from 1982-2005. The new data set has been able to produce more up-to-date and reliable estimates of the crashworthiness of individual car models than those published previously.

The rating scores estimate the risk of a driver being killed or seriously injured when involved in a tow-away crash, to a degree of accuracy represented by the confidence limits of the rating in each case. The estimates and their associated confidence limits are sufficiently sensitive that they are able to identify 180 models of passenger cars, four wheel drive vehicles, people movers and light commercial vehicles that have superior or inferior crashworthiness characteristics compared with the average vehicle. Ratings are presented for individual vehicle models in the Australian and New Zealand passenger fleets classified into one of 10 market groups.

This update of the ratings also revised the vehicle aggressivity ratings. The aggressivity measure considers the injury outcome to both drivers of other vehicles and unprotected road users including pedestrians, bicyclists and motorcyclists. The aggressivity rating measured the risk of death or serious injury a vehicle poses to drivers of other cars or unprotected road users with which it impacts in a crash. The mix of other drivers and unprotected road users on which the rating for each vehicle was based was standardised along with various other non-vehicle related factors using logistic regression techniques.

The aggressivity measure was calculated for 349 models of Australian and New Zealand passenger vehicles (passenger cars, four wheel drive vehicles, passenger vans and light commercial vehicles) manufactured between the years 1982-2005. The degree of accuracy of the aggressivity ratings is represented by the confidence limits of the rating in each case. The estimates and their associated confidence limits are sufficiently sensitive that they are able to identify 145 models of passenger cars, four wheel drive vehicles, passenger vans and light commercial vehicles that have superior or inferior aggressivity characteristics compared with the average vehicle. Estimated vehicle aggressivity towards drivers of other vehicles or unprotected road users was found to have a proportional relationship with vehicle mass. It was also found to have little or no relationship with ratings of vehicle crashworthiness, demonstrating the independence of the two complementary measures. For this update, 348 of the 381, or 91%, of the vehicle models rated for crashworthiness were also able to be rated for aggressivity.

The crashworthiness of passenger vehicles in the Australian vehicle fleet (cars, station wagons, four wheel drives, vans and taxis), measured by the risk of the driver being killed or admitted to hospital as the result of involvement in a tow-away crash, has been estimated for the years of manufacture from 1964 to 2005. This study further updates the original one by Cameron et al (1994a) for years of manufacture 1964 to 1992. It shows similar patterns of improvements in crashworthiness with the greatest gains over the years 1970 to 1979 during which time a number of new Australian Design Rules aimed at occupant protection took effect. Further significant gains in crashworthiness have also been observed over the years 1986 to 2005, with notable steady gains from 1985 to 1995 and since 2000. Trends in crashworthiness by year of vehicle manufacture from 1982 to 2005 for each of the 10 vehicle market groups were also estimated showing differential improvement in crashworthiness by market group by year of manufacture.

## **7. ASSUMPTIONS AND QUALIFICATIONS**

The results and conclusions presented in this report are based on a number of assumptions and warrant a number of qualifications that the reader should note. These are listed in the following sections.

### **7.1 Assumptions**

It has been assumed that:

- TAC claims records and, Victorian, New South Wales, South Australian, Western Australian, Queensland and New Zealand Police crash reports accurately recorded driver injury, hospitalisation and death.
- There was no bias in the merging of TAC claims and Victorian Police crash reports related to the model of car and factors affecting the severity of the crash.
- Crashed vehicle registration numbers were recorded accurately on Police crash reports and that they correctly identified the crashed vehicles in the Victorian, New South Wales, South Australian, Queensland, Western Australian and New Zealand vehicle registers.
- The adjustments for driver sex, age, speed zone, the number of vehicles involved and the state and year in which the crash occurred removed the influences of the other main factors available in the data that affected crash severity and injury susceptibility.
- The form of the logistic models used to relate injury risk and injury severity with the available factors influencing these outcomes (including the car model, market group or year of manufacture) was correct.
- Information contained in the Police crash records allowed accurate matching of both vehicles involved in crashes between two passenger cars and vehicles impacting unprotected road users for the purpose of calculating aggressivity ratings.

### **7.2 Qualifications**

The results and conclusions warrant at least the following qualifications:

- Only driver crash involvements and injuries have been considered. Passengers occupying the same model cars may have had different injury outcomes.
- Some models with the same name through the 1982-2005 years of manufacture may have varied substantially in their construction, specification and mass. Although there should be few such models in these updated results, the rating score calculated for these models may give a misleading impression and should be interpreted with caution.
- Other factors not collected in the data (e.g. crash impact severity) may differ between the models and may affect the results. However, earlier analysis has suggested that the different rating scores are predominantly due to vehicle factors alone (Cameron et al 1992).

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**MAKES AND MODELS OF CARS INVOLVED IN  
VICTORIAN AND NSW CRASHES DURING 1987-2005,  
SOUTH AUSTRALIA CRASHES DURING 1995-2005  
AND  
WESTERN AUSTRALIA, QUEENSLAND  
AND NEW ZEALAND CRASHES DURING 1991-2005**



**FREQUENCY FOR EACH MODEL FOR ALL TYPES OF CRASHES (NSW/VIC/SA/QLD/WA/NZ)**

Note: Only those models with a Market Group displayed were used in the crashworthiness analysis

MAKE/MODEL			MODEL CODE	No. of uninjured drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of injured drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of involved drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of injured (but not severely) drivers in NSW and Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	No. of severely injured drivers in NSW and Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	No. of injured drivers in NSW, Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	ANALYSIS INCLUSION CRITERIA INV=100 INJ=20	MARKET GROUP
Alfa Romeo	164	89-92	AL01Z	104	11	115	9	4	13	0	
Alfa Romeo	33	83-92	AL02Z	672	107	779	109	29	138	1	Small
Alfa Romeo	75	86-92	AL03Z	203	29	232	26	4	30	1	Small
Alfa Romeo	90	85-88	AL04Z	80	11	91	9	4	13	0	
Alfa Romeo	GTV	82-84	AL05Z	159	18	177	12	10	22	1	Small
Alfa Romeo	Sprint	82-88	AL06Z	130	22	152	29	5	34	1	Small
Alfa Romeo	Alfasud	82-84	AL07Z	113	22	135	18	6	24	1	Small
Alfa Romeo	Alfetta	82-88	AL08Z	56	12	68	4	6	10	0	
Alfa Romeo	Guilietta	82-86	AL09Z	63	8	71	7	2	9	0	
Alfa	Quattro		AL10Z	1	0	1	1	0	1	0	
Alfa Romeo	156	99-05	AL13Z	253	39	292	22	3	25	1	Medium
Alfa Romeo	166	99-05	AL14Z	27	3	30	1	1	2	0	
Alfa Romeo	GTV / Spider	98-05	AL15Z	91	10	101	4	0	4	0	
Alfa Romeo	147	01-04	AL16Z	88	11	99	5	2	7	0	
Alfa	Others		AL99Z	514	63	577	151	39	190	0	
Audi	A4 / S4 Cabriolet	02-05	AU10Z	11	1	12	3	0	3	0	
Audi	A6/S6/AllRoad	95-04	AUD1A	39	3	42	5	0	5	0	
			AUD1Z	2	0	2	1	0	1	0	
Audi	A8	95-03	AUD2Z	5	4	9	3	0	3	0	
Audi	A4	95-01	AUD3Z	616	75	691	70	15	85	1	Small
Audi	A8/S8/A6		AUD4Z	76	5	81	11	1	12	0	
Audi	A3/S3	97-04	AUD5Z	267	44	311	26	1	27	1	Small
Audi	TT	99-05	AUD6Z	70	6	76	6	0	6	0	

MAKE/MODEL			MODEL CODE	No. of uninjured drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of injured drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of involved drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of injured (but not severely) drivers in NSW and Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	No. of severely injured drivers in NSW and Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	No. of injured drivers in NSW, Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	ANALYSIS INCLUSION CRITERIA INV=100 INJ=20	MARKET GROUP
Audi	A4	01-05	AUD7Z	300	45	345	22	3	25	1	Small
Audi	Others		AUDIZ	1337	220	1557	202	56	258	0	
BMW	Z3 E36	97-03	BM10Z	173	20	193	16	6	22	1	Medium
Mini	Mini Cooper	02-05	BM11Z	60	8	68	12	2	14	0	
BMW	Z4	03-05	BM12Z	14	3	17	2	1	3	0	
BMW	5 Series E60	03-05	BM13Z	19	5	24	3	2	5	0	
BMW	X5	01-05	BM14Z	116	18	134	8	0	8	0	
BMW	6 Series E63	04-05	BM15Z	1	0	1	.	.	.	0	
BMW	1 Series E87	04-05	BM17Z	17	1	18	.	.	.	0	
BMW	3 Series E90	05-05	BM18Z	4	3	7	2	0	2	0	
BMW	3 Series E30	82-91	BM3 A	3415	527	3942	554	112	666	1	Medium
BMW	3 Series E36	92-98	BM3 B	4221	713	4934	602	110	712	1	Medium
BMW	3 Series E46	99-04	BM3 C	1437	269	1706	195	28	223	1	Medium
BMW	3 OTHERS		BM3 Z	116	46	162	48	11	59	0	
BMW	5 Series E28	82-88	BM5 A	936	115	1051	104	26	130	1	Medium
BMW	5 Series E34	89-95	BM5 B	735	108	843	107	26	133	1	Medium
BMW	5 Series E39	96-03	BM5 C	574	63	637	64	10	74	1	Medium
BMW	5 Others		BM5 Z	27	10	37	10	3	13	0	
BMW	6 Series E24	86-89	BM6 Z	5	0	5	1	0	1	0	
BMW	7 Series E23	82-88	BM7 A	275	28	303	35	7	42	1	Large
BMW	7 Series E32	89-94	BM7 B	194	27	221	34	9	43	1	Large
BMW	7 Series E38	95-01	BM7 C	152	16	168	18	2	20	1	Large
BMW	7 Series E65/66	02-05	BM7 D	19	5	24	1	1	2	0	
BMW	7 Others		BM7 Z	12	3	15	2	1	3	0	
BMW	8 Series E31	90-99	BM8 Z	19	1	20	1	0	1	0	
BMW	Others		BM99Z	1189	200	1389	250	63	313	0	
Chrysler	Voyager	97-05	CHR1Z	354	57	411	42	3	45	1	People Mover
Chrysler	Neon	96-99	CHR2Z	401	76	477	60	10	70	1	Small
Chrysler	Neon	00-02	CHR3Z	69	15	84	12	4	16	0	

MAKE/MODEL			MODEL CODE	No. of uninjured drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of injured drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of involved drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of injured (but not severely) drivers in NSW and Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	No. of severely injured drivers in NSW and Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	No. of injured drivers in NSW, Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	ANALYSIS INCLUSION CRITERIA INV=100 INJ=20	MARKET GROUP
Chrysler	PT Cruiser	00-05	CHR4Z	58	14	72	14	3	17	0	
Chrysler	Crossfire	03-05	CHR6Z	3	1	4	.	.	.	0	
Chrysler	Others		CHRYZ	16	1	17	9	0	9	0	
Citroen	BX	86-94	CI1 Z	85	4	89	28	5	33	0	
Citroen	C3 Pluriel	04-04	CI10Z	1	0	1	.	.	.	0	
Citroen	AX	91-93	CI3 Z	5	1	6	13	3	16	0	
Citroen	Xantia	94-00	CI4 Z	49	14	63	16	3	19	0	
Citroen	Berlingo	99-05	CI5 Z	70	9	79	2	1	3	0	
Citroen	Xsara	00-05	CI6 Z	50	12	62	10	1	11	0	
Citroen	XM	91-00	CI7 Z	7	1	8	1	1	2	0	
Citroen	C5	01-05	CI8 Z	40	7	47	1	0	1	0	
Citroen	C3	02-05	CI9 Z	19	0	19	.	.	.	0	
Citroen	Others		CI99Z	58	3	61	3	1	4	0	
			COM Z	6	0	6	.	.	.	0	
			COMUZ	4	0	4	.	.	.	0	
Daihatsu	Charade	82-86	D1 A	1903	571	2474	654	187	841	1	Light
	Charade		D1 B	323	100	423	153	27	180	0	
Daihatsu	Charade	88-92	D1 C	6693	1857	8550	1319	349	1668	1	Light
Daihatsu	Charade	93-00	D1 D	6114	1562	7676	973	239	1212	1	Light
	Charade		D1 Z	260	162	422	117	38	155	0	
Daihatsu	Feroza / Rocky	89-97	D11 Z	979	201	1180	164	51	215	1	4WD - Compact
Daihatsu	Handivan	82-90	D12 Z	672	281	953	225	57	282	1	Commercial - Van
Daihatsu	Hi-Jet	82-90	D13 Z	134	73	207	65	22	87	1	Commercial - Van
Daihatsu	Rocky / Rugger	85-98	D14 Z	495	141	636	94	49	143	1	4WD - Compact
Daihatsu	Pyzar	97-01	D15 Z	273	68	341	45	8	53	1	Light
Daihatsu	Move	97-99	D16 Z	65	22	87	16	7	23	0	
Daihatsu	Sirion / Storia	98-04	D17 Z	988	307	1295	199	41	240	1	Light
Daihatsu	Terios	97-05	D18 Z	471	174	645	143	31	174	1	4WD - Compact
Daihatsu	Handivan / Cuore	99-03	D19 Z	140	60	200	42	9	51	1	Commercial - Van

MAKE/MODEL			MODEL CODE	No. of uninjured drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of injured drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of involved drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of injured (but not severely) drivers in NSW and Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	No. of severely injured drivers in NSW and Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	No. of injured drivers in NSW, Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	ANALYSIS INCLUSION CRITERIA INV=100 INJ=20	MARKET GROUP
Daihatsu	Applause	89-99	D2 Z	2966	723	3689	507	114	621	1	Small
Daihatsu	YRV	01-04	D20 Z	4	5	9	5	1	6	0	
Daihatsu	Charade	03-05	D21 Z	13	2	15	1	0	1	0	
Daihatsu	Copen	3-Jun	D22 Z	4	2	6	3	1	4	0	
Daihatsu	Sirion / Storia	05-05	D23 Z	7	2	9	.	.	.	0	
Daihatsu	Mira	90-96	D3 Z	663	291	954	246	79	325	1	Light
Daihatsu	Delta		D4 Z	1386	212	1598	121	42	163	0	
Daihatsu	F20/25/50/55/60/65		D5 Z	76	32	108	18	10	28	0	
Daihatsu	Others		D99 Z	1141	353	1494	364	111	475	0	
Daewoo	1.5i	94-95	DA01Z	200	64	264	56	8	64	1	Light
Daewoo	Cielo	95-97	DA03Z	3194	936	4130	698	142	840	1	Light
Daewoo	Espero	95-97	DA05Z	654	186	840	130	38	168	1	Medium
Daewoo	Nubira	97-03	DA06Z	2077	471	2548	371	73	444	1	Small
Daewoo	Lanos	97-03	DA07Z	3394	951	4345	669	170	839	1	Light
Daewoo	Leganza	97-02	DA08Z	533	100	633	74	16	90	1	Medium
Daewoo / Ssang	Musso	98-02	DA09Z	207	22	229	20	7	27	1	4WD - Medium
Daewoo	Matiz	99-04	DA10Z	429	209	638	166	27	193	1	Light
Daewoo	Tacuma	00-04	DA11Z	49	14	63	5	3	8	0	
Daewoo	Lacetti	03-04	DA12Z	45	14	59	10	1	11	0	
Daewoo	Kalos	03-04	DA13Z	134	40	174	22	11	33	1	Light
Ssangyong	Rexton	03-05	DA14Z	6	0	6	.	.	.	0	
Ssangyong	Korando	04-05	DA15Z	3	0	3	1	0	1	0	
Daewoo	Others		DA99Z	50	17	67	15	2	17	0	
Ford	Laser/Met 90		F01 B	6133	1383	7516	1431	308	1739	0	
Ford	Laser	91-94	F01 C	13793	3063	16856	2809	622	3431	1	Small
Ford	Laser	95-97	F01 D	3790	852	4642	689	160	849	1	Small
Ford	Laser/Met Others		F01 Z	849	469	1318	357	93	450	0	
Ford	Cortina	82-82	F02 Z	29	11	40	305	80	385	0	
Ford	Telstar Others		F04 Z	265	122	387	93	25	118	0	

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Ford	Escort	82-82	F05 Z	30	3	33	3	1	4	0	
Ford	Falcon XE/XF	82-88	F06 Z	58871	9848	68719	8870	2739	11609	1	Large
Ford	Fairlane Z & LTD F	82-87	F07 Z	6143	1001	7144	933	272	1205	1	Large
Ford	Falcon EA / Falcon EB Series I	88-Mar 92	F08 C	45248	7273	52521	6284	1676	7960	1	Large
Ford	Falcon EB Series II / Falcon ED	Apr 92-94	F08 D	19151	2962	22113	2521	691	3212	1	Large
Ford	Falcon Others		F08 Z	640	168	808	251	65	316	0	
Ford	Fairlane N & LTD D	88-94	F09 A	4596	653	5249	598	181	779	1	Large
Ford	Fairlane N & LTD D	95-98	F09 B	1574	235	1809	207	55	262	1	Large
Ford	Fairlane & LTD AU	99-02	F09 C	736	114	850	77	14	91	1	Large
Ford	Fairlane & LTD BA/BF	03-05	F09 D	73	9	82	5	1	6	0	
Fairlane	N&LTD D Others		F09 Z	11	2	13	2	0	2	0	
Ford	Mondeo	95-01	F10 Z	1894	309	2203	365	57	422	1	Medium
Ford	Capri	89-94	F43 Z	1543	397	1940	345	71	416	1	Small
Ford	Festiva WD/WH/WF	94-01	F44 B	11410	3515	14925	2534	600	3134	1	Light
			F44AZ	29	15	44	10	5	15	0	
Ford	Falcon Panel Van	82-95	F45 A	4247	530	4777	437	104	541	1	Commercial - Van
Ford	Falcon Panel Van	96-99	F45 B	524	57	581	62	9	71	1	Commercial - Van
Ford	Falcon Panel Van Others		F45 Z	4	0	4	1	0	1	0	
Ford / Nissan	Falcon Ute / XFN Ute	82-95	F46 A	10832	1588	12420	1115	385	1500	1	Commercial - Ute
Ford	Falcon Ute	96-99	F46 B	2154	341	2495	250	74	324	1	Commercial - Ute
Ford	Falcon Ute	99	F46 C	622	96	718	72	18	90	0	
Ford	Falcon Ute AU	00-02	F46 D	1735	242	1977	213	47	260	1	Commercial - Ute
Ford	Falcon Ute BA/BF	03-05	F46 E	691	93	784	86	18	104	1	Commercial - Ute
Ford	Falcon Ute Others		F46 Z	11	1	12	.	.	.	0	
Ford	Ford F-Series	82-92	F47 Z	976	123	1099	97	23	120	1	Commercial - Ute
Ford	Spectron	86-90	F52 Z	47	15	62	25	4	29	0	
Ford	Trader		F53 Z	835	79	914	60	16	76	0	
Ford	Commercials		F54 Z	11762	2098	13860	1571	420	1991	0	
Ford	Sierra		F55 Z	3	1	4	1	0	1	0	

MAKE/MODEL			MODEL CODE	No. of uninjured drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of injured drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of involved drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of injured (but not severely) drivers in NSW and Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	No. of severely injured drivers in NSW and Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	No. of injured drivers in NSW, Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	ANALYSIS CRITERIA INV=100 INJ=20	MARKET GROUP
Ford	Bronco	82-87	F56 Z	181	23	204	14	10	24	1	4WD - Large
Ford	Probe	94-98	F61 Z	223	43	266	44	6	50	1	Medium
Ford	Falcon EF/EL	94-98	F62 Z	39511	6521	46032	5201	1293	6494	1	Large
Ford	Transit	95-00	F64 A	979	119	1098	93	24	117	1	Commercial - Van
Ford	Transit	01-05	F64 B	264	28	292	37	3	40	1	Commercial - Van
Ford	Transit Others		F64 Z	34	5	39	28	6	34	0	
Ford	Explorer	00-01	F65 Z	292	67	359	65	24	89	1	4WD - Large
Ford	Falcon AU	98-02	F66 Z	16168	2923	19091	2159	467	2626	1	Large
Ford	Taurus	96-98	F67 Z	392	73	465	63	15	78	1	Large
Ford	Ka	99-02	F68 Z	290	86	376	75	13	88	1	Light
Ford	Cougar	99-03	F69 Z	147	24	171	15	0	15	0	
			F70 Z	411	67	478	48	24	72	0	
Ford	Mustang	01-03	F71 Z	9	0	9	1	0	1	0	
Ford	Explorer	01-05	F72 Z	121	13	134	24	2	26	1	4WD - Large
Ford	Falcon BA/BF	02-05	F73 Z	3202	567	3769	433	73	506	1	Large
Ford	Focus LR	02-05	F75 Z	447	115	562	98	19	117	1	Small
Ford	F-Series	01-05	F76 Z	90	9	99	4	2	6	0	
Ford	Territory SX/SY	04-05	F77 Z	151	21	172	14	5	19	0	
Ford	Fiesta WP/WQ	04-05	F78 Z	11	4	15	4	0	4	0	
Ford	Focus LS	05-05	F79 Z	8	1	9	2	1	3	0	
Ford	Others		F99 Z	45421	7043	52464	11420	3611	15031	0	
			FAL Z	2	0	2	.	.	.	0	
Ferrari			FERAZ	9	0	9	1	0	1	0	
Fiat	Argenta	83-85	FI01Z	13	4	17	3	1	4	0	
Fiat	Croma	88-89	FI02Z	22	5	27	9	1	10	0	
Fiat	Regata	84-88	FI03Z	242	33	275	26	7	33	1	Small
Fiat	Superbrava	82-85	FI04Z	48	15	63	9	6	15	0	
Fiat	X-1/9		FI05Z	6	3	9	2	1	3	0	
Fiat	X-1/9	82-85	FI11Z	5	1	6	1	0	1	0	

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Fiat	Ducato	02-05	FI12Z	12	3	15	7	1	8	0	
Fiat	Others		FI99Z	149	17	166	49	10	59	0	
Fsm			FSM Z	13	2	15	6	1	7	0	
Holden / Toyota	Commodore VN/VP / Lexcen	89-93	H1 Z	57339	10166	67505	8327	2616	10943	1	Large
Holden	Calibra	94-97	H12 Z	416	53	469	81	15	96	1	Medium
Holden	Statesman/Caprice WB	82-85	H14 A	139	23	162	32	18	50	1	Large
Holden	Stateman/Caprice VQ	90-93	H14 B	712	105	817	97	42	139	1	Large
Holden	Stateman/Caprice VR/VS	94-98	H14 C	3559	542	4101	431	116	547	1	Large
Statesman/Capri	Others		H14 Z	129	21	150	18	3	21	0	
Holden	Nova Others		H15 Z	120	33	153	33	7	40	0	
Holden	Commodore Ute VG/VP	90-93	H18 Z	1796	300	2096	194	79	273	1	Commercial - Ute
Holden	Camira	82-89	H2 Z	15681	3579	19260	3691	927	4618	1	Medium
Holden / Isuzu	Jackaroo / Bighorn	82-91	H21 A	835	175	1010	220	40	260	1	4WD - Medium
Holden / Isuzu	Jackaroo / Bighorn	92-97	H21 B	660	96	756	114	28	142	1	4WD - Medium
Holden / Isuzu	Jackaroo / Bighorn	98-02	H21 C	534	88	622	65	17	82	1	4WD - Medium
Holden	Jackaroo		H21 Z	47	9	56	49	14	63	0	
Holden	Kingswood		H22 Z	29	6	35	3	5	8	0	
Holden / Isuzu	Piazza	86-88	H23 Z	54	9	63	17	2	19	0	
Holden / Isuzu	Rodeo / Pickup	82-85	H24 A	776	132	908	114	34	148	1	Commercial - Ute
Holden / Isuzu	Rodeo / Pickup	86-88	H24 B	426	70	496	62	9	71	1	Commercial - Ute
Holden / Isuzu	Rodeo / Pickup	89-95	H24 C	6360	1051	7411	726	252	978	1	Commercial - Ute
Holden	Rodeo	96-98	H24 D	2450	453	2903	328	97	425	1	Commercial - Ute
Holden	Rodeo	99-02	H24 E	2091	407	2498	266	77	343	1	Commercial - Ute
			H24 F	38	12	50	11	1	12	0	
Holden	Rodeo Others		H24 Z	189	46	235	39	10	49	0	
Holden	Shuttle / WFR Van	82-87	H26 Z	516	105	621	75	28	103	1	Commercial - Van
Holden	WB Series	82-85	H27 Z	1813	270	2083	164	89	253	1	Commercial - Ute
Holden	Torana/Sunbird		H28 Z	10	0	10	1	0	1	0	
Holden	Gemini	82-84	H3 A	6170	1449	7619	1500	373	1873	1	Small

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Holden	Gemini	85	H3 B	1253	319	1572	318	76	394	0	
Holden	Gemini RB	86-87	H3 C	988	291	1279	284	58	342	1	Small
Holden	Gemini Others		H3 Z	1	0	1	.	.	.	0	
Holden	Commodore Others		H31 Z	33	1	34	14	1	15	0	
Holden / Toyota	Commodore VR/VS / Lexcen	93-97	H33 Z	49374	8114	57488	6366	1607	7973	1	Large
Holden	Commodore Ute VR/VS	94-00	H34 Z	6896	1173	8069	764	299	1063	1	Commercial - Ute
Holden	Frontera / Mu	95-03	H35 Z	269	46	315	36	8	44	1	4WD - Medium
Holden	Vectra	97-03	H36 Z	2414	486	2900	450	68	518	1	Medium
Holden	Commodore VT/VX	97-02	H37 Z	30427	5597	36024	4275	865	5140	1	Large
Holden	Suburban	98-00	H38 Z	30	5	35	5	0	5	0	
Holden	Statesman/Caprice WH	99-03	H39 Z	816	119	935	83	15	98	1	Large
Holden	ASTRA JAP 87		H4 B	914	175	1089	172	47	219	0	
Holden	Astra TR	96-98	H4 D	1025	183	1208	204	35	239	1	Small
Holden	Astra TS	98-05	H4 E	4876	1093	5969	798	130	928	1	Small
Holden	Astra Others		H4 Z	61	26	87	29	7	36	0	
Holden	Commodore VU Ute	00-02	H41 Z	1281	196	1477	139	54	193	1	Commercial - Ute
Holden	Commodore VY/VZ	02-05	H42 Z	4413	894	5307	691	104	795	1	Large
Holden	Commodore VY/VZ Ute	02-05	H43 Z	1144	184	1328	128	37	165	1	Commercial - Ute
Holden	Monaro	01-05	H44 Z	311	53	364	40	12	52	1	Large
Holden	Cruze	02-05	H45 Z	199	74	273	55	11	66	1	4WD - Compact
Holden	Barina XC	01-05	H46 Z	1034	282	1316	198	31	229	1	Light
Holden	Zafira TT	01-05	H47 Z	126	23	149	11	2	13	0	
Holden	Statesman/Caprice WK/WL	03-05	H48 Z	151	28	179	17	3	20	1	Large
Holden	Adventra	03-05	H49 Z	30	5	35	6	0	6	0	
Holden	Barina SB	95-00	H5 D	5713	1614	7327	1120	231	1351	1	Light
Holden	Barina Others		H5 Z	253	109	362	137	24	161	0	
Holden	Rodeo	03-04	H50 Z	840	119	959	71	17	88	1	Commercial - Ute
Holden	Vectra ZC	03-05	H51 Z	92	10	102	13	3	16	0	
Holden	Astra AH	04-05	H55 Z	82	19	101	14	0	14	0	

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Holden	Barina TK	05-05	H56 Z	1	1	2	1	0	1	0	
Holden	Viva JF	05-05	H57 Z	1	1	2	1	0	1	0	
Holden	Commodore VB-VL	82-88	H6 Z	52385	9423	61808	8516	2675	11191	1	Large
Holden	Others		H99 Z	34555	4804	39359	9548	3383	12931	0	
Hyundai	Excel	86-90	HY1 A	2892	829	3721	889	231	1120	1	Light
Hyundai	Excel	90-94	HY1 B	8979	2500	11479	2014	476	2490	1	Light
Hyundai	Excel / Accent	95-00	HY1 C	21178	6048	27226	4348	883	5231	1	Light
Hyundai	Excel Others		HY1 Z	336	146	482	117	34	151	0	
Hyundai	Trajet	00-05	HY10Z	14	4	18	5	1	6	0	
Hyundai	Elantra	00-05	HY11Z	965	219	1184	132	29	161	1	Small
Hyundai	Santa Fe	00-05	HY12Z	173	36	209	27	5	32	1	4WD - Medium
Hyundai	Getz	02-05	HY13Z	635	160	795	96	28	124	1	Light
Hyundai	Sonata	98-01	HY15A	682	138	820	100	20	120	1	Large
Hyundai	Sonata EF	02-05	HY15B	97	20	117	11	0	11	0	
			HY15Z	3	0	3	3	1	4	0	
Hyundai	Tiburon	02-04	HY16Z	21	6	27	4	1	5	0	
Hyundai	Terracan	01-05	HY17Z	56	8	64	6	1	7	0	
Hyundai	Elantra Lavita	01-03	HY18Z	27	2	29	9	1	10	0	
Hyundai	Tucson	04-05	HY19Z	22	4	26	4	1	5	0	
Hyundai	Sonata	89-97	HY2 Z	3226	648	3874	548	113	661	1	Large
Hyundai	Sonata NF	05-05	HY20Z	3	2	5	1	0	1	0	
Hyundai	S Coupe	90-96	HY4 Z	1254	318	1572	259	52	311	1	Small
Hyundai	Lantra	91-95	HY5 A	2119	493	2612	365	88	453	1	Small
Hyundai	Lantra	96-00	HY5 B	3584	799	4383	628	123	751	1	Small
Hyundai	Lantra Others		HY5 Z	49	12	61	14	2	16	0	
Hyundai	Coupe	96-00	HY7 Z	726	159	885	117	36	153	1	Small
Hyundai	Grandeaur / XG	99-00	HY8 Z	248	36	284	22	2	24	1	Large
Hyundai	Accent	00-05	HY9 Z	2706	718	3424	480	96	576	1	Light
Hyundai	Others		HY99Z	1054	275	1329	699	270	969	0	

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Mitsubishi	Mirage / Colt	82-88	I01 Z	11845	3168	15013	3050	744	3794	1	Light
Mitsubishi	Sigma / Galant / Sapporo / Lambda	82-84	I02 Z	12620	2216	14836	2780	690	3470	1	Medium
Mitsubishi	Magna TM/TN/TP / Sigma / V3000	85-90	I04 Z	29084	4986	34070	4619	1234	5853	1	Large
Mitsubishi	CHARGER/VALIANT		I05 Z	32	3	35	2	1	3	0	
Mitsubishi	Magna TE/TF/TH/TJ / Verada KE/KF/KH/KJ / Diamante	96-03	I06 A	15148	2428	17576	1969	384	2353	1	Large
			I06 Z	1	2	3	2	0	2	0	
Mitsubishi	Starion	82-87	I07 Z	169	33	202	46	23	69	1	Medium
Mitsubishi	Lancer / Mirage CA	89-90	I09 A	5157	1010	6167	1136	256	1392	1	Small
Mitsubishi	Lancer / Mirage CB	91-92	I09 B	917	216	1133	317	57	374	1	Small
Mitsubishi	Lancer / Mirage CC	93-95	I09 C	6863	1430	8293	1305	285	1590	1	Small
Mitsubishi	Lancer / Mirage CE	96-03	I09 D	13904	3406	17310	2452	439	2891	1	Small
Mitsubishi	Lancer Others		I09 Z	1	0	1	413	81	494	0	
Mitsubishi	Nimbus / Chariot / Spacewagon	85-91	I10 A	499	100	599	197	39	236	1	People Mover
Mitsubishi	Nimbus / Chariot	92-98	I10 B	755	148	903	154	23	177	1	People Mover
Mitsubishi	Nimbus	99-03	I10 C	241	27	268	16	4	20	1	People Mover
Mitsubishi	Cordia	83-87	I12 Z	1725	341	2066	553	147	700	1	Small
Mitsubishi	Magna TR/TS / Verada KR/KS / V3000 / Diamante	91-96	I15 Z	26172	4034	30206	3705	751	4456	1	Large
Mitsubishi	Galant	89-93	I16 A	12	1	13	390	84	474	0	
Mitsubishi	Galant	95-96	I16 B	1528	276	1804	297	75	372	1	Medium
Mitsubishi	Galant Others		I16 Z	9	11	20	299	73	372	0	
Mitsubishi	Canter		I21 Z	1256	130	1386	147	43	190	0	
Mitsubishi	Starwagon / L300	83-86	I23 A	3134	707	3841	580	197	777	1	People Mover
Mitsubishi	Starwagon / Delica Starwagon	87-93	I23 B	6036	1048	7084	850	237	1087	1	People Mover
Mitsubishi	Starwagon / Delica Spacegear	95-98	I23 C	1698	252	1950	193	41	234	1	People Mover
Mitsubishi	Starwagon / Delica Spacegear	98-03	I23 D	796	127	923	81	24	105	1	People Mover
Mitsubishi	Starwagon Others		I23 Z	151	67	218	160	40	200	0	
Mitsubishi	Commercials		I24 Z	4836	838	5674	615	188	803	0	

MAKE/MODEL			MODEL CODE	No. of uninjured drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of injured drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of involved drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of injured (but not severely) drivers in NSW and Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	No. of severely injured drivers in NSW and Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	No. of injured drivers in NSW, Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	ANALYSIS INCLUSION CRITERIA INV=100 INJ=20	MARKET GROUP
Mitsubishi	Pajero	82-90	I25 A	1966	338	2304	372	118	490	1	4WD - Medium
Mitsubishi	Pajero	91	I25 B	484	51	535	88	24	112	0	
Mitsubishi	Pajero	92-99	I25 C	3430	416	3846	382	97	479	1	4WD - Medium
Mitsubishi	Pajero NM / NP	00-05	I25 D	606	66	672	57	12	69	1	4WD - Medium
Mitsubishi	Pajero Others		I25 Z	114	42	156	30	11	41	0	
Mitsubishi	3000GT	92-97	I26 Z	3	2	5	3	1	4	0	
Mitsubishi	Challenger	98-05	I30 Z	327	49	376	50	13	63	1	4WD - Medium
Mitsubishi	Pajero iO	99-03	I34 Z	53	11	64	8	1	9	0	
Mitsubishi	Lancer CE / CG	02-03	I37 Z	45	35	80	27	8	35	0	
Mitsubishi	Magna TL/TW / Verada KL/KW	03-05	I38 Z	385	59	444	53	3	56	1	Large
Mitsubishi	Outlander	03-05	I39 Z	95	18	113	10	0	10	0	
Mitsubishi	Lancer CH	03-05	I40 Z	409	99	508	62	10	72	1	Small
Mitsubishi	Grandis	04-05	I42 Z	8	1	9	1	0	1	0	
Mitsubishi	Colt	04-05	I43 Z	14	3	17	4	1	5	0	
Mitsubishi	380	05-05	I44 Z	3	0	3	.	.	.	0	
Mitsubishi	Triton MK	96-05	I45 Z	854	91	945	66	15	81	1	Commercial - Ute
Mitsubishi	Others		I99 Z	27614	4431	32045	6378	1835	8213	0	
Isuzu	NKR Series		IS01Z	773	103	876	71	15	86	0	
Isuzu	NPR Series		IS02Z	1548	121	1669	79	17	96	0	
Isuzu	Others		IS99Z	2445	191	2636	192	68	260	0	
Jaguar	XJ6	82-86	J01 A	335	46	381	35	12	47	1	Large
Jaguar	XJ6	87-94	J01 B	454	53	507	52	10	62	1	Large
Jaguar	XJ6	95-97	J01 C	95	11	106	7	3	10	0	
Jaguar	XJ8	98-03	J01 D	10	0	10	.	.	.	0	
Jaguar	XJ6 Others		J01 Z	23	3	26	5	0	5	0	
Jaguar	V12 Saloon		J02 Z	11	2	13	2	0	2	0	
Jaguar	XJS	82-96	J04 Z	66	11	77	9	1	10	0	
Jaguar	XJR	95-03	J05 Z	4	0	4	1	0	1	0	
Jaguar	XK8 / XKR	96-05	J07 Z	29	3	32	2	1	3	0	

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Jaguar	S-Type	99-02	J08 Z	90	8	98	8	0	8	0	
Jaguar	X-Type	02-05	J09 Z	52	6	58	5	1	6	0	
Jaguar	XJ	03-05	J10 Z	20	3	23	2	1	3	0	
Jaguar	Others		J99 Z	334	40	374	60	20	80	0	
Jaguar			JAG Z	4	1	5	2	1	3	0	
Jeep	Cherokee XJ	96-00	JE01Z	1016	142	1158	156	37	193	1	4WD - Medium
Jeep	Grand Cherokee ZG	96-99	JE02Z	224	25	249	31	9	40	1	4WD - Large
Jeep	Wrangler	96-04	JE03Z	220	30	250	36	12	48	1	4WD - Medium
Jeep	Grand Cherokee WJ/WG	99-05	JE04Z	116	11	127	26	5	31	1	4WD - Large
Jeep	Cherokee KJ	01-04	JE05Z	63	3	66	6	0	6	0	
Jeep	Grand Cherokee WH	6-Jun	JE06Z	4	0	4	.	.	.	0	
Jeep	Others		JEEPZ	144	23	167	31	7	38	0	
Kia	Sportage	98-03	K01 Z	448	78	526	72	9	81	1	4WD - Compact
Kia	Ceres	92-00	K02 Z	740	190	930	150	38	188	1	Commercial - Ute
Kia	Mentor	97-00	K03 Z	14	3	17	2	1	3	0	
Kia	Credos	98-01	K04 Z	38	15	53	10	2	12	0	
Kia	Rio	00-05	K05 Z	981	306	1287	201	45	246	1	Light
Kia	Carens	00-02	K06 Z	35	12	47	5	2	7	0	
Kia	Carnival	99-05	K07 Z	445	58	503	47	6	53	1	People Mover
Kia	Spectra	01-04	K08 Z	133	38	171	28	5	33	1	Small
Kia	Optima	01-05	K09 Z	15	2	17	1	0	1	0	
Kia	K2700	02-05	K10 Z	14	3	17	4	1	5	0	
Kia	Pregio	02-05	K11 Z	189	36	225	27	4	31	1	Commercial - Van
Kia	Sorento	03-05	K12 Z	40	5	45	7	2	9	0	
Kia	Cerato	04-05	K13 Z	34	11	45	4	1	5	0	
Lada			LADAZ	218	85	303	112	30	142	0	
Lancia			LANCZ	32	3	35	2	2	4	0	
Leyland			LEY Z	97	10	107	9	5	14	0	
Land Rover	Defender	92-05	LRO1Z	238	44	282	35	15	50	1	4WD - Medium

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Land Rover	Discovery	91-02	LRO2A	703	107	810	100	22	122	1	4WD - Medium
Land Rover	Discovery	02-04	LRO2B	31	3	34	2	0	2	0	
			LRO2Z	344	58	402	54	18	72	0	
Land Rover	Others		LROVZ	288	41	329	53	14	67	0	
Ford / Mazda	Laser / 323 / Familia	82-88	M01 A	41600	10662	52262	12174	2875	15049	1	Small
Mazda	323 89		M01 B	488	129	617	731	156	887	0	
Mazda	323 / Familia / Lantis	90-93	M01 C	3597	735	4332	1215	252	1467	1	Small
Mazda	323 94		M01 D	1084	219	1303	176	35	211	0	
Mazda	323 / Familia / Lantis	95-98	M01 E	3976	838	4814	662	133	795	1	Small
Ford / Mazda	Laser / 323	99-03	M01 F	3643	878	4521	633	112	745	1	Small
Mazda	323 Others		M01 Z	347	177	524	128	44	172	0	
Mazda	626/MX6 / Telstar	82	M02 A	11719	2492	14211	2595	744	3339	0	
Ford / Mazda	Telstar / 626 / MX6 / Capella	83-86	M02 B	9085	1789	10874	2507	591	3098	1	Medium
Mazda	626/MX6 / Telstar	87	M02 C	2763	378	3141	311	76	387	0	
Ford / Mazda	Telstar / 626 / MX6 / Capella	88-91	M02 D	4920	975	5895	1387	308	1695	1	Medium
Ford / Mazda	Telstar / 626 / MX6 / Capella / Cronos	92-97	M02 E	5403	817	6220	966	247	1213	1	Medium
Mazda	626	98-02	M02 F	1392	289	1681	264	56	320	1	Medium
Mazda	626/MX6 / Telstar Others		M02 Z	266	111	377	71	34	105	0	
Mazda	929 / Luce	82-90	M03 A	3203	573	3776	612	166	778	1	Large
Mazda	929 91		M03 B	199	26	225	36	8	44	0	
Mazda	929 / Sentia / Efina MS-9	92-96	M03 C	211	38	249	36	6	42	1	Large
Mazda	929 Others		M03 Z	86	41	127	29	11	40	0	
Ford / Mazda	Festiva WA / 121	87-90	M09 A	6088	1785	7873	1406	358	1764	1	Light
Mazda	121 / Autozam Review	94-96	M09 B	3017	856	3873	599	129	728	1	Light
Mazda	121 Metro / Demio	97-02	M09 C	1933	515	2448	397	75	472	1	Light
Mazda	121 / Ford Festiva WA Others		M09 Z	173	99	272	93	28	121	0	
Mazda	RX7	82-85	M10 A	623	118	741	119	36	155	1	Medium
Mazda	RX7	86-91	M10 B	344	45	389	87	24	111	1	Medium
Mazda	RX7	92-98	M10 C	72	11	83	17	6	23	0	

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Mazda	RX7 Others		M10 Z	6	0	6	4	5	9	0	
Mazda	MX5 / Eunos Roadster	89-97	M11 A	445	98	543	81	18	99	1	Small
Mazda	MX5 / Eunos Roadster	98-05	M11 B	269	63	332	36	5	41	1	Small
Mazda	MX5 Others		M11 Z	6	9	15	10	2	12	0	
Mazda	Commercials		M14 Z	7311	1195	8506	941	294	1235	0	
Mazda	MPV	94-99	M15 A	278	33	311	22	1	23	1	People Mover
Mazda	MPV	00-05	M15 B	110	14	124	9	2	11	0	
Mazda	MPV Others		M15 Z	5	1	6	1	0	1	0	
Mazda	Eunos 30X / Presso / MX-3 / Autozam AZ-3	90-97	M16 Z	407	84	491	67	9	76	1	Small
Mazda	Eunos 500	93-99	M17 Z	246	57	303	48	7	55	1	Medium
Mazda	Eunos 800	94-00	M18 Z	94	14	108	17	3	20	1	Medium
Ford / Mazda	Escape / Tribute	01-05	M21 Z	502	81	583	71	13	84	1	4WD - Compact
Ford / Mazda	Courier / B-Series / Bounty	98-02	M22 A	1242	193	1435	158	54	212	1	Commercial - Ute
Ford / Mazda	Courier / Bravo / Bounty	03-05	M22 B	231	54	285	40	12	52	1	Commercial - Ute
Mazda	Bravo / Ford Courier Others		M22 Z	187	23	210	47	11	58	0	
Mazda	Premacy	01-03	M23 Z	2	0	2	1	1	2	0	
Mazda	2	02-05	M24 Z	150	32	182	23	5	28	1	Light
Mazda	6	02-05	M25 Z	32	3	35	3	1	4	0	
Mazda	RX8	03-05	M26 Z	53	1	54	3	2	5	0	
Mazda	3	03-05	M27 Z	411	101	512	66	8	74	1	Small
Mazda	Others		M99 Z	11433	1909	13342	3110	858	3968	0	
Maserati			MASRZ	4	0	4	1	0	1	0	
Mercedes	100 Series		ME1 Z	204	29	233	33	8	41	0	
Mercedes	C180		ME10Z	45	11	56	10	2	12	0	
Mercedes Benz	C-Class W201	87-93	ME11Z	704	119	823	114	26	140	1	Medium
Mercedes Benz	C-Class W202	95-00	ME12Z	1171	164	1335	138	23	161	1	Medium
Mercedes Benz	CLK C208	97-03	ME13Z	155	22	177	14	2	16	0	
Mercedes Benz	E-Class W123	82-85	ME14Z	396	59	455	39	10	49	1	Medium

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Mercedes Benz	E-Class W124	86-94	ME15Z	1110	156	1266	135	24	159	1	Medium
Mercedes Benz	E-Class W210	96-02	ME16Z	603	73	676	60	15	75	1	Medium
Mercedes	S-CLASS W107		ME17Z	34	7	41	8	0	8	0	
Mercedes Benz	S-Class W126	82-92	ME18Z	883	114	997	88	21	109	1	Large
Mercedes Benz	S-Class R129	93-02	ME19Z	69	8	77	7	1	8	0	
Mercedes	200 Series		ME2 Z	349	27	376	40	17	57	0	
Mercedes Benz	S-Class C140	93-98	ME20Z	187	9	196	9	1	10	0	
Mercedes Benz	SLK R170	97-04	ME21Z	122	28	150	15	2	17	0	
Mercedes Benz	A-Class W168	98-05	ME22Z	198	40	238	26	5	31	1	Small
Mercedes Benz	MB100 / MB140	99-04	ME24Z	249	25	274	18	3	21	1	Commercial - Van
Mercedes Benz	S-Class W220	99-05	ME25Z	77	6	83	2	1	3	0	
Mercedes Benz	Vito / Viano	99-05	ME26Z	358	30	388	21	7	28	1	Commercial - Van
Mercedes Benz	M-Class W163	98-05	ME27Z	243	23	266	22	3	25	1	4WD - Large
Mercedes Benz	CL500/600 C215	98-00	ME28Z	6	0	6	.	.	.	0	
Mercedes Benz	C-Class W203	00-05	ME29Z	286	46	332	33	3	36	1	Medium
Mercedes	300 Series		ME3 Z	452	37	489	41	11	52	0	
Mercedes Benz	Sprinter	98-04	ME30Z	276	42	318	35	8	43	1	Commercial - Van
Mercedes Benz	G-Class	83-88	ME31Z	2	0	2	1	0	1	0	
Mercedes Benz	CLK C209	03-05	ME32Z	54	7	61	7	0	7	0	
Mercedes Benz	E-Class W211	02-05	ME33Z	96	10	106	3	0	3	0	
Mercedes Benz	S-Class R230	02-05	ME34Z	6	2	8	.	.	.	0	
Mercedes Benz	SLK R171	04-05	ME35Z	4	0	4	.	.	.	0	
Mercedes Benz	A-Class W169	05-05	ME37Z	2	1	3	.	.	.	0	
Mercedes Benz	CLS W219	05-05	ME38Z	1	0	1	.	.	.	0	
Mercedes	400 Series		ME4 Z	161	25	186	20	5	25	0	
Mercedes	500 Series		ME5 Z	38	5	43	4	1	5	0	
Mercedes	Others		ME99Z	1931	192	2123	303	91	394	0	
			MEE Z	1	0	1	.	.	.	0	
Holden / Nissan	Astra / Pulsar / Langley	84-86	N01 A	9493	2354	11847	2596	656	3252	1	Small

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Nissan	Pulsar/Vector	87	N01 B	1471	312	1783	663	113	776	0	
Holden / Nissan	Astra / Pulsar / Vector / Sentra	88-90	N01 C	12888	2809	15697	2560	623	3183	1	Small
Nissan	Pulsar/Vector	91	N01 D	3287	682	3969	543	124	667	0	
Nissan	Pulsar / Vector / Sentra	92-95	N01 E	6394	1196	7590	1274	272	1546	1	Small
Nissan	Pulsar / Vector / Sentra	96-99	N01 F	6574	1677	8251	1183	268	1451	1	Small
Nissan	Pulsar Others		N01 Z	419	201	620	142	51	193	0	
Nissan	Pintara	86-88	N02 A	5395	986	6381	847	224	1071	1	Medium
Nissan / Ford	Pintara / Corsair / Bluebird	89-92	N02 B	8738	1751	10489	1718	454	2172	1	Medium
Nissan	Pintara Others		N02 Z	1	0	1	96	24	120	0	
Nissan	Bluebird	82-86	N03 Z	12095	2486	14581	2463	749	3212	1	Medium
Nissan	Skyline	83-88	N04 Z	4960	872	5832	1066	293	1359	1	Large
Nissan	180B/200B		N05 Z	56	7	63	6	1	7	0	
Nissan	300ZX / Fairlady Z	90-95	N09 Z	533	88	621	106	25	131	1	Large
Nissan	Stanza	82-83	N10 Z	506	104	610	91	21	112	1	Small
Nissan	280C / Laurel	82-84	N11 Z	59	9	68	9	3	12	0	
Nissan	Gazelle / Silvia	84-86	N12 Z	410	75	485	358	128	486	1	Small
Nissan	280ZX	82-84	N13 Z	109	16	125	17	8	25	1	Medium
Nissan	Prairie	84-86	N14 Z	377	84	461	112	25	137	1	People Mover
Nissan	Maxima	90-94	N15 A	817	123	940	201	47	248	1	Large
Nissan	Maxima / Cefiro	95-99	N15 B	895	168	1063	182	36	218	1	Large
Nissan	Maxima	00-02	N15 C	263	49	312	52	7	59	1	Large
Nissan	Maxima Others		N15 Z	41	14	55	207	49	256	0	
Nissan	Exa	83-86	N16 A	459	123	582	118	34	152	1	Small
Nissan	Exa	87-91	N16 B	245	43	288	58	16	74	1	Small
Nissan	EXA Others		N16 Z	9	2	11	8	2	10	0	
Nissan	NX/NX-R	91-96	N17 Z	786	165	951	130	44	174	1	Small
Nissan	300C / Laurel	85-87	N20 Z	91	16	107	12	4	16	0	
Nissan	720 Ute	82-85	N21 Z	1587	289	1876	224	70	294	1	Commercial - Ute
Nissan	B120		N22 Z	119	28	147	18	9	27	0	

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Nissan	H40		N23 Z	16	3	19	2	1	3	0	
Nissan	Navara	86-91	N24 A	3684	564	4248	519	174	693	1	Commercial - Ute
Nissan	Navara	92-96	N24 B	1679	249	1928	229	61	290	1	Commercial - Ute
Nissan	Navara	97-05	N24 C	1065	147	1212	121	32	153	1	Commercial - Ute
Nissan	Navara Others		N24 Z	299	76	375	101	23	124	0	
Nissan	Vans(Nomad/Urvan/C22/E24/Vanette)		N25 Z	3471	789	4260	623	189	812	0	
Nissan	Patrol / Safari	82-87	N26 A	1445	186	1631	177	53	230	1	4WD - Large
Nissan / Ford	Patrol / Maverick / Safari	88-97	N26 B	7052	840	7892	766	225	991	1	4WD - Large
Nissan	Patrol / Safari	98-04	N26 C	2044	244	2288	229	65	294	1	4WD - Large
Nissan	Patrol		N26 Z	212	39	251	33	17	50	0	
Nissan	Pathfinder / Terrano	88-94	N27 Z	561	72	633	216	58	274	1	4WD - Medium
Nissan	Sunny /120Y		N28 Z	24	7	31	14	2	16	0	
Nissan	Serena	92-95	N30 Z	126	19	145	53	10	63	1	People Mover
Nissan	Infiniti	93-97	N31 Z	3	0	3	.	.	.	0	
Nissan	Bluebird	93-97	N32 Z	1470	214	1684	406	93	499	1	Medium
Nissan	200SX / Silvia	94-02	N33 Z	1052	153	1205	96	32	128	1	Medium
Nissan	Micra	95-97	N34 Z	746	213	959	147	46	193	1	Light
Nissan	Pathfinder / Terrano / Regulus	95-05	N36 Z	635	73	708	100	16	116	1	4WD - Medium
Nissan	Terrano II	97-00	N38 Z	25	4	29	4	0	4	0	
Nissan	Pulsar	00-05	N39 Z	3010	814	3824	487	134	621	1	Small
Nissan	X-Trail	01-05	N40 Z	483	102	585	70	18	88	1	4WD - Compact
Nissan	350Z	03-05	N41 Z	47	19	66	16	3	19	0	
Nissan	Maxima	03-05	N42 Z	62	9	71	7	4	11	0	
Nissan	Murano	05-05	N43 Z	5	0	5	.	.	.	0	
Nissan	Pathfinder	05-05	N44 Z	2	0	2	.	.	.	0	
Nissan	Others		N99 Z	19913	2904	22817	5373	1619	6992	0	
Fsm			NIKIZ	15	12	27	12	6	18	0	
Lada	Niva	84-99	NIVAZ	328	70	398	74	19	93	1	4WD - Compact
Honda	Civic	82-83	O1 A	680	157	837	426	103	529	1	Small

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Honda	Civic / Ballade / Shuttle	84-87	O1 B	2547	574	3121	1054	270	1324	1	Small
Honda	Civic / Shuttle	88-91	O1 C	3957	859	4816	1141	273	1414	1	Small
Honda	Civic	92-95	O1 D	4382	859	5241	937	188	1125	1	Small
Honda	Civic	96-00	O1 E	3868	817	4685	594	107	701	1	Small
Honda	Civic Others		O1 Z	218	84	302	521	111	632	0	
Honda	CRX	87-91	O10 A	365	77	442	249	78	327	1	Light
Honda	CRX	92-98	O10 B	204	33	237	47	17	64	1	Light
Honda	CRX Others		O10 Z	9	4	13	35	11	46	0	
Honda	Odyssey	95-00	O17 A	420	65	485	72	10	82	1	People Mover
Honda	Odyssey	00-02	O17 B	124	17	141	9	2	11	0	
			O17 Z	10	0	10	1	0	1	0	
Honda	CR-V	97-01	O18 A	1486	229	1715	246	30	276	1	4WD - Compact
Honda	CR-V	02-05	O18 B	590	101	691	71	9	80	1	4WD - Compact
			O18 Z	12	5	17	31	9	40	0	
Honda	HR-V	99-02	O19 Z	314	54	368	41	12	53	1	4WD - Compact
Honda	Legend	86-95	O2 B	806	99	905	132	31	163	1	Large
Honda	Legend	96-98	O2 C	69	7	76	6	0	6	0	
Honda	Legend	99-04	O2 D	33	4	37	5	1	6	0	
Honda	Legend Others		O2 Z	12	8	20	43	12	55	0	
Honda	S2000	99-05	O20 Z	137	14	151	8	0	8	0	
Honda	Civic	01-05	O21 Z	627	115	742	98	20	118	1	Small
Honda	Jazz	02-05	O22 Z	230	65	295	59	8	67	1	Light
Honda	Insight	01-04	O23 Z	1	0	1	.	.	.	0	
Honda	MDX	03-05	O24 Z	23	1	24	1	0	1	0	
Honda	Accord Euro	03-05	O25 Z	210	36	246	28	4	32	1	Medium
Honda	Accord	03-05	O26 Z	89	16	105	13	3	16	0	
Honda	Odyssey	04-05	O27 Z	36	1	37	1	0	1	0	
Honda	Accord	82-85	O3 A	1949	427	2376	968	238	1206	1	Medium
Honda	Accord	86-90	O3 B	2073	337	2410	806	163	969	1	Medium

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Honda	Accord	91-93	O3 C	1364	180	1544	268	61	329	1	Medium
Honda	Accord	94-98	O3 D	2664	391	3055	396	79	475	1	Medium
Honda	Accord	99-02	O3 E	423	78	501	61	9	70	1	Medium
Honda	Accord Others		O3 Z	127	47	174	321	73	394	0	
Honda	Prelude	82-82	O4 A	213	37	250	31	6	37	1	Medium
Honda	Prelude	83-91	O4 B	3280	539	3819	1152	271	1423	1	Medium
Honda	Prelude	92-96	O4 C	1407	208	1615	219	62	281	1	Medium
Honda	Prelude	97-02	O4 D	498	87	585	67	9	76	1	Medium
Honda	Prelude Others		O4 Z	58	25	83	158	32	190	0	
Honda	Integra	86-88	O5 A	622	113	735	331	77	408	1	Small
Honda	Integra	89	O5 B	393	82	475	275	67	342	0	
Honda	Integra	90-92	O5 C	652	110	762	175	29	204	1	Small
Honda	Integra	93	O5 D	196	31	227	24	6	30	0	
Honda	Integra	93-01	O5 E	861	135	996	155	27	182	1	Small
Honda	Integra	02-05	O5 F	93	21	114	16	2	18	0	
Honda	Integra Others		O5 Z	38	19	57	16	3	19	0	
Honda	Concerto	89-93	O6 Z	496	99	595	165	44	209	1	Small
Honda	NSX	91-02	O7 Z	14	1	15	2	1	3	0	
Honda	Acty	83-86	O8 Z	275	60	335	44	16	60	1	Commercial - Van
Honda	City	83-86	O9 Z	331	126	457	573	119	692	1	Light
Honda	Others		O99 Z	3680	623	4303	1328	408	1736	0	
Peugeot	205	87-94	PE1 Z	276	42	318	47	13	60	1	Light
Peugeot	607	01-05	PE10Z	4	0	4	1	0	1	0	
Peugeot	407	04-05	PE11Z	1	2	3	4	0	4	0	
Peugeot	405	89-97	PE2 Z	556	83	639	123	30	153	1	Medium
Peugeot	505	82-93	PE3 Z	686	81	767	91	29	120	1	Medium
Peugeot	306	94-01	PE4 Z	1040	180	1220	184	25	209	1	Small
Peugeot	605	94-96	PE5 Z	35	4	39	6	2	8	0	
Peugeot	406	96-04	PE7 Z	205	15	220	28	4	32	1	Medium

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Peugeot	206	99-05	PE8 Z	347	71	418	37	14	51	1	Light
Peugeot	307	01-05	PE9 Z	182	28	210	25	2	27	1	Small
Peugeot	Others		PE99Z	375	44	419	119	32	151	0	
Porsche	944	82-91	PO1 Z	95	11	106	14	6	20	1	Medium
Porsche	911	82-05	PO2 Z	18	1	19	8	3	11	0	
Porsche	968	92-95	PO4 Z	1	0	1	.	.	.	0	
Porsche	Cayenne	03-05	PO6 Z	3	0	3	.	.	.	0	
Porsche	Others		PO99Z	655	66	721	66	33	99	0	
Proton	Wira	95-96	PRO1Z	871	272	1143	172	49	221	1	Small
Proton	Satria	97-05	PRO2Z	124	29	153	12	3	15	0	
Proton	Waja	01-05	PRO3Z	7	2	9	1	1	2	0	
Proton	Jumbuck	03-05	PRO4Z	22	3	25	1	1	2	0	
Proton	Gen 2	04-05	PRO5Z	1	0	1	.	.	.	0	
			PROTZ	41	11	52	9	4	13	0	
Renault	20	82-83	RE1 Z	17	4	21	7	4	11	0	
Renault	Megane Cabriolet	01-03	RE10Z	29	4	33	6	1	7	0	
Renault	Clio	02-05	RE11Z	84	24	108	19	3	22	1	Light
Renault	Megane II	03-05	RE12Z	11	4	15	4	0	4	0	
Renault	Trafic	04-05	RE13Z	2	0	2	.	.	.	0	
Renault	Kangoo	04-05	RE15Z	3	0	3	.	.	.	0	
Renault	Feugo	82-87	RE2 Z	330	48	378	63	15	78	1	Medium
Renault	21	87-91	RE3 Z	22	4	26	6	2	8	0	
Renault	25	85-91	RE4 Z	44	9	53	17	4	21	0	
Renault	19	91-96	RE5 Z	255	54	309	47	7	54	1	Small
Renault	Laguna	95-96	RE7 Z	36	9	45	9	3	12	0	
Renault	Laguna	02-05	RE8 Z	11	3	14	5	0	5	0	
Renault	Scenic	01-05	RE9 Z	112	21	133	17	1	18	0	
Renault	Others		RE99Z	337	46	383	64	11	75	0	
Rover	3500	82-87	RO Z	175	29	204	35	3	38	1	Large

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Rover	416i/827		RO1 Z	343	62	405	45	11	56	0	
Rover	Quintet	82-86	RO2 Z	229	60	289	67	18	85	1	Small
Rover	825	87-88	RO3 Z	34	5	39	12	1	13	0	
Mg	MGF / MG TF	99-05	RO4 Z	183	26	209	19	5	24	1	Small
Landrover	Freelander	98-05	RO5 Z	122	22	144	19	7	26	1	4WD - Compact
Mg	ZT	02-05	RO6 Z	7	2	9	1	0	1	0	
Rover	75	01-05	RO7 Z	35	5	40	5	1	6	0	
Mg	ZR	05-05	RO9 Z	1	0	1	3	1	4	0	
Rover	Others		RO99Z	615	90	705	190	56	246	0	
Rolls Royce			ROLLZ	25	6	31	4	2	6	0	
Land Rover	Range Rover	82-94	RROV1	870	106	976	130	42	172	1	4WD - Large
Land Rover	Range Rover	95-02	RROV2	126	17	143	26	4	30	1	4WD - Large
Land Rover	Range Rover	02-05	RROV3	15	0	15	.	.	.	0	
Range Rover	Others		RROVZ	12	8	20	9	3	12	0	
Saab	Others		SA00Z	947	130	1077	174	43	217	0	
Saab	900 Series	82-92	SA1 A	979	164	1143	153	39	192	1	Medium
Saab	900/9-3	94-02	SA1 B	1062	146	1208	116	18	134	1	Medium
Saab	900 Others		SA1 Z	1	3	4	1	0	1	0	
Saab	9000	86-97	SA2 Z	903	133	1036	118	13	131	1	Medium
Saab	9-5	98-05	SA3 Z	155	34	189	28	2	30	1	Medium
Saab	09-3	03-05	SA4 Z	23	6	29	6	3	9	0	
Saab	900/9000		SA99Z	120	19	139	17	4	21	0	
Lada	Samara	88-90	SAMAZ	51	10	61	10	4	14	0	
Seat	Ibiza	95-99	SE01Z	5	2	7	4	1	5	0	
Seat	Cordoba	95-99	SE02Z	4	3	7	3	1	4	0	
Seat	Others		SEATZ	369	57	426	32	6	38	0	
Smart	City-Coupe / ForTwo	03-05	SM01Z	4	1	5	2	0	2	0	
Smart	Roadster	03-05	SM02Z	5	0	5	.	.	.	0	
Subaru	1800 / Leone / Omega / 4WD Wagon	82-93	SU1 Z	6142	1457	7599	1246	407	1653	1	Medium

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Subaru	Liberty / Legacy	89-93	SU2 A	4728	816	5544	1013	246	1259	1	Medium
Subaru	Liberty / Legacy / Outback	94-98	SU2 B	2068	372	2440	322	78	400	1	Medium
Subaru	Liberty / Legacy / Outback	99-03	SU2 C	1768	292	2060	190	39	229	1	Medium
Subaru	Liberty / Legacy / Outback	03-05	SU2 D	164	27	191	15	7	22	1	Medium
Subaru	Liberty Others		SU2 Z	102	36	138	358	95	453	0	
Subaru	Vortex	85-89	SU3 Z	64	16	80	33	7	40	0	
Subaru	Sherpa / Fiori / 700 / Rex	89-92	SU4 Z	643	311	954	288	72	360	1	Light
Subaru	SVX / Alcyone	92-95	SU5 Z	21	4	25	1	2	3	0	
Subaru	Brumby	82-92	SU6 Z	1510	446	1956	275	147	422	1	Commercial - Ute
Subaru	Impreza	93-00	SU7 A	3541	750	4291	594	163	757	1	Small
Subaru	Impreza	01-05	SU7 B	836	142	978	94	23	117	1	Small
			SU7 Z	22	7	29	30	6	36	0	
Subaru	Forester	97-02	SU8 Z	1081	200	1281	175	37	212	1	4WD - Compact
Subaru	Forester	02-05	SU9 Z	387	88	475	60	5	65	1	4WD - Compact
Subaru	Others		SU99Z	3399	703	4102	971	307	1278	0	
Suzuki	Swift	82-85	SZ01A	200	67	267	48	18	66	1	Light
Holden / Suzuki	Barina / Swift / Cultus	86-88	SZ01B	3560	1167	4727	1162	302	1464	1	Light
Holden / Suzuki	Barina / Swift / Cultus	89-99	SZ01C	15875	4256	20131	3186	736	3922	1	Light
Suzuki	Swift Others		SZ01Z	156	59	215	77	28	105	0	
Suzuki	Vitara / Escudo	88-98	SZ02A	3302	724	4026	643	143	786	1	4WD - Compact
Suzuki	Grand Vitara	99-05	SZ02B	369	76	445	70	14	84	1	4WD - Compact
Suzuki	Vitara Others		SZ02Z	58	25	83	59	20	79	0	
Suzuki	Hatch / Alto	82-84	SZ03Z	783	367	1150	263	85	348	1	Light
Holden / Suzuki	Scurry / Carry	82-00	SZ04Z	409	171	580	136	48	184	1	Commercial - Van
Suzuki	Alto	85-00	SZ05Z	189	87	276	167	44	211	1	Light
Suzuki	Mighty Boy	85-88	SZ06Z	425	190	615	136	40	176	1	Commercial - Ute
Holden / Suzuki	Drover / Sierra / Samurai / SJ410 / SJ413	82-99	SZ07Z	3846	1136	4982	847	225	1072	1	4WD - Compact
Suzuki	Baleno / Cultus Crescent	95-02	SZ08Z	1398	338	1736	240	44	284	1	Small
Suzuki	Carry	99-05	SZ09Z	71	14	85	15	2	17	0	

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Suzuki	Ignis	00-02	SZ10Z	204	80	284	79	13	92	1	Light
Suzuki	Jimny	98-05	SZ11Z	153	53	206	50	9	59	1	4WD - Compact
Suzuki	Liana	01-05	SZ12Z	96	20	116	14	3	17	0	
Suzuki	Grand Vitara	05-05	SZ13Z	2	0	2	.	.	.	0	
Suzuki	Swift	05-05	SZ14Z	25	9	34	6	1	7	0	
Suzuki	Others		SZ99Z	2338	702	3040	813	295	1108	0	
Toyota	Corolla	82-84	T01 A	9434	2303	11737	2729	624	3353	1	Small
Toyota	Corolla	85	T01 B	2960	727	3687	1121	266	1387	0	
Toyota	Corolla	86-88	T01 C	15873	3843	19716	3404	830	4234	1	Small
Toyota	Corolla	89	T01 D	2084	436	2520	395	113	508	0	
Toyota / Holden	Corolla / Nova	89-93	T01 E	24998	5635	30633	4786	1167	5953	1	Small
Toyota / Holden	Corolla / Nova	94-97	T01 F	15364	3426	18790	2634	571	3205	1	Small
Toyota	Corolla	98-01	T01 G	4308	1064	5372	788	128	916	1	Small
Toyota	Corolla	02-05	T01 H	2825	672	3497	467	93	560	1	Small
Toyota	Corolla Others		T01 Z	2	0	2	.	.	.	0	
Toyota	Corona	82-88	T03 Z	17216	3593	20809	3078	802	3880	1	Medium
Toyota	Camry	83-86	T04 Z	3785	719	4504	600	159	759	1	Medium
Holden / Toyota	Apollo JK/JL / Camry / Vista	88-92	T05 A	29846	5464	35310	4282	1105	5387	1	Medium
Holden / Toyota	Apollo JM/JP / Camry / Sceptor	93-97	T05 B	23896	4561	28457	3182	804	3986	1	Large
Toyota	Camry	98-02	T05 C	11394	2154	13548	1450	283	1733	1	Large
Toyota	Celica	81-85	T06 A	2456	463	2919	531	114	645	1	Medium
Toyota	Celica	86-89	T06 B	2265	375	2640	351	83	434	1	Medium
Toyota	Celica	90-93	T06 C	2261	381	2642	371	84	455	1	Medium
Toyota	Celica	94-99	T06 D	1264	256	1520	205	40	245	1	Medium
Toyota	Celica	00-05	T06 E	304	62	366	35	9	44	1	Medium
Toyota	Celica Others		T06 Z	62	24	86	80	23	103	0	
Toyota	Crown / Cressida / Mark II	82-85	T07 A	2009	371	2380	395	119	514	1	Large
Toyota	Crown / Cressida / Mark II	86-88	T07 B	954	131	1085	92	36	128	1	Large
Toyota	Cressida / Mark II	89-93	T07 C	2187	310	2497	232	65	297	1	Large

MAKE/MODEL		MODEL CODE	No. of uninjured drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of injured drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of involved drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of injured (but not severely) drivers in NSW and Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	No. of severely injured drivers in NSW and Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	No. of injured drivers in NSW, Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	ANALYSIS CRITERIA INV=100 INJ=20	MARKET GROUP	
Toyota	Crown/Cres Others		T07 Z	42	7	49	28	5	33	0	
Toyota	Tercel	83-88	T09 Z	480	106	586	108	29	137	1	Small
Toyota	Lexcen Others		T10 Z	1	0	1	2	0	2	0	
Toyota	Supra	82-90	T11 Z	491	89	580	77	28	105	1	Large
Toyota	MR2	87-90	T12 A	220	52	272	100	34	134	1	Small
Toyota	MR2	91-00	T12 B	173	26	199	56	12	68	1	Small
Toyota	MR2 Others		T12 Z	24	7	31	35	5	40	0	
Toyota	Paseo / Cynos	91-99	T13 Z	1375	291	1666	258	55	313	1	Small
Toyota	Bundera		T14 Z	10	4	14	4	1	5	0	
Toyota	Hiace/Liteace	82-86	T15 A	4407	800	5207	872	255	1127	1	Commercial - Van
Toyota	Hiace/Liteace	87-89	T15 B	2280	383	2663	500	126	626	1	Commercial - Van
Toyota	Hiace/Liteace	90-95	T15 C	5142	730	5872	700	209	909	1	Commercial - Van
Toyota	Hiace/Liteace	96-04	T15 D	3953	556	4509	372	86	458	1	Commercial - Van
Toyota	Hiace	05-05	T15 E	22	1	23	2	2	4	0	
Toyota	Hiace/Liteace Others		T15 Z	209	54	263	214	44	258	0	
Toyota	4Runner/Hilux	82-85	T16 A	5160	1010	6170	728	275	1003	1	Commercial - Ute
Toyota	4Runner/Hilux	86-88	T16 B	3950	722	4672	727	264	991	1	Commercial - Ute
Toyota	4Runner/Hilux	89-97	T16 C	16102	2888	18990	2440	917	3357	1	Commercial - Ute
Toyota	Hilux	98-02	T16 D	3974	717	4691	513	157	670	1	Commercial - Ute
Toyota	Hilux	03-04	T16 E	546	86	632	62	19	81	1	Commercial - Ute
Toyota	Hilux	05-05	T16 F	76	14	90	6	4	10	0	
Toyota	4Runner/Hilux Others		T16 Z	844	294	1138	405	145	550	0	
Lexus	ES300 / Windom	92-01	T17 Z	482	77	559	81	22	103	1	Large
Toyota	Tarago	83-89	T18 A	4627	1154	5781	761	227	988	1	People Mover
Toyota	Tarago	90	T18 B	188	29	217	75	8	83	0	
Toyota	Tarago / Previa / Estima	91-99	T18 C	2842	415	3257	307	70	377	1	People Mover
Toyota	Tarago / Previa / Estima	00-05	T18 D	382	64	446	38	11	49	1	People Mover
Toyota	Tarago Others		T18 Z	117	32	149	23	9	32	0	
Toyota	Commercials		T19 Z	4803	747	5550	486	117	603	0	

MAKE/MODEL			MODEL CODE	No. of uninjured drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of injured drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of involved drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of injured (but not severely) drivers in NSW and Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	No. of severely injured drivers in NSW and Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	No. of injured drivers in NSW, Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	ANALYSIS INCLUSION CRITERIA INV=100 INJ=20	MARKET GROUP
Toyota	Landcruiser	82-89	T20 A	7240	1158	8398	854	368	1222	1	4WD - Large
Toyota	Landcruiser	90-97	T20 B	10057	1287	11344	1046	395	1441	1	4WD - Large
Toyota	Landcruiser	98-05	T20 C	3341	516	3857	440	140	580	1	4WD - Large
Toyota	Landcruiser Others		T20 Z	613	194	807	170	83	253	0	
Toyota	RAV4	94-00	T21 A	2046	362	2408	397	67	464	1	4WD - Compact
Toyota	RAV4	01-05	T21 B	1028	202	1230	151	30	181	1	4WD - Compact
			T21 Z	53	14	67	17	6	23	0	
Toyota	Starlet	96-99	T22 Z	3461	926	4387	686	166	852	1	Light
Lexus	LS400 / Celsior	90-00	T25 Z	167	23	190	18	3	21	1	Large
Lexus	IS200 / IS300	99-04	T26 Z	327	56	383	25	2	27	1	Medium
Toyota	Echo	99-05	T27 Z	2611	708	3319	486	115	601	1	Light
Lexus	GS300	97-04	T28 Z	100	9	109	7	0	7	0	
Toyota	Avalon	00-05	T29 Z	1362	241	1603	183	40	223	1	Large
Toyota	MR2	00-05	T30 Z	54	17	71	4	1	5	0	
Lexus	LS430	00-04	T31 Z	20	1	21	.	.	.	0	
Toyota	Corolla 4WD Wagon	92-96	T32 Z	426	65	491	41	12	53	1	Small
Toyota	Spacia	93-00	T33 A	127	32	159	19	2	21	1	People Mover
Toyota	Spacia	1-Feb	T33 B	10	3	13	3	0	3	0	
			T33 Z	2	0	2	.	.	.	0	
Lexus	ES300	01-05	T34 Z	30	1	31	.	.	.	0	
Lexus	SC430	01-05	T35 Z	10	0	10	1	0	1	0	
Toyota	Camry	02-05	T36 Z	1563	316	1879	229	35	264	1	Large
Toyota	Prius	1-Feb	T37 Z	13	0	13	.	.	.	0	
Toyota	Avensis	01-05	T38 Z	66	12	78	4	4	8	0	
Toyota	Prius	03-05	T39 Z	11	1	12	1	1	2	0	
Toyota	Kluger	03-05	T40 Z	140	19	159	11	1	12	0	
Toyota	Landcruiser Prado	96-03	T41 Z	550	68	618	43	9	52	1	4WD - Medium
Toyota	Landcruiser Prado	03-05	T42 Z	368	33	401	32	6	38	1	4WD - Medium
Lexus	RX330	03-05	T43 Z	59	10	69	6	1	7	0	

MAKE/MODEL			MODEL CODE	No. of uninjured drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of injured drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of involved drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of injured (but not severely) drivers in NSW and Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	No. of severely injured drivers in NSW and Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	No. of injured drivers in NSW, Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	ANALYSIS INCLUSION CRITERIA INV=100 INJ=20	MARKET GROUP
Lexus	GS300/430/450h	05-05	T44 Z	1	0	1	1	0	1	0	
Toyota	Yaris	05-05	T45 Z	4	0	4	.	.	.	0	
			T46 Z	4	0	4	1	0	1	0	
Toyota	Others		T99 Z	26383	4087	30470	8291	2708	10999	0	
Volvo	850/S70/V70/C70	92-04	V877Z	1505	236	1741	185	37	222	1	Large
Volvo	200 Series	82-93	VO02Z	3130	430	3560	321	86	407	1	Medium
Volvo	300 Series	84-88	VO03Z	185	26	211	31	10	41	1	Small
Volvo	700/900 Series	84-92	VO07Z	2028	303	2331	258	45	303	1	Large
Volvo	960/S90/V90	90-98	VO10Z	105	20	125	17	3	20	1	Large
Volvo	S80	98-05	VO11Z	55	6	61	3	0	3	0	
Volvo	S60	01-05	VO12Z	70	12	82	9	2	11	0	
Volvo	XC 90	03-05	VO13Z	30	6	36	3	0	3	0	
Volvo	S40/V50	04-05	VO14Z	13	3	16	.	.	.	0	
Volvo	S40/V40	97-04	VO40Z	527	88	615	65	12	77	1	Small
Volvo	Others		VO99Z	3059	403	3462	485	128	613	0	
Volkswagon			VOLKZ	9	2	11	19	5	24	0	
Volkswagen	Caravelle / Transporter	88-94	VS01A	320	42	362	24	6	30	1	Commercial - Van
Volkswagen	Caravelle / Transporter	95-04	VS01B	765	120	885	75	9	84	1	Commercial - Van
			VS01Z	113	18	131	10	3	13	0	
Volkswagen	Golf	82-94	VS02A	208	37	245	52	14	66	1	Small
Volkswagen	Golf	95-98	VS02B	945	157	1102	92	18	110	1	Small
Volkswagen	Golf / Bora	99-04	VS02C	1038	187	1225	148	16	164	1	Small
Volkswagen	Golf Others		VS02Z	6	2	8	6	0	6	0	
Volkswagen	Kombi		VS03Z	6	4	10	3	1	4	0	
Volkswagen	Passat	95-97	VS04A	42	6	48	6	1	7	0	
Volkswagen	Passat	98-05	VS04B	224	29	253	32	1	33	1	Medium
Volkswagon	Passat Others		VS04Z	3	1	4	2	0	2	0	
Volkswagen	70E Pick Up		VS07Z	24	1	25	5	1	6	0	
Volkswagen	Polo	96-00	VS08A	390	99	489	62	9	71	1	Light

MAKE/MODEL			MODEL CODE	No. of uninjured drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of injured drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of involved drivers in NSW (87-2005) and QLD, WA (91-2005) and SA (95-2005)	No. of injured (but not severely) drivers in NSW and Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	No. of severely injured drivers in NSW and Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	No. of injured drivers in NSW, Victoria (87-2005) and QLD, WA, NZ (91-2005) and SA (95-2005)	ANALYSIS CRITERIA INV=100 INJ=20	MARKET GROUP
Volkswagen	Polo	1-Feb	VS08B	40	11	51	11	4	15	0	
Volkswagen	Polo Others		VS08Z	5	1	6	2	0	2	0	
Volkswagen	New Beetle	00-05	VS10Z	93	20	113	18	2	20	1	Small
Volkswagen	Polo	02-05	VS11Z	45	13	58	13	1	14	0	
Volkswagen	LT	03-05	VS12Z	5	0	5	3	1	4	0	
Volkswagen	Touareg	03-05	VS13Z	13	0	13	1	0	1	0	
Volkswagen	Golf	04-05	VS15Z	52	9	61	7	0	7	0	
Volkswagen	Caddy	05-05	VS16Z	3	0	3	.	.	.	0	
Volkswagen	Others		VS99Z	334	50	384	73	27	100	0	
Unknown				282928	88929	371857	70211	23263	93474		
			<b>Total</b>	<b>1914526</b>	<b>401801</b>	<b>2316327</b>	<b>377438</b>	<b>104381</b>	<b>481819</b>	<b>381</b>	



## **APPENDIX 2**

# **LOGISTIC REGRESSION ESTIMATES OF CRASHWORTHINESS INJURY RISK BY MODEL AND MARKET GROUP**



## CRASHWORTHINESS INJURY RISK RATINGS

New South Wales Data (1987-2005), South Australia (1995-2005),  
Queensland and Western Australia Data (1991-2005)

Make	Model of Car	Years of Manufacture	Pr(Risk) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
<b>ALL VEHICLE AVERAGE</b>			16.41			
<b>Compact Four Wheel Drive Vehicles</b>			17.74	17.27	18.22	0.95
Daihatsu	Feroza / Rocky	89-97	18.30	16.06	20.78	4.73
Daihatsu	Rocky / Rugger	85-98	21.93	18.74	25.51	6.77
Daihatsu	Terios	97-05	22.66	19.63	26.00	6.37
Holden	Cruze	02-05	20.57	16.42	25.45	9.03
Kia	Sportage	98-03	14.76	11.91	18.15	6.24
Ford / Mazda	Escape / Tribute	01-05	12.62	10.21	15.50	5.29
Nissan	X-Trail	01-05	14.59	12.06	17.54	5.48
Lada	Niva	84-99	18.20	14.54	22.53	7.99
Honda	CR-V	97-01	12.62	11.13	14.28	3.15
Honda	CR-V	02-05	12.73	10.53	15.31	4.78
Honda	HR-V	99-02	13.28	10.24	17.06	6.82
Landrover	Freelander	98-05	14.09	9.37	20.66	11.29
Subaru	Forester	97-02	13.29	11.59	15.19	3.60
Subaru	Forester	02-05	14.61	11.89	17.84	5.95
Suzuki	Vitara / Escudo	88-98	19.78	18.48	21.15	2.67
Suzuki	Grand Vitara	99-05	14.25	11.42	17.64	6.22
Holden / Suzuki	Drover / Sierra / Samurai / SJ410 / SJ413	82-99	25.20	23.90	26.55	2.65
Suzuki	Jimny	98-05	22.53	17.31	28.76	11.45
Toyota	RAV4	94-00	14.43	13.06	15.91	2.85
Toyota	RAV4	01-05	13.78	12.05	15.72	3.68
<b>Medium Four Wheel Drive Vehicles</b>			12.80	12.30	13.31	1.01
Daewoo / Ssangong	Musso	98-02	10.61	7.03	15.70	8.67
Holden / Isuzu	Jackaroo / Bighorn	82-91	19.61	17.08	22.41	5.33
Holden / Isuzu	Jackaroo / Bighorn	92-97	13.74	11.32	16.58	5.26
Holden / Isuzu	Jackaroo / Bighorn	98-02	13.35	10.87	16.29	5.42
Holden	Frontera / Mu	95-03	15.04	11.37	19.64	8.27
Hyundai	Santa Fe	00-05	15.42	11.23	20.80	9.57
Mitsubishi	Pajero	82-90	16.70	15.10	18.43	3.33
Mitsubishi	Pajero	92-99	11.75	10.70	12.88	2.18
Mitsubishi	Pajero NM / NP	00-05	9.36	7.39	11.79	4.40
Mitsubishi	Challenger	98-05	12.59	9.58	16.37	6.79
Jeep	Cherokee XJ	96-00	12.66	10.78	14.80	4.02
Jeep	Wrangler	96-04	14.01	9.93	19.40	9.47
Land Rover	Defender	92-05	11.42	8.43	15.28	6.85
Land Rover	Discovery	91-02	10.80	8.95	12.98	4.04
Nissan	Pathfinder / Terrano	88-94	13.53	10.84	16.76	5.92
Nissan	Pathfinder / Terrano / Regulus	95-05	10.36	8.28	12.88	4.61
Toyota	Landcruiser Prado	96-03	10.06	7.95	12.64	4.68
Toyota	Landcruiser Prado	03-05	7.04	5.02	9.79	4.76

Make	Model of Car	Years of Manufacture	Pr(Risk) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
<b>Large Four Wheel Drive Vehicles</b>			12.22	11.90	12.55	0.65
Ford	Bronco	82-87	15.22	10.32	21.87	11.56
Ford	Explorer	00-01	16.98	13.45	21.22	7.77
Ford	Explorer	01-05	8.40	4.89	14.08	9.19
Jeep	Grand Cherokee ZG	96-99	11.24	7.65	16.22	8.57
Jeep	Grand Cherokee WJ/WG	99-05	9.12	5.09	15.79	10.70
Mercedes Benz	M-Class W163	98-05	8.20	5.48	12.11	6.63
Nissan	Patrol / Safari	82-87	13.56	11.83	15.51	3.68
Nissan / Ford	Patrol / Maverick / Safari	88-97	11.60	10.85	12.39	1.53
Nissan	Patrol / Safari	98-04	10.11	8.94	11.42	2.48
Land Rover	Range Rover	82-94	12.89	10.74	15.40	4.66
Land Rover	Range Rover	95-02	13.47	8.50	20.69	12.19
Toyota	Landcruiser	82-89	15.31	14.48	16.18	1.69
Toyota	Landcruiser	90-97	11.99	11.36	12.65	1.29
Toyota	Landcruiser	98-05	11.88	10.91	12.93	2.02
<b>Commercial Vehicles- Vans</b>			17.60	17.16	18.06	0.90
Daihatsu	Handivan	82-90	33.27	30.09	36.61	6.52
Daihatsu	Hi-Jet	82-90	41.24	34.18	48.68	14.50
Daihatsu	Handivan / Cuore	99-03	28.05	22.10	34.87	12.77
Ford	Falcon Panel Van	82-95	16.37	15.13	17.68	2.54
Ford	Falcon Panel Van	96-99	13.35	10.47	16.88	6.42
Ford	Transit	95-00	13.61	11.48	16.07	4.59
Ford	Transit	01-05	10.87	7.59	15.33	7.73
Holden	Shuttle / WFR Van	82-87	22.39	18.83	26.40	7.56
Kia	Pregio	02-05	17.29	12.67	23.15	10.48
Mercedes Benz	MB100 / MB140	99-04	10.92	7.46	15.69	8.23
Mercedes Benz	Vito / Viano	99-05	8.95	6.32	12.53	6.21
Mercedes Benz	Sprinter	98-04	14.35	10.74	18.92	8.18
Honda	Acty	83-86	15.69	12.24	19.89	7.64
Holden / Suzuki	Scurry / Carry	82-00	33.04	29.01	37.34	8.34
Toyota	Hiace/Liteace	82-86	21.38	20.08	22.73	2.65
Toyota	Hiace/Liteace	87-89	20.20	18.46	22.06	3.61
Toyota	Hiace/Liteace	90-95	17.36	16.24	18.54	2.31
Toyota	Hiace/Liteace	96-04	14.81	13.69	16.00	2.31
Volkswagen	Caravelle / Transporter	88-94	13.36	9.99	17.65	7.66
Volkswagen	Caravelle / Transporter	95-04	15.26	12.88	17.99	5.11
<b>Commercial Vehicles- Utes</b>			15.24	15.00	15.48	0.48
Ford / Nissan	Falcon Ute / XFN Ute	82-95	15.47	14.76	16.22	1.46
Ford	Falcon Ute	96-99	14.59	13.18	16.13	2.96
Ford	Falcon Ute AU	00-02	12.31	10.90	13.88	2.98
Ford	Falcon Ute BA/BF	03-05	11.35	9.31	13.77	4.46
Ford	Ford F-Series	82-92	14.06	11.88	16.57	4.69
Holden	Commodore Ute VG/VP	90-93	15.71	14.09	17.47	3.38
Holden / Isuzu	Rodeo / Pickup	82-85	18.96	16.21	22.07	5.86
Holden / Isuzu	Rodeo / Pickup	86-88	18.66	15.05	22.91	7.86
Holden / Isuzu	Rodeo / Pickup	89-95	16.23	15.32	17.19	1.87
Holden	Rodeo	96-98	15.43	14.11	16.85	2.73
Holden	Rodeo	99-02	15.09	13.73	16.56	2.82

Make	Model of Car	Years of Manufacture	Pr(Risk) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Holden	WB Series	82-85	15.73	14.06	17.57	3.51
Holden	Commodore Ute VR/VS	94-00	14.77	13.96	15.61	1.65
Holden	Commodore VU Ute	00-02	12.33	10.75	14.10	3.35
Holden	Commodore VY/VZ Ute	02-05	12.57	10.91	14.44	3.53
Holden	Rodeo	03-04	10.95	9.17	13.02	3.85
Mitsubishi	Triton MK	96-05	12.86	10.60	15.53	4.94
Kia	Ceres	92-00	19.18	16.75	21.87	5.12
Ford / Mazda	Courier / B-Series / Bounty	98-02	13.19	11.50	15.09	3.58
Ford / Mazda	Courier / Bravo / Bounty	03-05	18.45	14.30	23.47	9.17
Nissan	720 Ute	82-85	18.48	16.60	20.53	3.93
Nissan	Navara	86-91	16.06	14.86	17.34	2.48
Nissan	Navara	92-96	14.43	12.81	16.22	3.41
Nissan	Navara	97-05	12.31	10.52	14.35	3.82
Subaru	Brumby	82-92	20.62	18.85	22.51	3.66
Suzuki	Mighty Boy	85-88	35.64	31.62	39.87	8.26
Toyota	4Runner/Hilux	82-85	18.31	17.27	19.41	2.14
Toyota	4Runner/Hilux	86-88	17.14	15.99	18.36	2.37
Toyota	4Runner/Hilux	89-97	15.96	15.39	16.55	1.16
Toyota	Hilux	98-02	14.31	13.32	15.36	2.04
Toyota	Hilux	03-04	12.28	9.98	15.02	5.04
<b>Large Cars</b>			15.38	15.24	15.52	0.29
BMW	7 Series E23	82-88	11.59	8.10	16.32	8.22
BMW	7 Series E32	89-94	14.72	10.27	20.66	10.39
BMW	7 Series E38	95-01	10.27	6.33	16.22	9.88
Ford	Falcon XE/XF	82-88	16.77	16.41	17.13	0.72
Ford	Fairlane Z & LTD F	82-87	16.43	15.50	17.41	1.92
Ford	Falcon EA / Falcon EB Series I	88-Mar 92	15.93	15.55	16.32	0.77
Ford	Falcon EB Series II / Falcon ED	Apr 92-94	14.58	14.07	15.11	1.05
Ford	Fairlane N & LTD D	88-94	13.34	12.38	14.36	1.98
Ford	Fairlane N & LTD D	95-98	13.11	11.58	14.82	3.24
Ford	Fairlane & LTD AU	99-02	13.76	11.54	16.33	4.78
Ford	Falcon EF/EL	94-98	14.63	14.26	15.00	0.74
Ford	Falcon AU	98-02	14.21	13.70	14.73	1.04
Ford	Taurus	96-98	15.17	12.14	18.80	6.66
Ford	Falcon BA/BF	02-05	13.30	12.26	14.40	2.14
Holden / Toyota	Commodore VN/VP / Lexcen	89-93	16.46	16.11	16.81	0.70
Holden	Statesman/Caprice WB	82-85	15.78	10.70	22.66	11.96
Holden	Stateman/Caprice VQ	90-93	14.50	12.07	17.31	5.23
Holden	Stateman/Caprice VR/VS	94-98	14.53	13.40	15.73	2.34
Holden / Toyota	Commodore VR/VS / Lexcen	93-97	15.14	14.79	15.50	0.71
Holden	Commodore VT/VX	97-02	14.94	14.54	15.36	0.81
Holden	Statesman/Caprice WH	99-03	12.12	10.17	14.38	4.21
Holden	Commodore VY/VZ	02-05	15.14	14.20	16.14	1.93
Holden	Monaro	01-05	13.77	10.57	17.73	7.15
Holden	Statesman/Caprice WK/WL	03-05	15.42	10.79	21.56	10.78
Holden	Commodore VB-VL	82-88	17.94	17.56	18.34	0.78
Hyundai	Sonata	98-01	15.45	13.16	18.06	4.91
Hyundai	Sonata	89-97	16.83	15.64	18.09	2.45
Hyundai	Grandeur / XG	99-00	12.53	9.13	16.97	7.84
Mitsubishi	Magna TM/TN/TP / Sigma / V3000	85-90	17.78	17.29	18.27	0.98
Mitsubishi	Magna TE/TF/TH/TJ / Verada	96-03	14.62	14.06	15.20	1.14

Make	Model of Car	Years of Manufacture	Pr(Risk) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Mitsubishi	KE/KF/KH/KJ / Diamante					
Mitsubishi	Magna TR/TS / Verada KR/KS / V3000 / Diamante	91-96	15.63	15.16	16.12	0.96
Mitsubishi	Magna TL/TW / Verada KL/KW	03-05	13.79	10.80	17.43	6.63
Jaguar	XJ6	82-86	16.00	12.19	20.72	8.53
Jaguar	XJ6	87-94	12.20	9.40	15.67	6.27
Mazda	929 / Luce	82-90	18.24	16.90	19.66	2.76
Mazda	929 / Sentia / Efini MS-9	92-96	16.74	12.33	22.31	9.98
Mercedes Benz	S-Class W126	82-92	13.46	11.30	15.95	4.65
Nissan	Skyline	83-88	17.41	16.36	18.52	2.16
Nissan	300ZX / Fairlady Z	90-95	17.91	14.74	21.58	6.84
Nissan	Maxima	90-94	14.93	12.62	17.58	4.97
Nissan	Maxima / Cefiro	95-99	15.91	13.76	18.32	4.57
Nissan	Maxima	00-02	14.50	11.04	18.82	7.78
Honda	Legend	86-95	12.60	10.43	15.15	4.72
Rover	3500	82-87	18.76	13.31	25.77	12.46
Holden / Toyota	Apollo JM/JP / Camry / Sceptor	93-97	16.69	16.21	17.18	0.97
Toyota	Camry	98-02	14.71	14.11	15.34	1.22
Toyota	Crown / Cressida / Mark II	82-85	17.95	16.32	19.70	3.37
Toyota	Crown / Cressida / Mark II	86-88	13.94	11.84	16.35	4.51
Toyota	Cressida / Mark II	89-93	13.40	12.04	14.89	2.85
Toyota	Supra	82-90	19.11	15.77	22.97	7.19
Lexus	ES300 / Windom	92-01	14.75	11.92	18.11	6.19
Lexus	LS400 / Celsior	90-00	12.17	8.17	17.76	9.59
Toyota	Avalon	00-05	13.06	11.54	14.74	3.20
Toyota	Camry	02-05	14.49	13.01	16.10	3.09
Volvo	850/S70/V70/C70	92-04	13.75	12.17	15.51	3.34
Volvo	700/900 Series	84-92	14.52	13.05	16.13	3.08
Volvo	960/S90/V90	90-98	15.05	9.76	22.49	12.73
<b>Medium Cars</b>			<b>16.71</b>	<b>16.52</b>	<b>16.90</b>	<b>0.38</b>
Alfa Romeo	156	99-05	13.50	9.97	18.04	8.06
BMW	Z3 E36	97-03	9.74	6.29	14.78	8.49
BMW	3 Series E30	82-91	15.91	14.69	17.23	2.54
BMW	3 Series E36	92-98	15.62	14.57	16.73	2.17
BMW	3 Series E46	99-04	14.28	12.72	16.00	3.27
BMW	5 Series E28	82-88	13.46	11.32	15.94	4.62
BMW	5 Series E34	89-95	14.78	12.36	17.59	5.23
BMW	5 Series E39	96-03	9.71	7.63	12.28	4.65
Daewoo	Espero	95-97	20.98	18.31	23.92	5.61
Daewoo	Leganza	97-02	14.46	11.95	17.40	5.45
Ford	Mondeo	95-01	14.31	12.86	15.90	3.04
Ford	Probe	94-98	20.35	15.46	26.32	10.87
Holden	Calibra	94-97	15.00	11.63	19.13	7.50
Holden	Camira	82-89	22.17	21.49	22.87	1.38
Holden	Vectra	97-03	15.40	14.13	16.75	2.62
Mitsubishi	Sigma / Galant / Sapporo / Lambda	82-84	19.55	18.80	20.33	1.52
Mitsubishi	Starion	82-87	21.40	15.63	28.58	12.96
Mitsubishi	Galant	95-96	17.79	15.93	19.82	3.88
Ford / Mazda	Telstar / 626 / MX6 / Capella	83-86	18.93	18.12	19.77	1.65
Ford / Mazda	Telstar / 626 / MX6 / Capella	88-91	17.11	16.12	18.15	2.04
Ford / Mazda	Telstar / 626 / MX6 / Capella /	92-97	14.28	13.37	15.24	1.87

Make	Model of Car	Years of Manufacture	Pr(Risk) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
	Cronos					
Mazda	626	98-02	14.93	13.35	16.67	3.32
Mazda	RX7	82-85	20.63	17.48	24.17	6.69
Mazda	RX7	86-91	14.88	11.28	19.38	8.10
Mazda	Eunos 500	93-99	21.40	16.81	26.83	10.02
Mazda	Eunos 800	94-00	14.76	8.90	23.50	14.61
Mercedes Benz	C-Class W201	87-93	15.32	12.90	18.09	5.19
Mercedes Benz	C-Class W202	95-00	12.62	10.89	14.59	3.71
Mercedes Benz	E-Class W123	82-85	12.97	10.12	16.47	6.35
Mercedes Benz	E-Class W124	86-94	13.63	11.74	15.78	4.04
Mercedes Benz	E-Class W210	96-02	10.94	8.75	13.59	4.85
Mercedes Benz	C-Class W203	00-05	14.07	10.67	18.33	7.67
Nissan	Pintara	86-88	17.59	16.58	18.64	2.06
Nissan / Ford	Pintara / Corsair / Bluebird	89-92	18.65	17.84	19.49	1.65
Nissan	Bluebird	82-86	19.94	19.21	20.70	1.49
Nissan	280ZX	82-84	15.17	9.45	23.45	14.00
Nissan	Bluebird	93-97	13.49	11.86	15.31	3.44
Nissan	200SX / Silvia	94-02	13.14	11.27	15.28	4.01
Honda	Accord Euro	03-05	13.76	10.03	18.58	8.55
Honda	Accord	82-85	20.62	18.89	22.46	3.57
Honda	Accord	86-90	16.08	14.54	17.74	3.20
Honda	Accord	91-93	13.24	11.52	15.18	3.66
Honda	Accord	94-98	13.90	12.64	15.25	2.61
Honda	Accord	99-02	14.57	11.76	17.91	6.15
Honda	Prelude	82-82	17.67	13.04	23.50	10.46
Honda	Prelude	83-91	17.62	16.29	19.02	2.73
Honda	Prelude	92-96	15.91	14.01	18.02	4.01
Honda	Prelude	97-02	15.46	12.64	18.77	6.12
Peugeot	405	89-97	13.41	10.88	16.43	5.55
Peugeot	505	82-93	11.55	9.35	14.18	4.83
Peugeot	406	96-04	6.87	4.16	11.14	6.98
Porsche	944	82-91	15.56	8.88	25.87	16.99
Renault	Feugo	82-87	17.12	13.15	21.98	8.84
Saab	900 Series	82-92	16.50	14.29	18.97	4.69
Saab	900/9-3	94-02	12.22	10.45	14.25	3.80
Saab	9000	86-97	14.25	12.12	16.68	4.56
Saab	9-5	98-05	17.43	12.64	23.53	10.89
Subaru	1800 / Leone / Omega / 4WD Wagon	82-93	19.30	18.37	20.27	1.90
Subaru	Liberty / Legacy	89-93	15.87	14.86	16.94	2.07
Subaru	Liberty / Legacy / Outback	94-98	14.30	12.96	15.76	2.81
Subaru	Liberty / Legacy / Outback	99-03	12.34	11.03	13.78	2.75
Subaru	Liberty / Legacy / Outback	03-05	13.20	9.13	18.71	9.58
Toyota	Corona	82-88	19.68	19.07	20.31	1.25
Toyota	Camry	83-86	18.65	17.42	19.93	2.51
Holden / Toyota	Apollo JK/JL / Camry / Vista	88-92	16.56	16.12	17.01	0.89
Toyota	Celica	81-85	19.73	18.15	21.41	3.27
Toyota	Celica	86-89	17.27	15.72	18.94	3.22
Toyota	Celica	90-93	16.88	15.36	18.51	3.15
Toyota	Celica	94-99	18.22	16.24	20.38	4.13
Toyota	Celica	00-05	15.19	11.92	19.16	7.24
Lexus	IS200 / IS300	99-04	13.64	10.58	17.41	6.83
Volvo	200 Series	82-93	13.16	12.02	14.40	2.38
Volkswagen	Passat	98-05	10.82	7.57	15.23	7.65

Make	Model of Car	Years of Manufacture	Pr(Risk) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
<b>People Movers</b>			17.89	17.43	18.35	0.92
Chrysler	Voyager	97-05	12.47	9.69	15.91	6.22
Mitsubishi	Nimbus / Chariot / Spacewagon	85-91	20.41	17.08	24.19	7.11
Mitsubishi	Nimbus / Chariot	92-98	18.13	15.60	20.96	5.37
Mitsubishi	Nimbus	99-03	9.46	6.53	13.52	6.99
Mitsubishi	Starwagon / L300	83-86	24.56	23.01	26.18	3.17
Mitsubishi	Starwagon / Delica Starwagon	87-93	20.31	19.21	21.45	2.24
Mitsubishi	Starwagon / Delica Spacegear	95-98	17.08	15.23	19.09	3.87
Mitsubishi	Starwagon / Delica Spacegear	98-03	14.95	12.68	17.56	4.88
Kia	Carnival	99-05	9.23	7.15	11.83	4.69
Mazda	MPV	94-99	10.19	7.28	14.08	6.80
Nissan	Prairie	84-86	21.43	17.60	25.82	8.22
Nissan	Serena	92-95	12.96	8.29	19.69	11.39
Honda	Odyssey	95-00	12.09	9.54	15.20	5.67
Toyota	Tarago	83-89	21.77	20.64	22.95	2.32
Toyota	Tarago / Previa / Estima	91-99	12.57	11.45	13.78	2.33
Toyota	Tarago / Previa / Estima	00-05	12.23	9.62	15.43	5.81
Toyota	Spacia	93-00	17.46	12.41	23.99	11.57
<b>Light Cars</b>			21.47	21.23	21.71	0.48
Daihatsu	Charade	82-86	26.48	24.63	28.43	3.80
Daihatsu	Charade	88-92	23.21	22.25	24.20	1.95
Daihatsu	Charade	93-00	21.84	20.85	22.86	2.01
Daihatsu	Pyzar	97-01	18.27	14.54	22.70	8.16
Daihatsu	Sirion / Storia	98-04	20.62	18.53	22.88	4.35
Daihatsu	Mira	90-96	32.74	29.63	36.02	6.40
Daewoo	1.5i	94-95	25.27	20.26	31.04	10.77
Daewoo	Cielo	95-97	21.17	19.91	22.48	2.57
Daewoo	Lanos	97-03	19.27	18.12	20.47	2.35
Daewoo	Matiz	99-04	27.57	24.26	31.15	6.90
Daewoo	Kalos	03-04	18.08	13.31	24.08	10.77
Ford	Festiva WD/WH/WF	94-01	22.68	21.96	23.41	1.45
Ford	Ka	99-02	19.37	15.77	23.57	7.80
Holden	Barina XC	01-05	18.39	16.44	20.51	4.07
Holden	Barina SB	95-00	21.16	20.20	22.16	1.96
Hyundai	Excel	86-90	23.30	21.89	24.78	2.89
Hyundai	Excel	90-94	21.89	21.08	22.71	1.63
Hyundai	Excel / Accent	95-00	21.06	20.53	21.60	1.07
Hyundai	Getz	02-05	18.27	15.78	21.06	5.28
Hyundai	Accent	00-05	17.91	16.69	19.19	2.51
Mitsubishi	Mirage / Colt	82-88	23.17	22.42	23.94	1.52
Kia	Rio	00-05	18.94	16.98	21.07	4.08
Ford / Mazda	Festiva WA / 121	87-90	23.03	22.05	24.04	1.99
Mazda	121 / Autozam Review	94-96	21.30	19.99	22.67	2.67
Mazda	121 Metro / Demio	97-02	19.56	18.02	21.20	3.18
Mazda	2	02-05	15.60	11.15	21.40	10.25
Nissan	Micra	95-97	21.59	19.01	24.42	5.41
Honda	CRX	87-91	22.32	18.21	27.06	8.85
Honda	CRX	92-98	16.15	11.67	21.93	10.26
Honda	Jazz	02-05	19.48	15.44	24.27	8.84
Honda	City	83-86	30.42	26.07	35.16	9.08

Make	Model of Car	Years of Manufacture	Pr(Risk) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Peugoet	205	87-94	16.99	12.79	22.23	9.45
Peugeot	206	99-05	15.45	12.35	19.15	6.80
Renault	Clio	02-05	21.24	14.55	29.91	15.36
Subaru	Sherpa / Fiori / 700 / Rex	89-92	35.22	32.04	38.53	6.48
Suzuki	Swift	82-85	26.73	21.47	32.76	11.29
Holden / Suzuki	Barina / Swift / Cultus	86-88	27.09	25.73	28.48	2.75
Holden / Suzuki	Barina / Swift / Cultus	89-99	22.41	21.77	23.07	1.30
Suzuki	Hatch / Alto	82-84	34.85	31.94	37.87	5.93
Suzuki	Alto	85-00	34.79	29.04	41.01	11.97
Suzuki	Ignis	00-02	25.61	20.86	31.02	10.16
Toyota	Starlet	96-99	19.85	18.67	21.09	2.41
Toyota	Echo	99-05	17.47	16.26	18.75	2.49
Volkswagen	Polo	96-00	18.07	14.96	21.66	6.70
<b>Small Cars</b>			18.74	18.55	18.92	0.37
Alfa Romeo	33	83-92	18.06	15.14	21.39	6.25
Alfa Romeo	75	86-92	17.22	12.27	23.65	11.38
Alfa Romeo	GTV	82-84	15.27	9.85	22.91	13.06
Alfa Romeo	Sprint	82-88	20.25	13.75	28.78	15.03
Alfa Romeo	Alfasud	82-84	20.74	14.03	29.57	15.54
Audi	A4	95-01	12.30	9.89	15.19	5.30
Audi	A3/S3	97-04	13.98	10.52	18.34	7.82
Audi	A4	01-05	12.10	9.11	15.90	6.79
Chrysler	Neon	96-99	14.85	11.96	18.30	6.34
Daihatsu	Applause	89-99	20.33	18.99	21.74	2.75
Daewoo	Nubira	97-03	16.28	14.92	17.75	2.83
Ford	Laser	91-94	19.26	18.61	19.93	1.32
Ford	Laser	95-97	17.93	16.82	19.10	2.28
Ford	Capri	89-94	23.96	21.93	26.11	4.18
Ford	Focus LR	02-05	16.83	14.08	19.98	5.90
Fiat	Regata	84-88	15.26	11.03	20.73	9.70
Holden	Gemini	82-84	22.15	21.12	23.22	2.10
Holden	Gemini RB	86-87	24.69	22.26	27.30	5.04
Holden	Astra TR	96-98	15.37	13.38	17.60	4.22
Holden	Astra TS	98-05	15.40	14.53	16.31	1.78
Hyundai	Elantra	00-05	16.51	14.54	18.69	4.14
Hyundai	S Coupe	90-96	21.82	19.72	24.08	4.36
Hyundai	Lantra	91-95	19.30	17.77	20.93	3.16
Hyundai	Lantra	96-00	17.09	15.99	18.24	2.25
Hyundai	Coupe	96-00	17.24	14.85	19.93	5.07
Mitsubishi	Lancer / Mirage CA	89-90	18.00	16.98	19.07	2.09
Mitsubishi	Lancer / Mirage CB	91-92	20.77	18.40	23.37	4.97
Mitsubishi	Lancer / Mirage CC	93-95	18.43	17.54	19.36	1.82
Mitsubishi	Lancer / Mirage CE	96-03	19.13	18.51	19.76	1.26
Mitsubishi	Cordia	83-87	22.30	20.28	24.45	4.17
Mitsubishi	Lancer CH	03-05	18.04	14.96	21.59	6.63
Kia	Spectra	01-04	17.86	13.03	23.98	10.95
Ford / Mazda	Laser / 323 / Familia	82-88	22.61	22.17	23.07	0.90
Mazda	323 / Familia / Lantis	90-93	18.21	17.02	19.47	2.46
Mazda	323 / Familia / Lantis	95-98	18.06	16.94	19.23	2.29
Ford / Mazda	Laser / 323	99-03	16.68	15.64	17.77	2.13
Mazda	MX5 / Eunos Roadster	89-97	19.97	16.62	23.81	7.20
Mazda	MX5 / Eunos Roadster	98-05	17.85	14.09	22.34	8.25

Make	Model of Car	Years of Manufacture	Pr(Risk) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Mazda	Eunos 30X / Presso / MX-3 / Autozam AZ-3	90-97	17.58	14.33	21.38	7.05
Mazda	3	03-05	17.08	14.16	20.46	6.30
Mercedes Benz	A-Class W168	98-05	16.34	12.14	21.65	9.50
Holden / Nissan	Astra / Pulsar / Langley	84-86	22.69	21.85	23.55	1.70
Holden / Nissan	Astra / Pulsar / Vector / Sentra	88-90	19.67	18.98	20.37	1.39
Nissan	Pulsar / Vector / Sentra	92-95	16.90	16.00	17.83	1.82
Nissan	Pulsar / Vector / Sentra	96-99	18.70	17.86	19.58	1.72
Nissan	Stanza	82-83	20.66	17.31	24.46	7.15
Nissan	Gazelle / Silvia	84-86	20.33	16.50	24.78	8.28
Nissan	Exa	83-86	27.73	23.76	32.09	8.33
Nissan	Exa	87-91	18.14	13.72	23.60	9.89
Nissan	NX/NX-R	91-96	20.34	17.67	23.31	5.64
Nissan	Pulsar	00-05	17.33	16.21	18.52	2.31
Honda	Civic	82-83	21.30	18.44	24.47	6.03
Honda	Civic / Ballade / Shuttle	84-87	21.93	20.37	23.58	3.22
Honda	Civic / Shuttle	88-91	19.48	18.31	20.72	2.41
Honda	Civic	92-95	18.16	17.06	19.32	2.26
Honda	Civic	96-00	17.42	16.32	18.57	2.25
Honda	Civic	01-05	13.49	11.29	16.03	4.74
Honda	Integra	86-88	19.10	16.11	22.50	6.39
Honda	Integra	90-92	17.10	14.35	20.25	5.90
Honda	Integra	93-01	14.66	12.49	17.15	4.66
Honda	Concerto	89-93	17.00	14.08	20.37	6.29
Peugeot	306	94-01	15.08	13.11	17.28	4.17
Peugeot	307	01-05	11.03	7.64	15.67	8.02
Proton	Wira	95-96	18.87	16.81	21.13	4.32
Renault	19	91-96	20.68	16.14	26.10	9.96
Rover	Quintet	82-86	22.20	17.52	27.71	10.20
MG	MGF / MG TF	99-05	11.85	8.11	16.99	8.88
Subaru	Impreza	93-00	17.65	16.48	18.87	2.39
Subaru	Impreza	01-05	13.13	11.19	15.35	4.16
Suzuki	Baleno / Cultus Crescent	95-02	18.84	17.04	20.79	3.75
Toyota	Corolla	82-84	21.89	21.07	22.74	1.67
Toyota	Corolla	86-88	20.41	19.79	21.04	1.25
Toyota / Holden	Corolla / Nova	89-93	18.77	18.28	19.26	0.99
Toyota / Holden	Corolla / Nova	94-97	17.92	17.34	18.52	1.18
Toyota	Corolla	98-01	16.47	15.53	17.45	1.93
Toyota	Corolla	02-05	15.89	14.76	17.09	2.33
Toyota	Tercel	83-88	20.37	17.08	24.11	7.03
Toyota	MR2	87-90	23.41	18.26	29.49	11.23
Toyota	MR2	91-00	17.50	12.23	24.42	12.20
Toyota	Paseo / Cynos	91-99	18.74	16.83	20.81	3.98
Toyota	Corolla 4WD Wagon	92-96	12.82	10.10	16.14	6.04
Volvo	300 Series	84-88	15.16	10.51	21.36	10.85
Volvo	S40/V40	97-04	13.60	11.12	16.54	5.42
Volkswagen	Golf	82-94	19.23	14.25	25.43	11.18
Volkswagen	Golf	95-98	14.95	12.88	17.27	4.39
Volkswagen	Golf / Bora	99-04	13.55	11.80	15.52	3.72
Volkswagen	New Beetle	00-05	15.36	10.01	22.85	12.83

**LOGISTIC REGRESSION ESTIMATES OF  
CRASHWORTHINESS INJURY SEVERITY BY MODEL AND MARKET  
GROUP**



## CRASHWORTHINESS INJURY SEVERITY RATINGS

New South Wales Data (1987-2005), South Australia Data (1995-2005),  
Queensland and Western Australia Data (1991-2005)

Make	Model of Car	Years of Manufacture	Pr(Severity) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
ALL VEHICLE AVERAGE			20.19			
<b>Compact Four Wheel Drive Vehicles</b>			18.82	17.71	19.99	2.29
Daihatsu	Feroza / Rocky	89-97	24.05	18.51	30.63	12.12
Daihatsu	Rocky / Rugger	85-98	27.74	21.11	35.51	14.40
Daihatsu	Terios	97-05	18.84	13.36	25.89	12.53
Holden	Cruze	02-05	20.00	11.23	33.08	21.84
Kia	Sportage	98-03	13.73	7.16	24.72	17.56
Ford / Mazda	Escape / Tribute	01-05	19.56	11.60	31.07	19.48
Nissan	X-Trail	01-05	24.11	15.43	35.62	20.19
Lada	Niva	84-99	20.54	13.23	30.49	17.26
Honda	CR-V	97-01	15.31	10.90	21.09	10.19
Honda	CR-V	02-05	14.34	7.57	25.48	17.91
Honda	HR-V	99-02	28.49	16.88	43.88	27.00
Landrover	Freelander	98-05	40.86	21.84	63.08	41.24
Subaru	Forester	97-02	17.43	12.72	23.42	10.69
Subaru	Forester	02-05	7.16	2.93	16.49	13.56
Suzuki	Vitara / Escudo	88-98	20.67	17.71	23.98	6.27
Suzuki	Grand Vitara	99-05	18.75	11.28	29.52	18.24
Holden / Suzuki	Drover / Sierra / Samurai / SJ410 / SJ413	82-99	20.31	17.90	22.97	5.07
Suzuki	Jimny	98-05	16.66	8.67	29.62	20.95
Toyota	RAV4	94-00	18.30	14.59	22.70	8.11
Toyota	RAV4	01-05	21.23	15.14	28.92	13.78
<b>Medium Four Wheel Drive Vehicles</b>			19.22	17.83	20.69	2.86
Daewoo / Ssangong	Musso	98-02	24.10	11.25	44.31	33.06
Holden / Isuzu	Jackaroo / Bighorn	82-91	14.66	10.81	19.57	8.77
Holden / Isuzu	Jackaroo / Bighorn	92-97	18.33	12.74	25.67	12.93
Holden / Isuzu	Jackaroo / Bighorn	98-02	19.69	12.27	30.04	17.77
Holden	Frontera / Mu	95-03	19.28	9.67	34.76	25.09
Hyundai	Santa Fe	00-05	25.13	11.14	47.35	36.21
Mitsubishi	Pajero	82-90	24.42	20.63	28.65	8.02
Mitsubishi	Pajero	92-99	20.82	17.21	24.96	7.75
Mitsubishi	Pajero NM / NP	00-05	19.99	11.48	32.49	21.02
Mitsubishi	Challenger	98-05	22.65	13.34	35.79	22.45
Jeep	Cherokee XJ	96-00	20.62	15.12	27.48	12.35
Jeep	Wrangler	96-04	28.78	17.00	44.37	27.37
Land Rover	Defender	92-05	22.61	13.47	35.41	21.95
Land Rover	Discovery	91-02	18.19	12.09	26.43	14.34
Nissan	Pathfinder / Terrano	88-94	20.29	15.87	25.57	9.69
Nissan	Pathfinder / Terrano / Regulus	95-05	14.59	9.02	22.74	13.72
Toyota	Landcruiser Prado	96-03	16.94	8.73	30.30	21.57
Toyota	Landcruiser Prado	03-05	18.34	8.34	35.68	27.35

Make	Model of Car	Years of Manufacture	Pr(Severity) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
<b>Large Four Wheel Drive Vehicles</b>			20.97	19.96	22.02	2.05
Ford	Bronco	82-87	33.06	17.52	53.46	35.94
Ford	Explorer	00-01	23.80	16.01	33.85	17.85
Ford	Explorer	01-05	8.07	1.96	27.81	25.85
Jeep	Grand Cherokee ZG	96-99	27.75	14.94	45.65	30.71
Jeep	Grand Cherokee WJ/WG	99-05	22.42	9.79	43.51	33.72
Mercedes Benz	M-Class W163	98-05	16.74	5.49	41.04	35.55
Nissan	Patrol / Safari	82-87	21.35	16.46	27.20	10.74
Nissan / Ford	Patrol / Maverick / Safari	88-97	20.56	18.09	23.28	5.19
Nissan	Patrol / Safari	98-04	20.75	16.37	25.94	9.57
Land Rover	Range Rover	82-94	19.62	14.49	26.02	11.53
Land Rover	Range Rover	95-02	11.80	4.30	28.50	24.19
Toyota	Landcruiser	82-89	25.25	22.84	27.84	5.00
Toyota	Landcruiser	90-97	23.22	21.05	25.55	4.51
Toyota	Landcruiser	98-05	19.31	16.35	22.66	6.31
<b>Commercial Vehicles- Vans</b>			20.53	19.46	21.65	2.18
Daihatsu	Handivan	82-90	23.31	18.33	29.15	10.82
Daihatsu	Hi-Jet	82-90	28.22	19.23	39.35	20.12
Daihatsu	Handivan / Cuore	99-03	17.95	9.27	31.89	22.62
Ford	Falcon Panel Van	82-95	19.48	16.21	23.23	7.03
Ford	Falcon Panel Van	96-99	13.57	7.11	24.34	17.23
Ford	Transit	95-00	21.32	14.47	30.27	15.81
Ford	Transit	01-05	7.67	2.46	21.52	19.07
Holden	Shuttle / WFR Van	82-87	26.33	18.52	35.98	17.46
Kia	Pregio	02-05	13.70	5.05	32.15	27.11
Mercedes Benz	MB100 / MB140	99-04	16.11	5.21	40.15	34.94
Mercedes Benz	Vito / Viano	99-05	30.98	15.42	52.48	37.06
Mercedes Benz	Sprinter	98-04	19.97	10.05	35.79	25.74
Honda	Acty	83-86	21.84	13.39	33.56	20.16
Holden / Suzuki	Scurry / Carry	82-00	28.38	21.92	35.88	13.96
Toyota	Hiace/Liteace	82-86	23.68	21.11	26.46	5.35
Toyota	Hiace/Liteace	87-89	21.64	18.37	25.30	6.92
Toyota	Hiace/Liteace	90-95	23.93	21.08	27.03	5.96
Toyota	Hiace/Liteace	96-04	20.31	16.62	24.57	7.95
Volkswagen	Caravelle / Transporter	88-94	19.84	8.85	38.69	29.84
Volkswagen	Caravelle / Transporter	95-04	10.14	5.26	18.67	13.41
<b>Commercial Vehicles- Utes</b>			20.78	20.13	21.44	1.30
Ford / Nissan	Falcon Ute / XFN Ute	82-95	22.75	20.63	25.02	4.39
Ford	Falcon Ute	96-99	19.37	15.46	23.98	8.52
Ford	Falcon Ute AU	00-02	19.13	14.54	24.76	10.23
Ford	Falcon Ute BA/BF	03-05	17.37	11.01	26.32	15.30
Ford	Ford F-Series	82-92	17.50	11.71	25.35	13.65
Holden	Commodore Ute VG/VP	90-93	24.14	19.47	29.51	10.04
Holden / Isuzu	Rodeo / Pickup	82-85	22.09	16.01	29.68	13.68
Holden / Isuzu	Rodeo / Pickup	86-88	12.56	6.55	22.74	16.19
Holden / Isuzu	Rodeo / Pickup	89-95	23.21	20.59	26.06	5.47
Holden	Rodeo	96-98	19.64	16.14	23.68	7.54

Make	Model of Car	Years of Manufacture	Pr(Severity) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Holden	Rodeo	99-02	18.38	14.72	22.71	7.99
Holden	WB Series	82-85	31.02	25.54	37.09	11.54
Holden	Commodore Ute VR/VS	94-00	23.33	20.85	26.00	5.14
Holden	Commodore VU Ute	00-02	26.52	20.52	33.54	13.02
Holden	Commodore VY/VZ Ute	02-05	17.95	12.96	24.33	11.37
Holden	Rodeo	03-04	16.00	9.88	24.87	14.99
Mitsubishi	Triton MK	96-05	20.35	12.38	31.61	19.23
Kia	Ceres	92-00	27.74	20.82	35.91	15.09
Ford / Mazda	Courier / B-Series / Bounty	98-02	22.58	17.40	28.77	11.37
Ford / Mazda	Courier / Bravo / Bounty	03-05	26.20	15.12	41.45	26.34
Nissan	720 Ute	82-85	20.53	16.35	25.46	9.12
Nissan	Navara	86-91	22.64	19.62	25.98	6.36
Nissan	Navara	92-96	18.84	14.75	23.74	8.99
Nissan	Navara	97-05	18.36	12.99	25.29	12.29
Subaru	Brumby	82-92	27.80	23.78	32.22	8.44
Suzuki	Mighty Boy	85-88	24.48	18.36	31.84	13.48
Toyota	4Runner/Hilux	82-85	22.12	19.69	24.76	5.06
Toyota	4Runner/Hilux	86-88	22.71	20.20	25.44	5.24
Toyota	4Runner/Hilux	89-97	22.47	21.02	23.99	2.98
Toyota	Hilux	98-02	18.71	16.00	21.76	5.76
Toyota	Hilux	03-04	20.52	13.03	30.79	17.76
<b>Large Cars</b>			19.81	19.43	20.19	0.76
BMW	7 Series E23	82-88	18.25	8.75	34.20	25.45
BMW	7 Series E32	89-94	22.55	11.87	38.63	26.76
BMW	7 Series E38	95-01	9.70	2.32	32.74	30.42
Ford	Falcon XE/XF	82-88	22.65	21.69	23.65	1.96
Ford	Fairlane Z & LTD F	82-87	22.10	19.71	24.68	4.97
Ford	Falcon EA / Falcon EB Series I	88-Mar 92	21.07	20.02	22.17	2.15
Ford	Falcon EB Series II / Falcon ED	Apr 92-94	21.03	19.52	22.63	3.11
Ford	Fairlane N & LTD D	88-94	20.92	18.16	23.98	5.82
Ford	Fairlane N & LTD D	95-98	20.78	16.10	26.39	10.29
Ford	Fairlane & LTD AU	99-02	17.09	10.24	27.13	16.88
Ford	Falcon EF/EL	94-98	19.71	18.61	20.86	2.25
Ford	Falcon AU	98-02	18.29	16.71	19.98	3.26
Ford	Taurus	96-98	18.27	10.99	28.79	17.80
Ford	Falcon BA/BF	02-05	15.82	12.65	19.60	6.95
Holden / Toyota	Commodore VN/VP / Lexcen	89-93	22.63	21.66	23.63	1.96
Holden	Statesman/Caprice WB	82-85	38.08	24.94	53.22	28.27
Holden	Stateman/Caprice VQ	90-93	27.02	20.18	35.16	14.98
Holden	Stateman/Caprice VR/VS	94-98	21.64	18.17	25.56	7.40
Holden / Toyota	Commodore VR/VS / Lexcen	93-97	19.72	18.70	20.77	2.07
Holden	Commodore VT/VX	97-02	18.24	17.04	19.51	2.47
Holden	Statesman/Caprice WH	99-03	17.92	10.94	27.95	17.01
Holden	Commodore VY/VZ	02-05	14.96	12.40	17.94	5.54
Holden	Monaro	01-05	21.41	12.05	35.14	23.09
Holden	Statesman/Caprice WK/WL	03-05	16.73	5.35	41.66	36.32
Holden	Commodore VB-VL	82-88	23.69	22.69	24.73	2.04
Hyundai	Sonata	98-01	21.56	14.25	31.24	16.99
Hyundai	Sonata	89-97	19.51	16.39	23.07	6.69
Hyundai	Grandeaur / XG	99-00	10.91	2.73	34.80	32.06
Mitsubishi	Magna TM/TN/TP / Sigma / V3000	85-90	22.75	21.49	24.07	2.58

Make	Model of Car	Years of Manufacture	Pr(Severity) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Mitsubishi	Magna TE/TF/TH/TJ / Verada KE/KF/KH/KJ / Diamante	96-03	19.32	17.54	21.24	3.70
Mitsubishi	Magna TR/TS / Verada KR/KS / V3000 / Diamante	91-96	19.43	18.10	20.85	2.75
Mitsubishi	Magna TL/TW / Verada KL/KW	03-05	10.16	3.33	27.07	23.74
Jaguar	XJ6	82-86	28.81	16.92	44.58	27.66
Jaguar	XJ6	87-94	15.46	8.32	26.93	18.61
Mazda	929 / Luce	82-90	22.50	19.50	25.81	6.31
Mazda	929 / Sentia / Efini MS-9	92-96	14.37	6.41	29.11	22.69
Mercedes Benz	S-Class W126	82-92	22.91	15.31	32.83	17.53
Nissan	Skyline	83-88	22.49	20.16	24.99	4.83
Nissan	300ZX / Fairlady Z	90-95	19.27	13.15	27.33	14.18
Nissan	Maxima	90-94	19.64	14.95	25.38	10.44
Nissan	Maxima / Cefiro	95-99	16.91	12.30	22.79	10.49
Nissan	Maxima	00-02	11.37	5.40	22.39	16.99
Honda	Legend	86-95	20.37	14.56	27.74	13.18
Rover	3500	82-87	8.53	2.75	23.50	20.75
Holden / Toyota	Apollo JM/JP / Camry / Sceptor	93-97	21.28	19.86	22.77	2.92
Toyota	Camry	98-02	19.20	17.17	21.41	4.24
Toyota	Crown / Cressida / Mark II	82-85	22.90	19.31	26.94	7.63
Toyota	Crown / Cressida / Mark II	86-88	26.99	19.78	35.67	15.89
Toyota	Cressida / Mark II	89-93	19.60	15.43	24.56	9.12
Toyota	Supra	82-90	28.50	20.23	38.52	18.29
Lexus	ES300 / Windom	92-01	22.97	15.42	32.80	17.38
Lexus	LS400 / Celsior	90-00	14.76	4.69	37.85	33.16
Toyota	Avalon	00-05	20.99	15.67	27.54	11.87
Toyota	Camry	02-05	15.06	10.90	20.44	9.54
Volvo	850/S70/V70/C70	92-04	19.17	14.13	25.48	11.35
Volvo	700/900 Series	84-92	16.02	12.10	20.92	8.82
Volvo	960/S90/V90	90-98	13.45	4.21	35.48	31.27
<b>Medium Cars</b>			19.76	19.31	20.22	0.91
Alfa Romeo	156	99-05	16.55	5.45	40.56	35.12
BMW	Z3 E36	97-03	30.20	13.70	54.13	40.43
BMW	3 Series E30	82-91	19.31	16.23	22.81	6.57
BMW	3 Series E36	92-98	18.50	15.51	21.92	6.41
BMW	3 Series E46	99-04	15.28	10.71	21.34	10.64
BMW	5 Series E28	82-88	22.22	15.46	30.86	15.41
BMW	5 Series E34	89-95	21.24	14.77	29.55	14.78
BMW	5 Series E39	96-03	17.02	9.40	28.85	19.45
Daewoo	Espero	95-97	26.54	19.77	34.63	14.86
Daewoo	Leganza	97-02	21.64	13.60	32.64	19.03
Ford	Mondeo	95-01	15.58	12.14	19.77	7.63
Ford	Probe	94-98	15.27	6.98	30.22	23.24
Holden	Calibra	94-97	16.47	10.04	25.84	15.80
Holden	Camira	82-89	21.82	20.45	23.26	2.82
Holden	Vectra	97-03	15.40	12.27	19.17	6.90
Mitsubishi	Sigma / Galant / Sapporo / Lambda	82-84	21.84	20.29	23.48	3.19
Mitsubishi	Starion	82-87	38.24	26.83	51.12	24.28
Mitsubishi	Galant	95-96	21.64	17.48	26.47	8.99
Ford / Mazda	Telstar / 626 / MX6 / Capella	83-86	20.57	19.00	22.23	3.22
Ford / Mazda	Telstar / 626 / MX6 / Capella	88-91	19.82	17.82	22.00	4.18

Make	Model of Car	Years of Manufacture	Pr(Severity) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Ford / Mazda	Telstar / 626 / MX6 / Capella / Cronos	92-97	22.42	19.94	25.12	5.17
Mazda	626	98-02	20.25	15.80	25.57	9.77
Mazda	RX7	82-85	23.27	17.02	30.95	13.93
Mazda	RX7	86-91	22.62	15.47	31.83	16.35
Mazda	Eunos 500	93-99	15.92	7.73	29.97	22.24
Mazda	Eunos 800	94-00	18.26	5.90	44.32	38.42
Mercedes Benz	C-Class W201	87-93	20.69	14.38	28.84	14.46
Mercedes Benz	C-Class W202	95-00	17.71	11.99	25.38	13.40
Mercedes Benz	E-Class W123	82-85	21.14	11.50	35.59	24.09
Mercedes Benz	E-Class W124	86-94	16.93	11.51	24.22	12.71
Mercedes Benz	E-Class W210	96-02	22.26	13.63	34.21	20.59
Mercedes Benz	C-Class W203	00-05	15.16	5.09	37.33	32.24
Nissan	Pintara	86-88	21.99	19.42	24.80	5.39
Nissan / Ford	Pintara / Corsair / Bluebird	89-92	22.61	20.70	24.65	3.94
Nissan	Bluebird	82-86	24.13	22.50	25.84	3.34
Nissan	280ZX	82-84	31.53	15.92	52.82	36.90
Nissan	Bluebird	93-97	22.14	18.35	26.45	8.11
Nissan	200SX / Silvia	94-02	23.36	16.68	31.68	15.00
Honda	Accord Euro	03-05	14.92	5.65	33.95	28.31
Honda	Accord	82-85	22.88	20.33	25.65	5.32
Honda	Accord	86-90	19.70	17.05	22.64	5.59
Honda	Accord	91-93	21.37	16.89	26.65	9.76
Honda	Accord	94-98	20.07	16.33	24.41	8.08
Honda	Accord	99-02	14.16	7.45	25.26	17.81
Honda	Prelude	82-82	17.60	8.07	34.22	26.15
Honda	Prelude	83-91	22.48	20.13	25.03	4.90
Honda	Prelude	92-96	25.15	19.98	31.14	11.17
Honda	Prelude	97-02	13.35	7.00	23.95	16.95
Peugeot	405	89-97	19.15	13.53	26.39	12.87
Peugeot	505	82-93	20.80	14.49	28.93	14.44
Peugeot	406	96-04	13.28	4.97	30.95	25.98
Porsche	944	82-91	33.07	15.44	57.21	41.77
Renault	Feugo	82-87	20.50	12.62	31.54	18.92
Saab	900 Series	82-92	21.27	15.76	28.07	12.31
Saab	900/9-3	94-02	16.85	10.83	25.27	14.44
Saab	9000	86-97	10.50	6.14	17.37	11.22
Saab	9-5	98-05	11.28	2.89	35.18	32.29
Subaru	1800 / Leone / Omega / 4WD Wagon	82-93	22.66	20.62	24.85	4.24
Subaru	Liberty / Legacy	89-93	20.06	17.78	22.54	4.75
Subaru	Liberty / Legacy / Outback	94-98	19.94	16.11	24.40	8.29
Subaru	Liberty / Legacy / Outback	99-03	18.27	13.48	24.29	10.81
Subaru	Liberty / Legacy / Outback	03-05	35.03	17.38	58.03	40.65
Toyota	Corona	82-88	22.05	20.59	23.59	3.00
Toyota	Camry	83-86	22.83	19.74	26.24	6.50
Holden / Toyota	Apollo JK/JL / Camry / Vista	88-92	21.50	20.24	22.81	2.57
Toyota	Celica	81-85	19.17	16.11	22.66	6.55
Toyota	Celica	86-89	22.23	18.20	26.85	8.65
Toyota	Celica	90-93	22.23	18.22	26.82	8.60
Toyota	Celica	94-99	20.63	15.44	26.99	11.55
Toyota	Celica	00-05	25.13	13.38	42.18	28.81
Lexus	IS200 / IS300	99-04	7.01	1.71	24.66	22.96
Volvo	200 Series	82-93	21.89	17.92	26.46	8.53

Make	Model of Car	Years of Manufacture	Pr(Severity) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Volkswagen	Passat	98-05	4.00	0.56	23.42	22.86
<b>People Movers</b>			20.81	19.68	21.99	2.31
Chrysler	Voyager	97-05	10.36	3.38	27.65	24.27
Mitsubishi	Nimbus / Chariot / Spacewagon	85-91	19.91	14.84	26.19	11.36
Mitsubishi	Nimbus / Chariot	92-98	17.08	11.59	24.43	12.84
Mitsubishi	Nimbus	99-03	23.64	9.06	49.01	39.94
Mitsubishi	Starwagon / L300	83-86	27.28	24.04	30.78	6.74
Mitsubishi	Starwagon / Delica Starwagon	87-93	21.79	19.30	24.51	5.21
Mitsubishi	Starwagon / Delica Spacegear	95-98	20.67	15.47	27.06	11.59
Mitsubishi	Starwagon / Delica Spacegear	98-03	25.16	17.32	35.04	17.71
Kia	Carnival	99-05	13.02	5.88	26.41	20.53
Mazda	MPV	94-99	5.07	0.70	28.89	28.20
Nissan	Prairie	84-86	21.30	14.78	29.70	14.92
Nissan	Serena	92-95	17.15	9.39	29.23	19.84
Honda	Odyssey	95-00	16.54	9.06	28.27	19.22
Toyota	Tarago	83-89	23.73	20.99	26.70	5.71
Toyota	Tarago / Previa / Estima	91-99	21.25	17.04	26.18	9.14
Toyota	Tarago / Previa / Estima	00-05	23.27	12.97	38.15	25.18
Toyota	Spacia	93-00	9.01	2.15	30.82	28.67
<b>Light Cars</b>			21.35	20.83	21.89	1.06
Daihatsu	Charade	82-86	26.71	23.48	30.20	6.72
Daihatsu	Charade	88-92	24.38	22.11	26.81	4.70
Daihatsu	Charade	93-00	24.59	21.88	27.51	5.64
Daihatsu	Pyzar	97-01	17.90	9.10	32.20	23.10
Daihatsu	Sirion / Storia	98-04	20.61	15.39	27.03	11.64
Daihatsu	Mira	90-96	28.18	23.10	33.88	10.78
Daewoo	1.5i	94-95	21.62	11.25	37.49	26.24
Daewoo	Cielo	95-97	18.71	15.98	21.79	5.82
Daewoo	Lanos	97-03	24.51	21.34	27.99	6.66
Daewoo	Matiz	99-04	15.76	10.92	22.20	11.28
Daewoo	Kalos	03-04	37.58	21.33	57.21	35.88
Ford	Festiva WD/WH/WF	94-01	23.72	21.98	25.56	3.58
Ford	Ka	99-02	18.87	11.15	30.14	18.99
Holden	Barina XC	01-05	15.50	11.01	21.38	10.37
Holden	Barina SB	95-00	20.31	17.96	22.87	4.90
Hyundai	Excel	86-90	24.66	21.90	27.66	5.76
Hyundai	Excel	90-94	22.87	21.00	24.87	3.87
Hyundai	Excel / Accent	95-00	20.87	19.54	22.25	2.71
Hyundai	Getz	02-05	34.05	24.74	44.78	20.04
Hyundai	Accent	00-05	22.62	18.81	26.94	8.13
Mitsubishi	Mirage / Colt	82-88	22.92	21.37	24.55	3.18
Kia	Rio	00-05	20.81	15.76	26.97	11.21
Ford / Mazda	Festiva WA / 121	87-90	23.58	21.39	25.92	4.53
Mazda	121 / Autozam Review	94-96	19.88	16.88	23.27	6.40
Mazda	121 Metro / Demio	97-02	19.51	15.76	23.91	8.15
Mazda	2	02-05	26.45	11.29	50.40	39.11
Nissan	Micra	95-97	27.61	21.19	35.11	13.92
Honda	CRX	87-91	26.63	21.77	32.12	10.36
Honda	CRX	92-98	27.06	17.25	39.77	22.52

Make	Model of Car	Years of Manufacture	Pr(Severity) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Honda	Jazz	02-05	15.14	7.64	27.79	20.15
Honda	City	83-86	21.96	18.61	25.71	7.09
Peugoet	205	87-94	20.90	12.24	33.37	21.13
Peugeot	206	99-05	36.54	23.08	52.49	29.42
Renault	Clio	02-05	18.87	6.25	44.79	38.53
Subaru	Sherpa / Fiori / 700 / Rex	89-92	22.95	18.54	28.06	9.53
Suzuki	Swift	82-85	27.80	17.98	40.35	22.37
Holden / Suzuki	Barina / Swift / Cultus	86-88	24.73	22.29	27.34	5.05
Holden / Suzuki	Barina / Swift / Cultus	89-99	22.84	21.29	24.46	3.16
Suzuki	Hatch / Alto	82-84	25.04	20.56	30.12	9.56
Suzuki	Alto	85-00	27.11	20.81	34.50	13.69
Suzuki	Ignis	00-02	17.35	10.13	28.10	17.97
Toyota	Starlet	96-99	23.03	19.99	26.38	6.39
Toyota	Echo	99-05	21.84	18.39	25.73	7.34
Volkswagen	Polo	96-00	15.80	8.40	27.72	19.32
<b>Small Cars</b>			20.00	19.59	20.43	0.84
Alfa Romeo	33	83-92	23.46	16.71	31.91	15.20
Alfa Romeo	75	86-92	18.60	7.23	40.10	32.87
Alfa Romeo	GTV	82-84	48.37	27.97	69.33	41.36
Alfa Romeo	Sprint	82-88	17.39	7.39	35.70	28.31
Alfa Romeo	Alfasud	82-84	27.96	12.99	50.23	37.23
Audi	A4	95-01	19.44	11.94	30.03	18.09
Audi	A3/S3	97-04	4.90	0.68	27.92	27.24
Audi	A4	01-05	13.84	4.52	35.31	30.79
Chrysler	Neon	96-99	20.07	11.20	33.33	22.12
Daihatsu	Applause	89-99	20.03	16.82	23.67	6.85
Daewoo	Nubira	97-03	19.76	15.90	24.28	8.38
Ford	Laser	91-94	20.52	19.00	22.13	3.13
Ford	Laser	95-97	22.40	19.39	25.72	6.33
Ford	Capri	89-94	21.48	17.30	26.35	9.05
Ford	Focus LR	02-05	20.40	13.31	29.96	16.65
Fiat	Regata	84-88	25.92	12.87	45.31	32.44
Holden	Gemini	82-84	22.15	20.10	24.35	4.24
Holden	Gemini RB	86-87	19.96	15.67	25.06	9.39
Holden	Astra TR	96-98	18.42	13.46	24.69	11.23
Holden	Astra TS	98-05	18.26	15.52	21.35	5.83
Hyundai	Elantra	00-05	24.10	17.23	32.63	15.41
Hyundai	S Coupe	90-96	21.13	16.41	26.78	10.37
Hyundai	Lantra	91-95	22.15	18.22	26.66	8.44
Hyundai	Lantra	96-00	21.05	17.88	24.63	6.75
Hyundai	Coupe	96-00	28.05	20.82	36.65	15.83
Mitsubishi	Lancer / Mirage CA	89-90	20.87	18.59	23.36	4.77
Mitsubishi	Lancer / Mirage CB	91-92	23.03	18.22	28.66	10.44
Mitsubishi	Lancer / Mirage CC	93-95	21.17	18.96	23.55	4.59
Mitsubishi	Lancer / Mirage CE	96-03	20.77	19.00	22.65	3.64
Mitsubishi	Cordia	83-87	24.34	21.00	28.03	7.03
Mitsubishi	Lancer CH	03-05	22.48	12.57	36.90	24.33
Kia	Spectra	01-04	13.98	5.71	30.34	24.63
Ford / Mazda	Laser / 323 / Familia	82-88	22.21	21.29	23.15	1.86
Mazda	323 / Familia / Lantis	90-93	20.10	17.88	22.51	4.63
Mazda	323 / Familia / Lantis	95-98	21.32	18.22	24.79	6.58

Make	Model of Car	Years of Manufacture	Pr(Severity) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Ford / Mazda	Laser / 323	99-03	18.58	15.60	21.98	6.38
Mazda	MX5 / Eunost Roadster	89-97	20.72	13.38	30.66	17.28
Mazda	MX5 / Eunost Roadster	98-05	14.42	6.04	30.65	24.61
Mazda	Eunos 30X / Presso / MX-3 / Autozam AZ-3	90-97	13.88	7.30	24.80	17.50
Mazda	3	03-05	13.40	6.77	24.78	18.01
Mercedes Benz	A-Class W168	98-05	21.68	9.13	43.28	34.16
Holden / Nissan	Astra / Pulsar / Langley	84-86	23.80	22.11	25.57	3.46
Holden / Nissan	Astra / Pulsar / Vector / Sentra	88-90	22.79	21.13	24.54	3.41
Nissan	Pulsar / Vector / Sentra	92-95	19.76	17.65	22.07	4.42
Nissan	Pulsar / Vector / Sentra	96-99	21.39	19.10	23.88	4.79
Nissan	Stanza	82-83	18.99	12.57	27.65	15.08
Nissan	Gazelle / Silvia	84-86	25.88	21.96	30.22	8.26
Nissan	Exa	83-86	25.77	18.92	34.05	15.14
Nissan	Exa	87-91	27.89	17.80	40.86	23.06
Nissan	NX/NX-R	91-96	28.37	21.67	36.20	14.53
Nissan	Pulsar	00-05	23.92	20.40	27.85	7.45
Honda	Civic	82-83	22.77	19.08	26.95	7.87
Honda	Civic / Ballade / Shuttle	84-87	24.69	22.13	27.44	5.31
Honda	Civic / Shuttle	88-91	21.91	19.60	24.40	4.80
Honda	Civic	92-95	19.82	17.33	22.57	5.24
Honda	Civic	96-00	18.71	15.65	22.20	6.54
Honda	Civic	01-05	19.88	13.10	29.01	15.91
Honda	Integra	86-88	22.24	18.10	27.02	8.93
Honda	Integra	90-92	15.95	11.24	22.15	10.91
Honda	Integra	93-01	18.07	12.64	25.16	12.52
Honda	Concerto	89-93	22.37	16.91	28.98	12.07
Peugeot	306	94-01	12.41	8.42	17.91	9.49
Peugeot	307	01-05	10.76	2.66	34.76	32.11
Proton	Wira	95-96	23.19	17.80	29.62	11.82
Renault	19	91-96	15.44	7.51	29.12	21.61
Rover	Quintet	82-86	21.45	13.71	31.93	18.22
MG	MGF / MG TF	99-05	21.80	9.06	43.82	34.75
Subaru	Impreza	93-00	23.84	20.66	27.33	6.67
Subaru	Impreza	01-05	21.63	14.62	30.78	16.16
Suzuki	Baleno / Cultus Crescent	95-02	19.12	14.47	24.83	10.36
Toyota	Corolla	82-84	21.88	20.28	23.57	3.29
Toyota	Corolla	86-88	21.85	20.42	23.34	2.92
Toyota / Holden	Corolla / Nova	89-93	21.51	20.28	22.79	2.51
Toyota / Holden	Corolla / Nova	94-97	20.32	18.76	21.98	3.22
Toyota	Corolla	98-01	16.69	14.14	19.60	5.47
Toyota	Corolla	02-05	20.05	16.55	24.08	7.53
Toyota	Tercel	83-88	23.62	16.77	32.18	15.40
Toyota	MR2	87-90	26.85	19.71	35.44	15.73
Toyota	MR2	91-00	17.18	9.86	28.24	18.38
Toyota	Paseo / Cynos	91-99	19.83	15.45	25.08	9.63
Toyota	Corolla 4WD Wagon	92-96	27.01	15.63	42.49	26.85
Volvo	300 Series	84-88	28.13	15.69	45.15	29.45
Volvo	S40/V40	97-04	18.54	10.72	30.13	19.41
Volkswagen	Golf	82-94	33.04	21.15	47.57	26.42
Volkswagen	Golf	95-98	18.85	12.08	28.20	16.12
Volkswagen	Golf / Bora	99-04	14.58	9.15	22.44	13.29
Volkswagen	New Beetle	00-05	12.24	3.07	38.04	34.97





**CRASHWORTHINESS RATINGS OF  
1982-2005 MODELS OF CARS INVOLVED IN  
CRASHES DURING 1987-2005  
with  
(1) 95 % CONFIDENCE LIMITS  
(2) 90 % CONFIDENCE LIMITS**



**CRASHWORTHINESS RATINGS  
(WITH 95% CONFIDENCE LIMITS)**

**New South Wales Data (1987-2005), South Australia Data (1995-2005),  
Queensland and Western Australia Data (1991-2005)**

<b>Make</b>	<b>Model of Car</b>	<b>Years of Manufacture</b>	<b>Serious injury rate per 100 drivers involved</b>	<b>Lower 95% Confidence Limit</b>	<b>Upper 95% Confidence Limit</b>	<b>Width of Confidence Interval</b>
<b>ALL MODEL AVERAGE</b>			3.31			
<b>Compact Four Wheel Drive Vehicles</b>			3.34	3.13	3.57	0.44
Daihatsu	Feroza / Rocky	89-97	4.40	3.31	5.84	2.53
Daihatsu	Rocky / Rugger	85-98	6.08	4.49	8.24	3.74
Daihatsu	Terios	97-05	4.27	2.98	6.12	3.14
Holden	Cruze	02-05	4.11	2.29	7.40	5.12
Kia	Sportage	98-03	2.03	1.05	3.92	2.87
Ford / Mazda	Escape / Tribute	01-05	2.47	1.44	4.23	2.79
Nissan	X-Trail	01-05	3.52	2.22	5.58	3.36
Lada	Niva	84-99	3.74	2.33	6.00	3.68
Honda	CR-V	97-01	1.93	1.36	2.75	1.40
Honda	CR-V	02-05	1.82	0.96	3.46	2.50
Honda	HR-V	99-02	3.78	2.19	6.53	4.34
Landrover	Freelander	98-05	5.76	2.96	11.21	8.26
Subaru	Forester	97-02	2.32	1.66	3.24	1.58
Subaru	Forester	02-05	1.05	0.43	2.56	2.14
Suzuki	Vitara / Escudo	88-98	4.09	3.46	4.83	1.36
Suzuki	Grand Vitara	99-05	2.67	1.57	4.54	2.97
Holden / Suzuki	Drover / Sierra / Samurai / SJ410 / SJ413	82-99	5.12	4.47	5.86	1.39
Suzuki	Jimny	98-05	3.75	1.92	7.34	5.42
Toyota	RAV4	94-00	2.64	2.07	3.36	1.29
Toyota	RAV4	01-05	2.93	2.06	4.16	2.10
<b>Medium Four Wheel Drive Vehicles</b>			2.46	2.26	2.68	0.41
Daewoo / Ssangong	Musso	98-02	2.56	1.14	5.72	4.58
Holden / Isuzu	Jackaroo / Bighorn	82-91	2.87	2.07	3.99	1.91
Holden / Isuzu	Jackaroo / Bighorn	92-97	2.52	1.69	3.76	2.07
Holden / Isuzu	Jackaroo / Bighorn	98-02	2.63	1.60	4.31	2.70
Holden	Frontera / Mu	95-03	2.90	1.44	5.86	4.42
Hyundai	Santa Fe	00-05	3.88	1.74	8.62	6.88
Mitsubishi	Pajero	82-90	4.08	3.36	4.94	1.58
Mitsubishi	Pajero	92-99	2.45	1.99	3.01	1.02
Mitsubishi	Pajero NM / NP	00-05	1.87	1.05	3.32	2.27
Mitsubishi	Challenger	98-05	2.85	1.62	5.02	3.40
Jeep	Cherokee XJ	96-00	2.61	1.86	3.66	1.80
Jeep	Wrangler	96-04	4.03	2.24	7.27	5.03
Land Rover	Defender	92-05	2.58	1.46	4.57	3.11
Land Rover	Discovery	91-02	1.96	1.27	3.03	1.76
Nissan	Pathfinder / Terrano	88-94	2.74	1.99	3.79	1.81
Nissan	Pathfinder / Terrano / Regulus	95-05	1.51	0.90	2.53	1.63

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Toyota	Landcruiser Prado	96-03	1.70	0.87	3.33	2.46
Toyota	Landcruiser Prado	03-05	1.29	0.57	2.90	2.33
<b>Large Four Wheel Drive Vehicles</b>			<b>2.56</b>	<b>2.42</b>	<b>2.71</b>	<b>0.29</b>
Ford	Bronco	82-87	5.03	2.55	9.92	7.37
Ford	Explorer	00-01	4.04	2.60	6.28	3.67
Ford	Explorer	01-05	0.68	0.16	2.92	2.76
Jeep	Grand Cherokee ZG	96-99	3.12	1.58	6.15	4.57
Jeep	Grand Cherokee WJ/WG	99-05	2.04	0.79	5.28	4.49
Mercedes Benz	M-Class W163	98-05	1.37	0.45	4.16	3.70
Nissan	Patrol / Safari	82-87	2.89	2.18	3.85	1.68
Nissan / Ford	Patrol / Maverick / Safari	88-97	2.39	2.07	2.75	0.68
Nissan	Patrol / Safari	98-04	2.10	1.62	2.72	1.11
Land Rover	Range Rover	82-94	2.53	1.79	3.57	1.78
Land Rover	Range Rover	95-02	1.59	0.55	4.59	4.04
Toyota	Landcruiser	82-89	3.87	3.45	4.33	0.88
Toyota	Landcruiser	90-97	2.79	2.49	3.11	0.62
Toyota	Landcruiser	98-05	2.29	1.91	2.76	0.85
<b>Commercial Vehicles- Vans</b>			<b>3.61</b>	<b>3.41</b>	<b>3.83</b>	<b>0.43</b>
Daihatsu	Handivan	82-90	7.75	6.03	9.98	3.95
Daihatsu	Hi-Jet	82-90	11.64	7.79	17.38	9.58
Daihatsu	Handivan / Cuore	99-03	5.04	2.59	9.79	7.20
Ford	Falcon Panel Van	82-95	3.19	2.62	3.88	1.26
Ford	Falcon Panel Van	96-99	1.81	0.93	3.52	2.59
Ford	Transit	95-00	2.90	1.93	4.36	2.43
Ford	Transit	01-05	0.83	0.26	2.65	2.39
Holden	Shuttle / WFR Van	82-87	5.90	4.06	8.57	4.51
Kia	Pregio	02-05	2.37	0.88	6.38	5.50
Mercedes Benz	MB100 / MB140	99-04	1.76	0.58	5.35	4.78
Mercedes Benz	Vito / Viano	99-05	2.77	1.36	5.64	4.28
Mercedes Benz	Sprinter	98-04	2.87	1.42	5.79	4.37
Honda	Acty	83-86	3.43	2.03	5.78	3.75
Holden / Suzuki	Scurry / Carry	82-00	9.38	7.11	12.38	5.27
Toyota	Hiace/Liteace	82-86	5.06	4.45	5.76	1.31
Toyota	Hiace/Liteace	87-89	4.37	3.64	5.25	1.61
Toyota	Hiace/Liteace	90-95	4.15	3.61	4.78	1.18
Toyota	Hiace/Liteace	96-04	3.01	2.44	3.71	1.28
Volkswagen	Caravelle / Transporter	88-94	2.65	1.19	5.91	4.73
Volkswagen	Caravelle / Transporter	95-04	1.55	0.80	2.99	2.19
<b>Commercial Vehicles- Utes</b>			<b>3.17</b>	<b>3.06</b>	<b>3.28</b>	<b>0.22</b>
Ford / Nissan	Falcon Ute / XFN Ute	82-95	3.52	3.16	3.92	0.76
Ford	Falcon Ute	96-99	2.83	2.22	3.60	1.38
Ford	Falcon Ute AU	00-02	2.36	1.76	3.16	1.40
Ford	Falcon Ute BA/BF	03-05	1.97	1.22	3.19	1.96
Ford	Ford F-Series	82-92	2.46	1.61	3.76	2.14
Holden	Commodore Ute VG/VP	90-93	3.79	3.00	4.79	1.79
Holden / Isuzu	Rodeo / Pickup	82-85	4.19	2.96	5.92	2.96

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Holden / Isuzu	Rodeo / Pickup	86-88	2.34	1.21	4.54	3.33
Holden / Isuzu	Rodeo / Pickup	89-95	3.77	3.30	4.29	0.99
Holden	Rodeo	96-98	3.03	2.45	3.74	1.29
Holden	Rodeo	99-02	2.77	2.19	3.51	1.32
Holden	WB Series	82-85	4.88	3.93	6.07	2.14
Holden	Commodore Ute VR/VS	94-00	3.45	3.04	3.90	0.85
Holden	Commodore VU Ute	00-02	3.27	2.47	4.33	1.86
Holden	Commodore VY/VZ Ute	02-05	2.26	1.60	3.19	1.59
Holden	Rodeo	03-04	1.75	1.07	2.88	1.81
Mitsubishi	Triton MK	96-05	2.62	1.57	4.36	2.78
Kia	Ceres	92-00	5.32	3.92	7.21	3.29
Ford / Mazda	Courier / B-Series / Bounty	98-02	2.98	2.24	3.97	1.73
Ford / Mazda	Courier / Bravo / Bounty	03-05	4.83	2.74	8.52	5.77
Nissan	720 Ute	82-85	3.79	2.97	4.85	1.89
Nissan	Navara	86-91	3.64	3.10	4.27	1.17
Nissan	Navara	92-96	2.72	2.08	3.55	1.46
Nissan	Navara	97-05	2.26	1.56	3.26	1.70
Subaru	Brumby	82-92	5.73	4.81	6.84	2.03
Suzuki	Mighty Boy	85-88	8.72	6.47	11.77	5.30
Toyota	4Runner/Hilux	82-85	4.05	3.56	4.61	1.04
Toyota	4Runner/Hilux	86-88	3.89	3.40	4.45	1.05
Toyota	4Runner/Hilux	89-97	3.59	3.33	3.87	0.54
Toyota	Hilux	98-02	2.68	2.26	3.17	0.91
Toyota	Hilux	03-04	2.52	1.56	4.07	2.50
<b>Large Cars</b>			3.05	2.98	3.11	0.13
BMW	7 Series E23	82-88	2.12	0.98	4.59	3.62
BMW	7 Series E32	89-94	3.32	1.66	6.63	4.97
BMW	7 Series E38	95-01	1.00	0.24	4.22	3.98
Ford	Falcon XE/XF	82-88	3.80	3.62	3.99	0.37
Ford	Fairlane Z & LTD F	82-87	3.63	3.20	4.12	0.92
Ford	Falcon EA / Falcon EB Series I	88-Mar 92	3.36	3.17	3.55	0.38
Ford	Falcon EB Series II / Falcon ED	Apr 92-94	3.07	2.82	3.33	0.50
Ford	Fairlane N & LTD D	88-94	2.79	2.38	3.27	0.88
Ford	Fairlane N & LTD D	95-98	2.72	2.07	3.59	1.53
Ford	Fairlane & LTD AU	99-02	2.35	1.40	3.96	2.56
Ford	Falcon EF/EL	94-98	2.88	2.71	3.07	0.36
Ford	Falcon AU	98-02	2.60	2.36	2.86	0.50
Ford	Taurus	96-98	2.77	1.63	4.72	3.09
Ford	Falcon BA/BF	02-05	2.10	1.67	2.66	0.99
Holden / Toyota	Commodore VN/VP / Lexcen	89-93	3.72	3.55	3.91	0.36
Holden	Statesman/Caprice WB	82-85	6.01	3.52	10.27	6.75
Holden	Stateman/Caprice VQ	90-93	3.92	2.81	5.46	2.65
Holden	Stateman/Caprice VR/VS	94-98	3.14	2.60	3.80	1.19
Holden / Toyota	Commodore VR/VS / Lexcen	93-97	2.99	2.82	3.16	0.34
Holden	Commodore VT/VX	97-02	2.73	2.53	2.93	0.40
Holden	Statesman/Caprice WH	99-03	2.17	1.31	3.59	2.28
Holden	Commodore VY/VZ	02-05	2.27	1.86	2.76	0.89
Holden	Monaro	01-05	2.95	1.62	5.36	3.75
Holden	Statesman/Caprice WK/WL	03-05	2.58	0.85	7.84	6.99
Holden	Commodore VB-VL	82-88	4.25	4.05	4.46	0.41

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Hyundai	Sonata	98-01	3.33	2.18	5.10	2.92
Hyundai	Sonata	89-97	3.28	2.73	3.96	1.23
Hyundai	Grandeaur / XG	99-00	1.37	0.36	5.26	4.91
Mitsubishi	Magna TM/TN/TP / Sigma / V3000	85-90	4.04	3.80	4.31	0.51
Mitsubishi	Magna TE/TF/TH/TJ / Verada KE/KF/KH/KJ / Diamante	96-03	2.82	2.55	3.13	0.58
Mitsubishi	Magna TR/TS / Verada KR/KS / V3000 / Diamante	91-96	3.04	2.81	3.28	0.47
Mitsubishi	Magna TL/TW / Verada KL/KW	03-05	1.40	0.47	4.18	3.72
Jaguar	XJ6	82-86	4.61	2.64	8.04	5.40
Jaguar	XJ6	87-94	1.89	0.99	3.59	2.61
Mazda	929 / Luce	82-90	4.10	3.50	4.81	1.31
Mazda	929 / Sentia / Efini MS-9	92-96	2.40	1.06	5.47	4.41
Mercedes Benz	S-Class W126	82-92	3.08	2.03	4.70	2.67
Nissan	Skyline	83-88	3.92	3.46	4.43	0.97
Nissan	300ZX / Fairlady Z	90-95	3.45	2.28	5.22	2.94
Nissan	Maxima	90-94	2.93	2.14	4.01	1.87
Nissan	Maxima / Cefiro	95-99	2.69	1.91	3.78	1.87
Nissan	Maxima	00-02	1.65	0.77	3.55	2.78
Honda	Legend	86-95	2.57	1.77	3.73	1.96
Rover	3500	82-87	1.60	0.51	5.00	4.49
Holden / Toyota	Apollo JM/JP / Camry / Sceptor	93-97	3.55	3.30	3.83	0.53
Toyota	Camry	98-02	2.82	2.51	3.18	0.67
Toyota	Crown / Cressida / Mark II	82-85	4.11	3.39	4.98	1.58
Toyota	Crown / Cressida / Mark II	86-88	3.76	2.69	5.27	2.59
Toyota	Cressida / Mark II	89-93	2.63	2.03	3.39	1.36
Toyota	Supra	82-90	5.45	3.75	7.92	4.17
Lexus	ES300 / Windom	92-01	3.39	2.20	5.23	3.03
Lexus	LS400 / Celsior	90-00	1.80	0.57	5.62	5.05
Toyota	Avalon	00-05	2.74	2.01	3.73	1.72
Toyota	Camry	02-05	2.18	1.56	3.04	1.48
Volvo	850/S70/V70/C70	92-04	2.64	1.92	3.63	1.71
Volvo	700/900 Series	84-92	2.33	1.73	3.12	1.39
Volvo	960/S90/V90	90-98	2.02	0.63	6.53	5.90
<b>Medium Cars</b>			<b>3.30</b>	<b>3.22</b>	<b>3.39</b>	<b>0.17</b>
Alfa Romeo	156	99-05	2.23	0.76	6.54	5.77
BMW	Z3 E36	97-03	2.94	1.29	6.68	5.39
BMW	3 Series E30	82-91	3.07	2.55	3.71	1.16
BMW	3 Series E36	92-98	2.89	2.40	3.48	1.08
BMW	3 Series E46	99-04	2.18	1.52	3.14	1.63
BMW	5 Series E28	82-88	2.99	2.03	4.41	2.37
BMW	5 Series E34	89-95	3.14	2.12	4.64	2.51
BMW	5 Series E39	96-03	1.65	0.89	3.05	2.16
Daewoo	Espero	95-97	5.57	4.08	7.60	3.52
Daewoo	Leganza	97-02	3.13	1.94	5.05	3.11
Ford	Mondeo	95-01	2.23	1.71	2.91	1.20
Ford	Probe	94-98	3.11	1.41	6.84	5.43
Holden	Calibra	94-97	2.47	1.44	4.22	2.78
Holden	Camira	82-89	4.84	4.50	5.20	0.69

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Holden	Vectra	97-03	2.37	1.87	3.01	1.15
Mitsubishi	Sigma / Galant / Sapporo / Lambda	82-84	4.27	3.93	4.64	0.71
Mitsubishi	Starion	82-87	8.18	5.25	12.75	7.49
Mitsubishi	Galant	95-96	3.85	3.05	4.87	1.82
Ford / Mazda	Telstar / 626 / MX6 / Capella	83-86	3.89	3.56	4.26	0.70
Ford / Mazda	Telstar / 626 / MX6 / Capella	88-91	3.39	3.01	3.83	0.82
Ford / Mazda	Telstar / 626 / MX6 / Capella / Cronos	92-97	3.20	2.80	3.66	0.85
Mazda	626	98-02	3.02	2.32	3.94	1.62
Mazda	RX7	82-85	4.80	3.41	6.75	3.34
Mazda	RX7	86-91	3.37	2.14	5.29	3.15
Mazda	Eunos 500	93-99	3.41	1.65	7.03	5.38
Mazda	Eunos 800	94-00	2.70	0.86	8.50	7.64
Mercedes Benz	C-Class W201	87-93	3.17	2.15	4.67	2.52
Mercedes Benz	C-Class W202	95-00	2.24	1.49	3.35	1.86
Mercedes Benz	E-Class W123	82-85	2.74	1.47	5.10	3.63
Mercedes Benz	E-Class W124	86-94	2.31	1.54	3.45	1.91
Mercedes Benz	E-Class W210	96-02	2.43	1.46	4.07	2.61
Mercedes Benz	C-Class W203	00-05	2.13	0.74	6.14	5.40
Nissan	Pintara	86-88	3.87	3.38	4.43	1.05
Nissan / Ford	Pintara / Corsair / Bluebird	89-92	4.22	3.83	4.65	0.83
Nissan	Bluebird	82-86	4.81	4.45	5.21	0.76
Nissan	280ZX	82-84	4.78	2.24	10.23	8.00
Nissan	Bluebird	93-97	2.99	2.39	3.73	1.34
Nissan	200SX / Silvia	94-02	3.07	2.15	4.38	2.23
Honda	Accord Euro	03-05	2.05	0.78	5.39	4.61
Honda	Accord	82-85	4.72	4.08	5.45	1.37
Honda	Accord	86-90	3.17	2.66	3.77	1.10
Honda	Accord	91-93	2.83	2.17	3.69	1.53
Honda	Accord	94-98	2.79	2.23	3.48	1.25
Honda	Accord	99-02	2.06	1.08	3.96	2.88
Honda	Prelude	82-82	3.11	1.41	6.86	5.45
Honda	Prelude	83-91	3.96	3.46	4.53	1.06
Honda	Prelude	92-96	4.00	3.10	5.17	2.07
Honda	Prelude	97-02	2.06	1.08	3.95	2.88
Peugeot	405	89-97	2.57	1.73	3.81	2.07
Peugeot	505	82-93	2.40	1.60	3.60	2.00
Peugeot	406	96-04	0.91	0.32	2.62	2.30
Porsche	944	82-91	5.15	2.19	12.12	9.94
Renault	Feugo	82-87	3.51	2.07	5.95	3.88
Saab	900 Series	82-92	3.51	2.54	4.84	2.30
Saab	900/9-3	94-02	2.06	1.31	3.24	1.93
Saab	9000	86-97	1.50	0.87	2.58	1.72
Saab	9-5	98-05	1.96	0.52	7.39	6.87
Subaru	1800 / Leone / Omega / 4WD Wagon	82-93	4.38	3.94	4.86	0.93
Subaru	Liberty / Legacy	89-93	3.18	2.78	3.64	0.86
Subaru	Liberty / Legacy / Outback	94-98	2.85	2.27	3.59	1.32
Subaru	Liberty / Legacy / Outback	99-03	2.25	1.65	3.09	1.45
Subaru	Liberty / Legacy / Outback	03-05	4.63	2.28	9.40	7.13
Toyota	Corona	82-88	4.34	4.03	4.68	0.65

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Toyota	Camry	83-86	4.26	3.64	4.98	1.35
Holden / Toyota	Apollo JK/JL / Camry / Vista	88-92	3.56	3.33	3.80	0.47
Toyota	Celica	81-85	3.78	3.13	4.57	1.44
Toyota	Celica	86-89	3.84	3.09	4.76	1.67
Toyota	Celica	90-93	3.75	3.03	4.65	1.62
Toyota	Celica	94-99	3.76	2.78	5.08	2.30
Toyota	Celica	00-05	3.82	2.04	7.15	5.12
Lexus	IS200 / IS300	99-04	0.96	0.24	3.83	3.59
Volvo	200 Series	82-93	2.88	2.33	3.57	1.25
Volkswagen	Passat	98-05	0.43	0.06	3.03	2.97
<b>People Movers</b>			3.72	3.50	3.96	0.45
Chrysler	Voyager	97-05	1.29	0.43	3.88	3.45
Mitsubishi	Nimbus / Chariot / Spacewagon	85-91	4.06	2.91	5.68	2.76
Mitsubishi	Nimbus / Chariot	92-98	3.10	2.07	4.63	2.56
Mitsubishi	Nimbus	99-03	2.24	0.87	5.72	4.84
Mitsubishi	Starwagon / L300	83-86	6.70	5.83	7.70	1.88
Mitsubishi	Starwagon / Delica Starwagon	87-93	4.42	3.88	5.05	1.17
Mitsubishi	Starwagon / Delica Spacegear	95-98	3.53	2.61	4.78	2.17
Mitsubishi	Starwagon / Delica Spacegear	98-03	3.76	2.55	5.55	3.01
Kia	Carnival	99-05	1.20	0.54	2.68	2.14
Mazda	MPV	94-99	0.52	0.07	3.65	3.57
Nissan	Prairie	84-86	4.56	3.06	6.80	3.74
Nissan	Serena	92-95	2.22	1.08	4.56	3.48
Honda	Odyssey	95-00	2.00	1.08	3.71	2.64
Toyota	Tarago	83-89	5.17	4.53	5.89	1.36
Toyota	Tarago / Previa / Estima	91-99	2.67	2.11	3.38	1.26
Toyota	Tarago / Previa / Estima	00-05	2.85	1.57	5.15	3.58
Toyota	Spacia	93-00	1.57	0.39	6.43	6.04
<b>Light Cars</b>			4.58	4.46	4.71	0.25
Daihatsu	Charade	82-86	7.07	6.12	8.18	2.06
Daihatsu	Charade	88-92	5.66	5.10	6.29	1.19
Daihatsu	Charade	93-00	5.37	4.74	6.07	1.33
Daihatsu	Pyzar	97-01	3.27	1.66	6.44	4.77
Daihatsu	Sirion / Storia	98-04	4.25	3.14	5.74	2.60
Daihatsu	Mira	90-96	9.23	7.44	11.44	4.00
Daewoo	1.5i	94-95	5.46	2.87	10.42	7.55
Daewoo	Cielo	95-97	3.96	3.35	4.68	1.33
Daewoo	Lanos	97-03	4.72	4.07	5.48	1.41
Daewoo	Matiz	99-04	4.34	2.98	6.33	3.36
Daewoo	Kalos	03-04	6.79	3.80	12.13	8.33
Ford	Festiva WD/WH/WF	94-01	5.38	4.96	5.84	0.88
Ford	Ka	99-02	3.66	2.13	6.27	4.14
Holden	Barina XC	01-05	2.85	2.01	4.05	2.04
Holden	Barina SB	95-00	4.30	3.78	4.89	1.11
Hyundai	Excel	86-90	5.75	5.04	6.56	1.52
Hyundai	Excel	90-94	5.01	4.56	5.49	0.93
Hyundai	Excel / Accent	95-00	4.40	4.10	4.71	0.61
Hyundai	Getz	02-05	6.22	4.47	8.66	4.19

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Hyundai	Accent	00-05	4.05	3.34	4.91	1.57
Mitsubishi	Mirage / Colt	82-88	5.31	4.92	5.73	0.82
Kia	Rio	00-05	3.94	2.95	5.27	2.32
Ford / Mazda	Festiva WA / 121	87-90	5.43	4.89	6.03	1.15
Mazda	121 / Autozam Review	94-96	4.23	3.56	5.03	1.47
Mazda	121 Metro / Demio	97-02	3.82	3.05	4.78	1.72
Mazda	2	02-05	4.13	1.80	9.47	7.67
Nissan	Micra	95-97	5.96	4.49	7.91	3.41
Honda	CRX	87-91	5.94	4.50	7.85	3.35
Honda	CRX	92-98	4.37	2.58	7.40	4.82
Honda	Jazz	02-05	2.95	1.48	5.88	4.41
Honda	City	83-86	6.68	5.36	8.32	2.97
Peugoet	205	87-94	3.55	2.00	6.32	4.33
Peugeot	206	99-05	5.64	3.53	9.02	5.48
Renault	Clio	02-05	4.01	1.37	11.75	10.39
Subaru	Sherpa / Fiori / 700 / Rex	89-92	8.08	6.44	10.15	3.70
Suzuki	Swift	82-85	7.43	4.70	11.76	7.06
Holden / Suzuki	Barina / Swift / Cultus	86-88	6.70	5.98	7.51	1.53
Holden / Suzuki	Barina / Swift / Cultus	89-99	5.12	4.75	5.52	0.77
Suzuki	Hatch / Alto	82-84	8.72	7.08	10.76	3.68
Suzuki	Alto	85-00	9.43	6.94	12.82	5.88
Suzuki	Ignis	00-02	4.44	2.56	7.71	5.15
Toyota	Starlet	96-99	4.57	3.93	5.32	1.39
Toyota	Echo	99-05	3.82	3.18	4.58	1.40
Volkswagen	Polo	96-00	2.85	1.52	5.36	3.84
<b>Small Cars</b>			<b>3.75</b>	<b>3.66</b>	<b>3.84</b>	<b>0.17</b>
Alfa Romeo	33	83-92	4.24	2.93	6.12	3.19
Alfa Romeo	75	86-92	3.20	1.26	8.16	6.90
Alfa Romeo	GTV	82-84	7.38	3.97	13.75	9.78
Alfa Romeo	Sprint	82-88	3.52	1.46	8.51	7.06
Alfa Romeo	Alfasud	82-84	5.80	2.65	12.70	10.05
Audi	A4	95-01	2.39	1.43	3.99	2.55
Audi	A3/S3	97-04	0.68	0.10	4.76	4.66
Audi	A4	01-05	1.67	0.56	4.98	4.42
Chrysler	Neon	96-99	2.98	1.65	5.38	3.73
Daihatsu	Applause	89-99	4.07	3.39	4.89	1.51
Daewoo	Nubira	97-03	3.22	2.56	4.05	1.49
Ford	Laser	91-94	3.95	3.64	4.30	0.66
Ford	Laser	95-97	4.02	3.44	4.69	1.25
Ford	Capri	89-94	5.15	4.10	6.47	2.37
Ford	Focus LR	02-05	3.43	2.20	5.35	3.15
Fiat	Regata	84-88	3.95	1.94	8.06	6.13
Holden	Gemini	82-84	4.91	4.41	5.46	1.05
Holden	Gemini RB	86-87	4.93	3.81	6.37	2.55
Holden	Astra TR	96-98	2.83	2.03	3.95	1.92
Holden	Astra TS	98-05	2.81	2.37	3.33	0.96
Hyundai	Elantra	00-05	3.98	2.82	5.61	2.79
Hyundai	S Coupe	90-96	4.61	3.54	6.01	2.47
Hyundai	Lantra	91-95	4.28	3.47	5.26	1.79
Hyundai	Lantra	96-00	3.60	3.02	4.28	1.25

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Hyundai	Coupe	96-00	4.84	3.51	6.66	3.14
Mitsubishi	Lancer / Mirage CA	89-90	3.76	3.31	4.27	0.96
Mitsubishi	Lancer / Mirage CB	91-92	4.78	3.70	6.18	2.48
Mitsubishi	Lancer / Mirage CC	93-95	3.90	3.46	4.39	0.93
Mitsubishi	Lancer / Mirage CE	96-03	3.97	3.62	4.36	0.75
Mitsubishi	Cordia	83-87	5.43	4.57	6.45	1.88
Mitsubishi	Lancer CH	03-05	4.05	2.28	7.20	4.92
Kia	Spectra	01-04	2.50	1.01	6.15	5.14
Ford / Mazda	Laser / 323 / Familia	82-88	5.02	4.79	5.26	0.47
Mazda	323 / Familia / Lantis	90-93	3.66	3.20	4.18	0.98
Mazda	323 / Familia / Lantis	95-98	3.85	3.26	4.55	1.29
Ford / Mazda	Laser / 323	99-03	3.10	2.58	3.72	1.14
Mazda	MX5 / Eunos Roadster	89-97	4.14	2.63	6.52	3.89
Mazda	MX5 / Eunos Roadster	98-05	2.57	1.09	6.06	4.97
Mazda	Eunos 30X / Presso / MX-3 / Autozam AZ-3	90-97	2.44	1.28	4.67	3.39
Mazda	3	03-05	2.29	1.16	4.52	3.36
Mercedes Benz	A-Class W168	98-05	3.54	1.52	8.25	6.73
Holden / Nissan	Astra / Pulsar / Langley	84-86	5.40	4.97	5.86	0.88
Holden / Nissan	Astra / Pulsar / Vector / Sentra	88-90	4.48	4.13	4.87	0.74
Nissan	Pulsar / Vector / Sentra	92-95	3.34	2.95	3.78	0.83
Nissan	Pulsar / Vector / Sentra	96-99	4.00	3.55	4.52	0.97
Nissan	Stanza	82-83	3.92	2.55	6.04	3.50
Nissan	Gazelle / Silvia	84-86	5.26	4.06	6.81	2.75
Nissan	Exa	83-86	7.15	5.13	9.95	4.82
Nissan	Exa	87-91	5.06	3.07	8.33	5.26
Nissan	NX/NX-R	91-96	5.77	4.31	7.73	3.42
Nissan	Pulsar	00-05	4.15	3.50	4.91	1.41
Honda	Civic	82-83	4.85	3.88	6.06	2.18
Honda	Civic / Ballade / Shuttle	84-87	5.42	4.75	6.17	1.41
Honda	Civic / Shuttle	88-91	4.27	3.76	4.84	1.08
Honda	Civic	92-95	3.60	3.11	4.17	1.06
Honda	Civic	96-00	3.26	2.70	3.93	1.22
Honda	Civic	01-05	2.68	1.73	4.15	2.41
Honda	Integra	86-88	4.25	3.27	5.52	2.24
Honda	Integra	90-92	2.73	1.86	3.99	2.13
Honda	Integra	93-01	2.65	1.81	3.88	2.06
Honda	Concerto	89-93	3.80	2.74	5.27	2.53
Peugeot	306	94-01	1.87	1.25	2.80	1.55
Peugeot	307	01-05	1.19	0.30	4.69	4.39
Proton	Wira	95-96	4.38	3.31	5.79	2.48
Renault	19	91-96	3.19	1.54	6.60	5.06
Rover	Quintet	82-86	4.76	2.94	7.72	4.78
MG	MGF / MG TF	99-05	2.58	1.07	6.26	5.20
Subaru	Impreza	93-00	4.21	3.60	4.91	1.31
Subaru	Impreza	01-05	2.84	1.89	4.26	2.37
Suzuki	Baleno / Cultus Crescent	95-02	3.60	2.70	4.81	2.11
Toyota	Corolla	82-84	4.79	4.40	5.21	0.81
Toyota	Corolla	86-88	4.46	4.14	4.80	0.66
Toyota / Holden	Corolla / Nova	89-93	4.04	3.79	4.30	0.52
Toyota / Holden	Corolla / Nova	94-97	3.64	3.34	3.97	0.63
Toyota	Corolla	98-01	2.75	2.31	3.27	0.96

<b>Make</b>	<b>Model of Car</b>	<b>Years of Manufacture</b>	<b>Serious injury rate per 100 drivers involved</b>	<b>Lower 95% Confidence Limit</b>	<b>Upper 95% Confidence Limit</b>	<b>Width of Confidence Interval</b>
Toyota	Corolla	02-05	3.19	2.60	3.90	1.29
Toyota	Tercel	83-88	4.81	3.32	6.96	3.64
Toyota	MR2	87-90	6.28	4.30	9.19	4.89
Toyota	MR2	91-00	3.01	1.60	5.67	4.07
Toyota	Paseo / Cynos	91-99	3.72	2.85	4.84	1.99
Toyota	Corolla 4WD Wagon	92-96	3.46	1.98	6.04	4.06
Volvo	300 Series	84-88	4.26	2.24	8.10	5.85
Volvo	S40/V40	97-04	2.52	1.44	4.40	2.96
Volkswagen	Golf	82-94	6.35	3.85	10.48	6.63
Volkswagen	Golf	95-98	2.82	1.80	4.42	2.63
Volkswagen	Golf / Bora	99-04	1.98	1.23	3.17	1.93
Volkswagen	New Beetle	00-05	1.88	0.48	7.36	6.88

**CRASHWORTHINESS RATINGS  
(WITH 90% CONFIDENCE LIMITS)**

**New South Wales Data (1987-2005), South Australia Data (1995-2005),  
Queensland and Western Australia Data (1991-2005)**

<b>Make</b>	<b>Model of Car</b>	<b>Years of Manufacture</b>	<b>Serious injury rate per 100 drivers involved</b>	<b>Lower 90% Confidence Limit</b>	<b>Upper 90% Confidence Limit</b>	<b>Width of Confidence Interval</b>
<b>ALL MODEL AVERAGE</b>			3.31			
<b>Compact Four Wheel Drive Vehicles</b>			3.34	3.16	3.53	0.37
Daihatsu	Feroza / Rocky	89-97	4.40	3.47	5.58	2.11
Daihatsu	Rocky / Rugger	85-98	6.08	4.72	7.84	3.12
Daihatsu	Terios	97-05	4.27	3.16	5.77	2.61
Holden	Cruze	02-05	4.11	2.52	6.73	4.21
Kia	Sportage	98-03	2.03	1.17	3.52	2.35
Ford / Mazda	Escape / Tribute	01-05	2.47	1.57	3.87	2.30
Nissan	X-Trail	01-05	3.52	2.39	5.17	2.78
Lada	Niva	84-99	3.74	2.52	5.56	3.04
Honda	CR-V	97-01	1.93	1.44	2.60	1.16
Honda	CR-V	02-05	1.82	1.07	3.12	2.05
Honda	HR-V	99-02	3.78	2.40	5.97	3.58
Landrover	Freelander	98-05	5.76	3.30	10.06	6.76
Subaru	Forester	97-02	2.32	1.75	3.06	1.31
Subaru	Forester	02-05	1.05	0.49	2.21	1.72
Suzuki	Vitara / Escudo	88-98	4.09	3.56	4.70	1.14
Suzuki	Grand Vitara	99-05	2.67	1.71	4.17	2.45
Holden / Suzuki	Drover / Sierra / Samurai / SJ410 / SJ413	82-99	5.12	4.57	5.73	1.16
Suzuki	Jimny	98-05	3.75	2.14	6.58	4.44
Toyota	RAV4	94-00	2.64	2.16	3.23	1.08
Toyota	RAV4	01-05	2.93	2.18	3.92	1.74
<b>Medium Four Wheel Drive Vehicles</b>			2.46	2.29	2.64	0.35
Daewoo / Ssangong	Musso	98-02	2.56	1.30	5.02	3.71
Holden / Isuzu	Jackaroo / Bighorn	82-91	2.87	2.19	3.78	1.59
Holden / Isuzu	Jackaroo / Bighorn	92-97	2.52	1.80	3.52	1.72
Holden / Isuzu	Jackaroo / Bighorn	98-02	2.63	1.74	3.97	2.23
Holden	Frontera / Mu	95-03	2.90	1.61	5.22	3.61
Hyundai	Santa Fe	00-05	3.88	1.99	7.57	5.58
Mitsubishi	Pajero	82-90	4.08	3.47	4.79	1.32
Mitsubishi	Pajero	92-99	2.45	2.05	2.91	0.86
Mitsubishi	Pajero NM / NP	00-05	1.87	1.16	3.03	1.87
Mitsubishi	Challenger	98-05	2.85	1.78	4.58	2.80
Jeep	Cherokee XJ	96-00	2.61	1.97	3.47	1.50
Jeep	Wrangler	96-04	4.03	2.46	6.60	4.14
Land Rover	Defender	92-05	2.58	1.60	4.16	2.56
Land Rover	Discovery	91-02	1.96	1.37	2.83	1.46
Nissan	Pathfinder / Terrano	88-94	2.74	2.09	3.60	1.50

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 90% Confidence Limit	Upper 90% Confidence Limit	Width of Confidence Interval
Nissan	Pathfinder / Terrano / Regulus	95-05	1.51	0.98	2.32	1.34
Toyota	Landcruiser Prado	96-03	1.70	0.97	2.98	2.01
Toyota	Landcruiser Prado	03-05	1.29	0.66	2.54	1.89
<b>Large Four Wheel Drive Vehicles</b>			2.56	2.45	2.68	0.24
Ford	Bronco	82-87	5.03	2.85	8.88	6.03
Ford	Explorer	00-01	4.04	2.80	5.84	3.05
Ford	Explorer	01-05	0.68	0.20	2.30	2.10
Jeep	Grand Cherokee ZG	96-99	3.12	1.77	5.51	3.74
Jeep	Grand Cherokee WJ/WG	99-05	2.04	0.92	4.52	3.60
Mercedes Benz	M-Class W163	98-05	1.37	0.54	3.47	2.93
Nissan	Patrol / Safari	82-87	2.89	2.28	3.68	1.40
Nissan / Ford	Patrol / Maverick / Safari	88-97	2.39	2.12	2.69	0.57
Nissan	Patrol / Safari	98-04	2.10	1.69	2.61	0.92
Land Rover	Range Rover	82-94	2.53	1.90	3.37	1.48
Land Rover	Range Rover	95-02	1.59	0.65	3.86	3.21
Toyota	Landcruiser	82-89	3.87	3.52	4.25	0.74
Toyota	Landcruiser	90-97	2.79	2.54	3.06	0.52
Toyota	Landcruiser	98-05	2.29	1.97	2.68	0.71
<b>Commercial Vehicles- Vans</b>			3.61	3.44	3.80	0.36
Daihatsu	Handivan	82-90	7.75	6.28	9.58	3.30
Daihatsu	Hi-Jet	82-90	11.64	8.32	16.27	7.96
Daihatsu	Handivan / Cuore	99-03	5.04	2.89	8.78	5.89
Ford	Falcon Panel Van	82-95	3.19	2.71	3.76	1.05
Ford	Falcon Panel Van	96-99	1.81	1.04	3.16	2.12
Ford	Transit	95-00	2.90	2.06	4.08	2.02
Ford	Transit	01-05	0.83	0.32	2.20	1.88
Holden	Shuttle / WFR Van	82-87	5.90	4.31	8.06	3.75
Kia	Pregio	02-05	2.37	1.03	5.43	4.39
Mercedes Benz	MB100 / MB140	99-04	1.76	0.69	4.46	3.77
Mercedes Benz	Vito / Viano	99-05	2.77	1.53	5.02	3.49
Mercedes Benz	Sprinter	98-04	2.87	1.59	5.16	3.57
Honda	Acty	83-86	3.43	2.21	5.31	3.09
Holden / Suzuki	Scurry / Carry	82-00	9.38	7.44	11.83	4.39
Toyota	Hiace/Liteace	82-86	5.06	4.54	5.64	1.10
Toyota	Hiace/Liteace	87-89	4.37	3.75	5.09	1.35
Toyota	Hiace/Liteace	90-95	4.15	3.69	4.67	0.98
Toyota	Hiace/Liteace	96-04	3.01	2.52	3.59	1.07
Volkswagen	Caravelle / Transporter	88-94	2.65	1.35	5.19	3.83
Volkswagen	Caravelle / Transporter	95-04	1.55	0.89	2.69	1.80
<b>Commercial Vehicles- Utes</b>			3.17	3.07	3.26	0.19
Ford / Nissan	Falcon Ute / XFN Ute	82-95	3.52	3.22	3.85	0.63
Ford	Falcon Ute	96-99	2.83	2.31	3.46	1.15
Ford	Falcon Ute AU	00-02	2.36	1.84	3.01	1.17
Ford	Falcon Ute BA/BF	03-05	1.97	1.32	2.95	1.63
Ford	Ford F-Series	82-92	2.46	1.73	3.51	1.78
Holden	Commodore Ute VG/VP	90-93	3.79	3.12	4.61	1.50

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 90% Confidence Limit	Upper 90% Confidence Limit	Width of Confidence Interval
Holden / Isuzu	Rodeo / Pickup	82-85	4.19	3.14	5.60	2.46
Holden / Isuzu	Rodeo / Pickup	86-88	2.34	1.35	4.08	2.73
Holden / Isuzu	Rodeo / Pickup	89-95	3.77	3.38	4.20	0.83
Holden	Rodeo	96-98	3.03	2.54	3.62	1.08
Holden	Rodeo	99-02	2.77	2.28	3.38	1.10
Holden	WB Series	82-85	4.88	4.07	5.85	1.79
Holden	Commodore Ute VR/VS	94-00	3.45	3.11	3.82	0.71
Holden	Commodore VU Ute	00-02	3.27	2.58	4.14	1.55
Holden	Commodore VY/VZ Ute	02-05	2.26	1.69	3.01	1.32
Holden	Rodeo	03-04	1.75	1.16	2.65	1.50
Mitsubishi	Triton MK	96-05	2.62	1.71	4.01	2.30
Kia	Ceres	92-00	5.32	4.12	6.86	2.74
Ford / Mazda	Courier / B-Series / Bounty	98-02	2.98	2.34	3.78	1.44
Ford / Mazda	Courier / Bravo / Bounty	03-05	4.83	3.01	7.77	4.76
Nissan	720 Ute	82-85	3.79	3.09	4.66	1.57
Nissan	Navara	86-91	3.64	3.18	4.16	0.98
Nissan	Navara	92-96	2.72	2.18	3.40	1.22
Nissan	Navara	97-05	2.26	1.66	3.07	1.41
Subaru	Brumby	82-92	5.73	4.95	6.64	1.69
Suzuki	Mighty Boy	85-88	8.72	6.79	11.21	4.42
Toyota	4Runner/Hilux	82-85	4.05	3.64	4.51	0.87
Toyota	4Runner/Hilux	86-88	3.89	3.48	4.36	0.88
Toyota	4Runner/Hilux	89-97	3.59	3.37	3.82	0.45
Toyota	Hilux	98-02	2.68	2.32	3.09	0.76
Toyota	Hilux	03-04	2.52	1.69	3.76	2.07
<b>Large Cars</b>			3.05	2.99	3.10	0.11
BMW	7 Series E23	82-88	2.12	1.11	4.05	2.94
BMW	7 Series E32	89-94	3.32	1.86	5.93	4.07
BMW	7 Series E38	95-01	1.00	0.30	3.33	3.03
Ford	Falcon XE/XF	82-88	3.80	3.65	3.96	0.31
Ford	Fairlane Z & LTD F	82-87	3.63	3.27	4.04	0.77
Ford	Falcon EA / Falcon EB Series I	88-Mar 92	3.36	3.20	3.52	0.32
Ford	Falcon EB Series II / Falcon ED	Apr 92-94	3.07	2.86	3.29	0.42
Ford	Fairlane N & LTD D	88-94	2.79	2.45	3.18	0.74
Ford	Fairlane N & LTD D	95-98	2.72	2.16	3.43	1.27
Ford	Fairlane & LTD AU	99-02	2.35	1.52	3.63	2.11
Ford	Falcon EF/EL	94-98	2.88	2.74	3.04	0.30
Ford	Falcon AU	98-02	2.60	2.40	2.82	0.42
Ford	Taurus	96-98	2.77	1.78	4.33	2.55
Ford	Falcon BA/BF	02-05	2.10	1.73	2.56	0.83
Holden / Toyota	Commodore VN/VP / Lexcen	89-93	3.72	3.58	3.88	0.30
Holden	Statesman/Caprice WB	82-85	6.01	3.84	9.41	5.57
Holden	Stateman/Caprice VQ	90-93	3.92	2.97	5.17	2.20
Holden	Stateman/Caprice VR/VS	94-98	3.14	2.68	3.68	1.00
Holden / Toyota	Commodore VR/VS / Lexcen	93-97	2.99	2.85	3.13	0.29
Holden	Commodore VT/VX	97-02	2.73	2.57	2.90	0.33
Holden	Statesman/Caprice WH	99-03	2.17	1.43	3.31	1.88
Holden	Commodore VY/VZ	02-05	2.27	1.92	2.67	0.74
Holden	Monaro	01-05	2.95	1.79	4.87	3.08
Holden	Statesman/Caprice WK/WL	03-05	2.58	1.02	6.54	5.52

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 90% Confidence Limit	Upper 90% Confidence Limit	Width of Confidence Interval
Holden	Commodore VB-VL	82-88	4.25	4.08	4.43	0.34
Hyundai	Sonata	98-01	3.33	2.33	4.75	2.42
Hyundai	Sonata	89-97	3.28	2.81	3.84	1.03
Hyundai	Grandeaur / XG	99-00	1.37	0.44	4.22	3.78
Mitsubishi	Magna TM/TN/TP / Sigma / V3000	85-90	4.04	3.84	4.26	0.43
Mitsubishi	Magna TE/TF/TH/TJ / Verada KE/KF/KH/KJ / Diamante	96-03	2.82	2.59	3.08	0.49
Mitsubishi	Magna TR/TS / Verada KR/KS / V3000 / Diamante	91-96	3.04	2.85	3.24	0.39
Mitsubishi	Magna TL/TW / Verada KL/KW	03-05	1.40	0.56	3.50	2.94
Jaguar	XJ6	82-86	4.61	2.89	7.34	4.45
Jaguar	XJ6	87-94	1.89	1.10	3.23	2.14
Mazda	929 / Luce	82-90	4.10	3.59	4.69	1.10
Mazda	929 / Sentia / Efini MS-9	92-96	2.40	1.21	4.78	3.57
Mercedes Benz	S-Class W126	82-92	3.08	2.17	4.38	2.21
Nissan	Skyline	83-88	3.92	3.53	4.34	0.81
Nissan	300ZX / Fairlady Z	90-95	3.45	2.44	4.88	2.44
Nissan	Maxima	90-94	2.93	2.26	3.81	1.55
Nissan	Maxima / Cefiro	95-99	2.69	2.02	3.58	1.55
Nissan	Maxima	00-02	1.65	0.87	3.13	2.26
Honda	Legend	86-95	2.57	1.88	3.51	1.63
Rover	3500	82-87	1.60	0.62	4.15	3.54
Holden / Toyota	Apollo JM/JP / Camry / Sceptor	93-97	3.55	3.34	3.78	0.44
Toyota	Camry	98-02	2.82	2.56	3.12	0.56
Toyota	Crown / Cressida / Mark II	82-85	4.11	3.50	4.82	1.32
Toyota	Crown / Cressida / Mark II	86-88	3.76	2.84	4.99	2.15
Toyota	Cressida / Mark II	89-93	2.63	2.12	3.25	1.13
Toyota	Supra	82-90	5.45	3.98	7.45	3.47
Lexus	ES300 / Windom	92-01	3.39	2.36	4.87	2.51
Lexus	LS400 / Celsior	90-00	1.80	0.69	4.67	3.97
Toyota	Avalon	00-05	2.74	2.12	3.55	1.43
Toyota	Camry	02-05	2.18	1.65	2.88	1.23
Volvo	850/S70/V70/C70	92-04	2.64	2.02	3.44	1.43
Volvo	700/900 Series	84-92	2.33	1.82	2.98	1.16
Volvo	960/S90/V90	90-98	2.02	0.76	5.39	4.63
<b>Medium Cars</b>			<b>3.30</b>	<b>3.23</b>	<b>3.37</b>	<b>0.14</b>
Alfa Romeo	156	99-05	2.23	0.91	5.49	4.58
BMW	Z3 E36	97-03	2.94	1.48	5.84	4.37
BMW	3 Series E30	82-91	3.07	2.63	3.60	0.97
BMW	3 Series E36	92-98	2.89	2.47	3.38	0.90
BMW	3 Series E46	99-04	2.18	1.61	2.96	1.35
BMW	5 Series E28	82-88	2.99	2.16	4.14	1.97
BMW	5 Series E34	89-95	3.14	2.26	4.35	2.09
BMW	5 Series E39	96-03	1.65	0.99	2.76	1.77
Daewoo	Espero	95-97	5.57	4.29	7.22	2.93
Daewoo	Leganza	97-02	3.13	2.10	4.67	2.58
Ford	Mondeo	95-01	2.23	1.78	2.79	1.00
Ford	Probe	94-98	3.11	1.61	6.02	4.41
Holden	Calibra	94-97	2.47	1.58	3.87	2.29

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 90% Confidence Limit	Upper 90% Confidence Limit	Width of Confidence Interval
Holden	Camira	82-89	4.84	4.56	5.14	0.58
Holden	Vectra	97-03	2.37	1.94	2.90	0.96
Mitsubishi	Sigma / Galant / Sapporo / Lambda	82-84	4.27	3.99	4.58	0.59
Mitsubishi	Starion	82-87	8.18	5.65	11.86	6.21
Mitsubishi	Galant	95-96	3.85	3.16	4.69	1.52
Ford / Mazda	Telstar / 626 / MX6 / Capella	83-86	3.89	3.61	4.20	0.58
Ford / Mazda	Telstar / 626 / MX6 / Capella	88-91	3.39	3.07	3.75	0.69
Ford / Mazda	Telstar / 626 / MX6 / Capella / Cronos	92-97	3.20	2.87	3.58	0.71
Mazda	626	98-02	3.02	2.42	3.78	1.35
Mazda	RX7	82-85	4.80	3.61	6.38	2.78
Mazda	RX7	86-91	3.37	2.31	4.92	2.61
Mazda	Eunos 500	93-99	3.41	1.86	6.25	4.39
Mazda	Eunos 800	94-00	2.70	1.03	7.04	6.01
Mercedes Benz	C-Class W201	87-93	3.17	2.29	4.39	2.10
Mercedes Benz	C-Class W202	95-00	2.24	1.59	3.14	1.54
Mercedes Benz	E-Class W123	82-85	2.74	1.63	4.61	2.98
Mercedes Benz	E-Class W124	86-94	2.31	1.65	3.23	1.58
Mercedes Benz	E-Class W210	96-02	2.43	1.58	3.74	2.16
Mercedes Benz	C-Class W203	00-05	2.13	0.88	5.16	4.28
Nissan	Pintara	86-88	3.87	3.45	4.33	0.88
Nissan / Ford	Pintara / Corsair / Bluebird	89-92	4.22	3.89	4.58	0.69
Nissan	Bluebird	82-86	4.81	4.51	5.14	0.63
Nissan	280ZX	82-84	4.78	2.53	9.04	6.51
Nissan	Bluebird	93-97	2.99	2.48	3.60	1.12
Nissan	200SX / Silvia	94-02	3.07	2.28	4.14	1.86
Honda	Accord Euro	03-05	2.05	0.92	4.61	3.69
Honda	Accord	82-85	4.72	4.18	5.33	1.15
Honda	Accord	86-90	3.17	2.74	3.66	0.92
Honda	Accord	91-93	2.83	2.26	3.54	1.27
Honda	Accord	94-98	2.79	2.32	3.36	1.04
Honda	Accord	99-02	2.06	1.20	3.56	2.36
Honda	Prelude	82-82	3.11	1.61	6.03	4.42
Honda	Prelude	83-91	3.96	3.54	4.43	0.89
Honda	Prelude	92-96	4.00	3.23	4.96	1.72
Honda	Prelude	97-02	2.06	1.20	3.56	2.36
Peugeot	405	89-97	2.57	1.85	3.57	1.72
Peugeot	505	82-93	2.40	1.71	3.37	1.66
Peugeot	406	96-04	0.91	0.38	2.20	1.83
Porsche	944	82-91	5.15	2.51	10.54	8.03
Renault	Feugo	82-87	3.51	2.26	5.46	3.20
Saab	900 Series	82-92	3.51	2.68	4.60	1.92
Saab	900/9-3	94-02	2.06	1.41	3.01	1.60
Saab	9000	86-97	1.50	0.95	2.36	1.41
Saab	9-5	98-05	1.96	0.65	5.95	5.31
Subaru	1800 / Leone / Omega / 4WD Wagon	82-93	4.38	4.00	4.78	0.77
Subaru	Liberty / Legacy	89-93	3.18	2.84	3.56	0.72
Subaru	Liberty / Legacy / Outback	94-98	2.85	2.35	3.46	1.10
Subaru	Liberty / Legacy / Outback	99-03	2.25	1.73	2.94	1.20
Subaru	Liberty / Legacy / Outback	03-05	4.63	2.55	8.38	5.82

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 90% Confidence Limit	Upper 90% Confidence Limit	Width of Confidence Interval
Toyota	Corona	82-88	4.34	4.08	4.62	0.55
Toyota	Camry	83-86	4.26	3.73	4.86	1.13
Holden / Toyota	Apollo JK/JL / Camry / Vista	88-92	3.56	3.37	3.76	0.39
Toyota	Celica	81-85	3.78	3.23	4.43	1.21
Toyota	Celica	86-89	3.84	3.20	4.60	1.39
Toyota	Celica	90-93	3.75	3.13	4.49	1.36
Toyota	Celica	94-99	3.76	2.92	4.84	1.92
Toyota	Celica	00-05	3.82	2.26	6.46	4.20
Lexus	IS200 / IS300	99-04	0.96	0.30	3.05	2.76
Volvo	200 Series	82-93	2.88	2.41	3.45	1.04
Volkswagen	Passat	98-05	0.43	0.08	2.20	2.12
<b>People Movers</b>			3.72	3.54	3.92	0.38
Chrysler	Voyager	97-05	1.29	0.51	3.24	2.73
Mitsubishi	Nimbus / Chariot / Spacewagon	85-91	4.06	3.07	5.37	2.30
Mitsubishi	Nimbus / Chariot	92-98	3.10	2.21	4.33	2.12
Mitsubishi	Nimbus	99-03	2.24	1.02	4.91	3.89
Mitsubishi	Starwagon / L300	83-86	6.70	5.96	7.53	1.57
Mitsubishi	Starwagon / Delica Starwagon	87-93	4.42	3.96	4.94	0.98
Mitsubishi	Starwagon / Delica Spacegear	95-98	3.53	2.74	4.55	1.80
Mitsubishi	Starwagon / Delica Spacegear	98-03	3.76	2.72	5.21	2.50
Kia	Carnival	99-05	1.20	0.61	2.35	1.73
Mazda	MPV	94-99	0.52	0.10	2.65	2.55
Nissan	Prairie	84-86	4.56	3.27	6.38	3.11
Nissan	Serena	92-95	2.22	1.22	4.05	2.84
Honda	Odyssey	95-00	2.00	1.19	3.36	2.17
Toyota	Tarago	83-89	5.17	4.63	5.77	1.14
Toyota	Tarago / Previa / Estima	91-99	2.67	2.20	3.25	1.05
Toyota	Tarago / Previa / Estima	00-05	2.85	1.73	4.68	2.95
Toyota	Spacia	93-00	1.57	0.48	5.11	4.62
<b>Light Cars</b>			4.58	4.48	4.69	0.21
Daihatsu	Charade	82-86	7.07	6.26	7.99	1.72
Daihatsu	Charade	88-92	5.66	5.18	6.18	1.00
Daihatsu	Charade	93-00	5.37	4.84	5.95	1.11
Daihatsu	Pyzar	97-01	3.27	1.86	5.76	3.91
Daihatsu	Sirion / Storia	98-04	4.25	3.30	5.47	2.17
Daihatsu	Mira	90-96	9.23	7.71	11.05	3.34
Daewoo	1.5i	94-95	5.46	3.18	9.37	6.19
Daewoo	Cielo	95-97	3.96	3.44	4.55	1.11
Daewoo	Lanos	97-03	4.72	4.17	5.35	1.18
Daewoo	Matiz	99-04	4.34	3.17	5.96	2.79
Daewoo	Kalos	03-04	6.79	4.18	11.04	6.85
Ford	Festiva WD/WH/WF	94-01	5.38	5.02	5.76	0.74
Ford	Ka	99-02	3.66	2.33	5.74	3.42
Holden	Barina XC	01-05	2.85	2.12	3.82	1.70
Holden	Barina SB	95-00	4.30	3.86	4.79	0.93
Hyundai	Excel	86-90	5.75	5.15	6.42	1.27
Hyundai	Excel	90-94	5.01	4.63	5.41	0.78
Hyundai	Excel / Accent	95-00	4.40	4.15	4.66	0.51

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 90% Confidence Limit	Upper 90% Confidence Limit	Width of Confidence Interval
Hyundai	Getz	02-05	6.22	4.72	8.21	3.49
Hyundai	Accent	00-05	4.05	3.45	4.76	1.31
Mitsubishi	Mirage / Colt	82-88	5.31	4.98	5.66	0.68
Kia	Rio	00-05	3.94	3.09	5.03	1.93
Ford / Mazda	Festiva WA / 121	87-90	5.43	4.97	5.93	0.96
Mazda	121 / Autozam Review	94-96	4.23	3.67	4.89	1.23
Mazda	121 Metro / Demio	97-02	3.82	3.16	4.60	1.44
Mazda	2	02-05	4.13	2.06	8.27	6.21
Nissan	Micra	95-97	5.96	4.71	7.55	2.84
Honda	CRX	87-91	5.94	4.71	7.50	2.79
Honda	CRX	92-98	4.37	2.81	6.79	3.97
Honda	Jazz	02-05	2.95	1.65	5.26	3.60
Honda	City	83-86	6.68	5.56	8.03	2.48
Peugeot	205	87-94	3.55	2.19	5.75	3.56
Peugeot	206	99-05	5.64	3.81	8.35	4.54
Renault	Clio	02-05	4.01	1.63	9.86	8.23
Subaru	Sherpa / Fiori / 700 / Rex	89-92	8.08	6.68	9.78	3.09
Suzuki	Swift	82-85	7.43	5.06	10.91	5.85
Holden / Suzuki	Barina / Swift / Cultus	86-88	6.70	6.09	7.37	1.28
Holden / Suzuki	Barina / Swift / Cultus	89-99	5.12	4.81	5.45	0.64
Suzuki	Hatch / Alto	82-84	8.72	7.32	10.39	3.07
Suzuki	Alto	85-00	9.43	7.30	12.19	4.89
Suzuki	Ignis	00-02	4.44	2.80	7.04	4.24
Toyota	Starlet	96-99	4.57	4.03	5.19	1.16
Toyota	Echo	99-05	3.82	3.28	4.44	1.17
Volkswagen	Polo	96-00	2.85	1.68	4.84	3.15
<b>Small Cars</b>			<b>3.75</b>	<b>3.68</b>	<b>3.82</b>	<b>0.15</b>
Alfa Romeo	33	83-92	4.24	3.11	5.76	2.65
Alfa Romeo	75	86-92	3.20	1.46	7.00	5.54
Alfa Romeo	GTV	82-84	7.38	4.39	12.42	8.03
Alfa Romeo	Sprint	82-88	3.52	1.68	7.37	5.69
Alfa Romeo	Alfasud	82-84	5.80	3.01	11.17	8.16
Audi	A4	95-01	2.39	1.56	3.67	2.11
Audi	A3/S3	97-04	0.68	0.14	3.47	3.33
Audi	A4	01-05	1.67	0.67	4.17	3.50
Chrysler	Neon	96-99	2.98	1.82	4.88	3.06
Daihatsu	Applause	89-99	4.07	3.49	4.75	1.26
Daewoo	Nubira	97-03	3.22	2.66	3.90	1.24
Ford	Laser	91-94	3.95	3.69	4.24	0.55
Ford	Laser	95-97	4.02	3.53	4.57	1.04
Ford	Capri	89-94	5.15	4.25	6.23	1.98
Ford	Focus LR	02-05	3.43	2.37	4.98	2.61
Fiat	Regata	84-88	3.95	2.18	7.18	5.00
Holden	Gemini	82-84	4.91	4.49	5.37	0.88
Holden	Gemini RB	86-87	4.93	3.98	6.11	2.13
Holden	Astra TR	96-98	2.83	2.14	3.74	1.60
Holden	Astra TS	98-05	2.81	2.44	3.24	0.80
Hyundai	Elantra	00-05	3.98	2.98	5.31	2.32
Hyundai	S Coupe	90-96	4.61	3.69	5.76	2.06
Hyundai	Lantra	91-95	4.28	3.59	5.09	1.49

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 90% Confidence Limit	Upper 90% Confidence Limit	Width of Confidence Interval
Hyundai	Lantra	96-00	3.60	3.11	4.16	1.05
Hyundai	Coupe	96-00	4.84	3.70	6.32	2.62
Mitsubishi	Lancer / Mirage CA	89-90	3.76	3.38	4.18	0.81
Mitsubishi	Lancer / Mirage CB	91-92	4.78	3.86	5.93	2.07
Mitsubishi	Lancer / Mirage CC	93-95	3.90	3.53	4.31	0.78
Mitsubishi	Lancer / Mirage CE	96-03	3.97	3.67	4.30	0.62
Mitsubishi	Cordia	83-87	5.43	4.70	6.27	1.57
Mitsubishi	Lancer CH	03-05	4.05	2.51	6.56	4.05
Kia	Spectra	01-04	2.50	1.17	5.31	4.13
Ford / Mazda	Laser / 323 / Familia	82-88	5.02	4.83	5.22	0.39
Mazda	323 / Familia / Lantis	90-93	3.66	3.27	4.09	0.82
Mazda	323 / Familia / Lantis	95-98	3.85	3.35	4.43	1.08
Ford / Mazda	Laser / 323	99-03	3.10	2.66	3.61	0.95
Mazda	MX5 / Eunos Roadster	89-97	4.14	2.83	6.05	3.22
Mazda	MX5 / Eunos Roadster	98-05	2.57	1.26	5.27	4.02
Mazda	Eunos 30X / Presso / MX-3 / Autozam AZ-3	90-97	2.44	1.42	4.20	2.78
Mazda	3	03-05	2.29	1.30	4.04	2.75
Mercedes Benz	A-Class W168	98-05	3.54	1.75	7.19	5.44
Holden / Nissan	Astra / Pulsar / Langley	84-86	5.40	5.04	5.78	0.74
Holden / Nissan	Astra / Pulsar / Vector / Sentra	88-90	4.48	4.18	4.80	0.62
Nissan	Pulsar / Vector / Sentra	92-95	3.34	3.01	3.70	0.69
Nissan	Pulsar / Vector / Sentra	96-99	4.00	3.62	4.43	0.81
Nissan	Stanza	82-83	3.92	2.73	5.63	2.90
Nissan	Gazelle / Silvia	84-86	5.26	4.24	6.53	2.30
Nissan	Exa	83-86	7.15	5.42	9.43	4.01
Nissan	Exa	87-91	5.06	3.33	7.68	4.35
Nissan	NX/NX-R	91-96	5.77	4.52	7.37	2.85
Nissan	Pulsar	00-05	4.15	3.60	4.78	1.18
Honda	Civic	82-83	4.85	4.02	5.85	1.82
Honda	Civic / Ballade / Shuttle	84-87	5.42	4.86	6.04	1.18
Honda	Civic / Shuttle	88-91	4.27	3.84	4.74	0.90
Honda	Civic	92-95	3.60	3.19	4.07	0.88
Honda	Civic	96-00	3.26	2.79	3.81	1.02
Honda	Civic	01-05	2.68	1.86	3.86	2.00
Honda	Integra	86-88	4.25	3.41	5.29	1.87
Honda	Integra	90-92	2.73	1.98	3.75	1.77
Honda	Integra	93-01	2.65	1.93	3.64	1.71
Honda	Concerto	89-93	3.80	2.89	5.00	2.11
Peugeot	306	94-01	1.87	1.34	2.62	1.29
Peugeot	307	01-05	1.19	0.38	3.75	3.37
Proton	Wira	95-96	4.38	3.46	5.53	2.07
Renault	19	91-96	3.19	1.74	5.87	4.13
Rover	Quintet	82-86	4.76	3.18	7.13	3.96
MG	MGF / MG TF	99-05	2.58	1.23	5.42	4.19
Subaru	Impreza	93-00	4.21	3.69	4.79	1.10
Subaru	Impreza	01-05	2.84	2.02	3.99	1.97
Suzuki	Baleno / Cultus Crescent	95-02	3.60	2.83	4.59	1.76
Toyota	Corolla	82-84	4.79	4.46	5.14	0.68
Toyota	Corolla	86-88	4.46	4.19	4.74	0.55
Toyota / Holden	Corolla / Nova	89-93	4.04	3.83	4.26	0.43
Toyota / Holden	Corolla / Nova	94-97	3.64	3.39	3.91	0.52

<b>Make</b>	<b>Model of Car</b>	<b>Years of Manufacture</b>	<b>Serious injury rate per 100 drivers involved</b>	<b>Lower 90% Confidence Limit</b>	<b>Upper 90% Confidence Limit</b>	<b>Width of Confidence Interval</b>
Toyota	Corolla	98-01	2.75	2.38	3.18	0.80
Toyota	Corolla	02-05	3.19	2.69	3.77	1.08
Toyota	Tercel	83-88	4.81	3.53	6.56	3.02
Toyota	MR2	87-90	6.28	4.57	8.64	4.06
Toyota	MR2	91-00	3.01	1.77	5.11	3.34
Toyota	Paseo / Cynos	91-99	3.72	2.98	4.64	1.66
Toyota	Corolla 4WD Wagon	92-96	3.46	2.17	5.52	3.34
Volvo	300 Series	84-88	4.26	2.49	7.29	4.80
Volvo	S40/V40	97-04	2.52	1.58	4.02	2.44
Volkswagen	Golf	82-94	6.35	4.18	9.66	5.48
Volkswagen	Golf	95-98	2.82	1.93	4.11	2.18
Volkswagen	Golf / Bora	99-04	1.98	1.33	2.93	1.60
Volkswagen	New Beetle	00-05	1.88	0.60	5.89	5.29

**AGGRESSIVITY INJURY RISK  
AGGRESSIVITY INJURY SEVERITY AND  
RATINGS OF VEHICLE AGGRESSIVITY  
(with 95% and 90% CONFIDENCE LIMITS),  
TOWARDS OTHER VEHICLE DRIVERS  
AND UNPROTECTED ROAD USERS**



## AGGRESSIVITY INJURY RISK RATINGS

**New South Wales Data (1987-2005), South Australia Data (1995-2005),  
Queensland and Western Australia Data (1991-2005)**

Make	Model of Car	Years of Manufacture	Pr(Risk) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
ALL VEHICLE AVERAGE			14.63			
<b>Compact Four Wheel Drive Vehicles</b>			13.45	12.87	14.05	1.18
Daihatsu	Feroza / Rocky	89-97	17.79	14.76	21.29	6.54
Daihatsu	Rocky / Rugger	85-98	16.87	12.57	22.27	9.70
Daihatsu	Terios	97-05	14.88	11.16	19.57	8.41
Holden	Cruze	02-05	9.93	5.88	16.27	10.39
Kia	Sportage	98-03	17.07	13.12	21.90	8.79
Ford / Mazda	Escape / Tribute	01-05	12.29	8.72	17.04	8.32
Nissan	X-Trail	01-05	11.35	7.82	16.20	8.37
Lada	Niva	84-99	16.03	12.03	21.05	9.02
Honda	CR-V	97-01	13.88	11.73	16.35	4.62
Honda	CR-V	02-05	17.02	13.08	21.84	8.76
Honda	HR-V	99-02	15.37	10.91	21.22	10.31
Subaru	Forester	97-02	13.00	10.45	16.05	5.60
Subaru	Forester	02-05	14.65	9.98	20.99	11.01
Suzuki	Vitara / Escudo	88-98	15.21	13.61	16.96	3.35
Suzuki	Grand Vitara	99-05	11.93	7.84	17.75	9.91
Holden / Suzuki	Drover / Sierra / Samurai / SJ410 / SJ413	82-99	14.38	12.90	15.99	3.09
Suzuki	Jimny	98-05	15.59	9.64	24.22	14.58
Toyota	RAV4	94-00	15.63	13.71	17.76	4.06
Toyota	RAV4	01-05	14.07	11.25	17.46	6.21
<b>Medium Four Wheel Drive Vehicles</b>			16.77	16.04	17.53	1.49
Daewoo / Ssangong	Musso	98-02	10.19	5.86	17.15	11.29
Holden / Isuzu	Jackaroo / Bighorn	82-91	20.05	16.70	23.87	7.16
Holden / Isuzu	Jackaroo / Bighorn	92-97	17.55	14.20	21.49	7.29
Holden / Isuzu	Jackaroo / Bighorn	98-02	22.59	18.16	27.72	9.56
Holden	Frontera / Mu	95-03	15.37	10.51	21.93	11.42
Hyundai	Santa Fe	00-05	18.82	12.41	27.51	15.10
Mitsubishi	Pajero	82-90	18.91	16.64	21.41	4.77
Mitsubishi	Pajero	92-99	17.67	16.03	19.43	3.40
Mitsubishi	Pajero NM / NP	00-05	15.67	11.90	20.35	8.46
Mitsubishi	Challenger	98-05	20.22	15.01	26.68	11.67
Jeep	Cherokee XJ	96-00	19.23	16.48	22.32	5.84
Jeep	Wrangler	96-04	24.22	17.79	32.05	14.26
Land Rover	Defender	92-05	17.78	12.68	24.35	11.67
Land Rover	Discovery	91-02	18.02	14.82	21.73	6.91
Nissan	Pathfinder / Terrano	88-94	22.04	17.73	27.05	9.32
Nissan	Pathfinder / Terrano / Regulus	95-05	15.70	12.10	20.13	8.03
Toyota	Landcruiser Prado	96-03	19.23	14.94	24.40	9.45
Toyota	Landcruiser Prado	03-05	15.35	10.76	21.44	10.68

Make	Model of Car	Years of Manufacture	Pr(Risk) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
<b>Large Four Wheel Drive Vehicles</b>			18.42	17.92	18.93	1.01
Ford	Bronco	82-87	26.07	18.27	35.75	17.48
Ford	Explorer	00-01	15.22	10.73	21.16	10.43
Jeep	Grand Cherokee ZG	96-99	16.20	11.18	22.89	11.71
Mercedes Benz	M-Class W163	98-05	27.10	19.72	36.01	16.28
Nissan	Patrol / Safari	82-87	21.19	18.49	24.16	5.67
Nissan / Ford	Patrol / Maverick / Safari	88-97	19.24	18.06	20.47	2.41
Nissan	Patrol / Safari	98-04	20.31	18.20	22.61	4.41
Land Rover	Range Rover	82-94	20.80	17.26	24.86	7.60
Toyota	Landcruiser	82-89	20.87	19.63	22.16	2.53
Toyota	Landcruiser	90-97	20.65	19.61	21.71	2.10
Toyota	Landcruiser	98-05	18.82	17.12	20.63	3.51
<b>Commercial Vehicles- Vans</b>			17.70	17.10	18.30	1.20
Daihatsu	Handivan	82-90	8.01	5.69	11.17	5.48
Ford	Falcon Panel Van	82-95	15.91	14.36	17.59	3.23
Ford	Falcon Panel Van	96-99	15.35	11.66	19.95	8.28
Ford	Transit	95-00	20.46	17.35	23.96	6.62
Ford	Transit	01-05	15.96	10.99	22.60	11.61
Holden	Shuttle / WFR Van	82-87	19.35	14.95	24.68	9.74
Kia	Pregio	02-05	17.58	12.11	24.81	12.70
Mercedes Benz	MB100 / MB140	99-04	23.69	17.54	31.19	13.65
Mercedes Benz	Vito / Viano	99-05	23.38	17.78	30.09	12.31
Mercedes Benz	Sprinter	98-04	20.53	15.24	27.06	11.82
Honda	Acty	83-86	11.70	7.25	18.35	11.10
Holden / Suzuki	Scurry / Carry	82-00	11.45	7.68	16.72	9.05
Toyota	Hiace/Liteace	82-86	19.75	17.95	21.69	3.74
Toyota	Hiace/Liteace	87-89	20.64	18.27	23.24	4.97
Toyota	Hiace/Liteace	90-95	22.50	20.90	24.18	3.28
Toyota	Hiace/Liteace	96-04	20.52	18.85	22.30	3.45
Volkswagen	Caravelle / Transporter	88-94	21.01	15.37	28.04	12.67
Volkswagen	Caravelle / Transporter	95-04	21.67	17.86	26.04	8.18
<b>Commercial Vehicles- Utes</b>			16.03	15.70	16.36	0.66
Ford / Nissan	Falcon Ute / XFN Ute	82-95	17.87	16.81	18.97	2.16
Ford	Falcon Ute	96-99	18.58	16.48	20.89	4.40
Ford	Falcon Ute AU	00-02	19.87	17.48	22.49	5.01
Ford	Falcon Ute BA/BF	03-05	18.40	14.75	22.71	7.95
Ford	Ford F-Series	82-92	22.26	19.13	25.73	6.60
Holden	Commodore Ute VG/VP	90-93	14.60	12.32	17.23	4.91
Holden / Isuzu	Rodeo / Pickup	82-85	15.86	12.30	20.22	7.92
Holden / Isuzu	Rodeo / Pickup	86-88	16.39	12.23	21.60	9.37
Holden / Isuzu	Rodeo / Pickup	89-95	17.88	16.64	19.18	2.54
Holden	Rodeo	96-98	17.62	15.76	19.65	3.89
Holden	Rodeo	99-02	18.88	16.73	21.23	4.49
Holden	WB Series	82-85	17.57	15.26	20.15	4.89
Holden	Commodore Ute VR/VS	94-00	16.90	15.71	18.16	2.46
Holden	Commodore VU Ute	00-02	14.95	12.48	17.82	5.33
Holden	Commodore VY/VZ Ute	02-05	16.21	13.43	19.44	6.01

Make	Model of Car	Years of Manufacture	Pr(Risk) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Holden	Rodeo	03-04	17.07	14.14	20.47	6.32
Mitsubishi	Triton MK	96-05	16.56	13.56	20.06	6.49
Kia	Ceres	92-00	12.68	10.08	15.85	5.77
Ford / Mazda	Courier / B-Series / Bounty	98-02	15.81	13.40	18.56	5.16
Ford / Mazda	Courier / Bravo / Bounty	03-05	14.93	10.17	21.38	11.21
Nissan	720 Ute	82-85	17.14	14.58	20.05	5.48
Nissan	Navara	86-91	17.30	15.66	19.07	3.41
Nissan	Navara	92-96	18.91	16.61	21.44	4.83
Nissan	Navara	97-05	17.91	15.26	20.90	5.64
Subaru	Brumby	82-92	14.57	12.03	17.54	5.51
Suzuki	Mighty Boy	85-88	10.34	6.73	15.56	8.82
Toyota	4Runner/Hilux	82-85	18.26	16.66	19.97	3.31
Toyota	4Runner/Hilux	86-88	17.88	16.18	19.72	3.54
Toyota	4Runner/Hilux	89-97	17.77	16.95	18.62	1.67
Toyota	Hilux	98-02	18.05	16.56	19.65	3.09
Toyota	Hilux	03-04	19.64	15.83	24.11	8.28
<b>Large Cars</b>			14.23	14.05	14.41	0.36
BMW	7 Series E23	82-88	17.45	11.48	25.63	14.14
BMW	7 Series E32	89-94	18.87	12.32	27.80	15.48
Ford	Falcon XE/XF	82-88	16.26	15.75	16.77	1.02
Ford	Fairlane Z & LTD F	82-87	15.57	14.33	16.90	2.57
Ford	Falcon EA / Falcon EB Series I	88-Mar 92	15.98	15.47	16.51	1.04
Ford	Falcon EB Series II / Falcon ED	Apr 92-94	16.37	15.63	17.14	1.50
Ford	Fairlane N & LTD D	88-94	14.48	13.09	16.00	2.91
Ford	Fairlane N & LTD D	95-98	17.35	14.99	20.00	5.00
Ford	Fairlane & LTD AU	99-02	14.84	11.80	18.50	6.71
Ford	Falcon EF/EL	94-98	16.48	15.95	17.03	1.07
Ford	Falcon AU	98-02	16.53	15.77	17.32	1.54
Ford	Taurus	96-98	16.69	12.40	22.07	9.67
Ford	Falcon BA/BF	02-05	15.86	14.28	17.58	3.30
Holden / Toyota	Commodore VN/VP / Lexcen	89-93	14.65	14.20	15.12	0.91
Holden	Statesman/Caprice WB	82-85	19.14	12.60	27.98	15.39
Holden	Stateman/Caprice VQ	90-93	14.24	10.88	18.42	7.54
Holden	Stateman/Caprice VR/VS	94-98	13.70	12.20	15.34	3.14
Holden / Toyota	Commodore VR/VS / Lexcen	93-97	14.40	13.93	14.88	0.94
Holden	Commodore VT/VX	97-02	16.66	16.07	17.28	1.21
Holden	Statesman/Caprice WH	99-03	15.85	12.80	19.45	6.65
Holden	Commodore VY/VZ	02-05	16.26	14.88	17.73	2.85
Holden	Monaro	01-05	19.19	14.55	24.87	10.32
Holden	Commodore VB-VL	82-88	15.56	15.06	16.08	1.03
Hyundai	Sonata	98-01	14.66	11.71	18.21	6.50
Hyundai	Sonata	89-97	14.06	12.59	15.66	3.07
Hyundai	Grandeur / XG	99-00	17.98	12.40	25.35	12.95
Mitsubishi	Magna TM/TN/TP / Sigma / V3000	85-90	15.06	14.44	15.69	1.24
Mitsubishi	Magna TE/TF/TH/TJ / Verada KE/KF/KH/KJ / Diamante	96-03	15.86	15.08	16.66	1.58
Mitsubishi	Magna TR/TS / Verada KR/KS / V3000 / Diamante	91-96	15.72	15.11	16.36	1.26
Mitsubishi	Magna TL/TW / Verada KL/KW	03-05	15.33	11.37	20.34	8.97
Jaguar	XJ6	82-86	18.90	13.16	26.37	13.21
Jaguar	XJ6	87-94	21.28	16.33	27.25	10.92

Make	Model of Car	Years of Manufacture	Pr(Risk) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Mazda	929 / Luce	82-90	16.17	14.40	18.12	3.72
Mazda	929 / Sentia / Efini MS-9	92-96	13.74	8.65	21.13	12.48
Mercedes Benz	S-Class W126	82-92	13.35	10.60	16.69	6.09
Mercedes Benz	S-Class C140	93-98	14.75	9.15	22.91	13.76
Nissan	Skyline	83-88	16.36	14.94	17.88	2.94
Nissan	300ZX / Fairlady Z	90-95	19.55	14.84	25.32	10.47
Nissan	Maxima	90-94	14.46	11.42	18.15	6.73
Nissan	Maxima / Cefiro	95-99	14.64	11.99	17.76	5.77
Nissan	Maxima	00-02	16.78	11.73	23.41	11.68
Honda	Legend	86-95	18.61	15.12	22.70	7.58
Holden / Toyota	Apollo JM/JP / Camry / Sceptor	93-97	15.16	14.55	15.78	1.24
Toyota	Camry	98-02	15.67	14.84	16.54	1.70
Toyota	Crown / Cressida / Mark II	82-85	15.98	13.78	18.45	4.68
Toyota	Crown / Cressida / Mark II	86-88	12.99	10.11	16.53	6.42
Toyota	Cressida / Mark II	89-93	13.21	11.33	15.36	4.03
Toyota	Supra	82-90	24.48	19.12	30.76	11.64
Lexus	ES300 / Windom	92-01	17.66	13.49	22.77	9.29
Lexus	LS400 / Celsior	90-00	12.86	7.78	20.51	12.73
Toyota	Avalon	00-05	17.97	15.56	20.66	5.10
Toyota	Camry	02-05	14.44	12.46	16.68	4.22
Volvo	850/S70/V70/C70	92-04	16.97	14.60	19.65	5.05
Volvo	700/900 Series	84-92	15.58	13.43	18.00	4.56
<b>Medium Cars</b>			12.99	12.77	13.21	0.44
BMW	3 Series E30	82-91	12.88	11.29	14.66	3.37
BMW	3 Series E36	92-98	12.06	10.78	13.47	2.69
BMW	3 Series E46	99-04	13.34	11.23	15.79	4.56
BMW	5 Series E28	82-88	16.36	13.05	20.32	7.27
BMW	5 Series E34	89-95	13.04	9.98	16.88	6.90
BMW	5 Series E39	96-03	14.48	11.11	18.67	7.56
Daewoo	Espero	95-97	14.92	11.91	18.53	6.62
Daewoo	Leganza	97-02	15.12	11.71	19.30	7.59
Ford	Cortina	82-82	15.51	13.91	17.26	3.35
Ford	Mondeo	95-01	14.45	12.50	16.64	4.13
Ford	Probe	94-98	14.07	8.98	21.36	12.38
Holden	Calibra	94-97	16.30	11.89	21.93	10.03
Holden	Camira	82-89	15.63	14.79	16.50	1.72
Holden	Vectra	97-03	14.31	12.62	16.18	3.56
Mitsubishi	Sigma / Galant / Sapporo / Lambda	82-84	14.17	13.38	15.00	1.63
Mitsubishi	Galant	95-96	13.90	11.68	16.48	4.80
Ford / Mazda	Telstar / 626 / MX6 / Capella	83-86	14.03	13.02	15.11	2.08
Ford / Mazda	Telstar / 626 / MX6 / Capella	88-91	13.67	12.45	14.98	2.54
Ford / Mazda	Telstar / 626 / MX6 / Capella / Cronos	92-97	12.28	11.15	13.51	2.36
Mazda	626	98-02	12.06	10.14	14.28	4.14
Mazda	RX7	82-85	12.55	8.78	17.63	8.85
Mazda	RX7	86-91	16.21	11.05	23.15	12.10
Mazda	Eunos 500	93-99	13.67	9.00	20.24	11.24
Mercedes Benz	C-Class W201	87-93	12.37	9.49	15.97	6.47
Mercedes Benz	C-Class W202	95-00	9.64	7.64	12.09	4.45
Mercedes Benz	E-Class W123	82-85	14.48	10.68	19.34	8.66
Mercedes Benz	E-Class W124	86-94	12.78	10.43	15.57	5.14

Make	Model of Car	Years of Manufacture	Pr(Risk) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Mercedes Benz	E-Class W210	96-02	16.05	12.50	20.37	7.87
Mercedes Benz	C-Class W203	00-05	12.06	8.22	17.36	9.14
Nissan	Pintara	86-88	14.82	13.54	16.20	2.65
Nissan / Ford	Pintara / Corsair / Bluebird	89-92	14.40	13.42	15.44	2.02
Nissan	Bluebird	82-86	13.63	12.72	14.59	1.87
Nissan	Bluebird	93-97	13.76	11.61	16.24	4.63
Nissan	200SX / Silvia	94-02	14.12	11.15	17.72	6.58
Honda	Accord Euro	03-05	10.06	6.07	16.23	10.16
Honda	Accord	82-85	12.65	10.63	14.98	4.34
Honda	Accord	86-90	13.21	11.35	15.32	3.97
Honda	Accord	91-93	13.90	11.63	16.54	4.91
Honda	Accord	94-98	15.65	13.91	17.56	3.65
Honda	Accord	99-02	15.35	11.61	20.04	8.43
Honda	Prelude	82-82	10.38	5.47	18.81	13.34
Honda	Prelude	83-91	13.24	11.63	15.04	3.41
Honda	Prelude	92-96	13.17	10.83	15.93	5.09
Honda	Prelude	97-02	10.87	7.74	15.06	7.32
Peugeot	405	89-97	10.81	7.68	15.00	7.32
Peugeot	505	82-93	12.91	9.48	17.36	7.88
Peugeot	406	96-04	6.42	3.06	12.96	9.90
Renault	Feugo	82-87	12.39	7.53	19.71	12.18
Saab	900 Series	82-92	12.95	10.18	16.33	6.16
Saab	900/9-3	94-02	14.25	11.66	17.30	5.64
Saab	9000	86-97	14.14	11.39	17.42	6.03
Subaru	1800 / Leone / Omega / 4WD Wagon	82-93	12.75	11.57	14.03	2.46
Subaru	Liberty / Legacy	89-93	14.32	13.00	15.75	2.74
Subaru	Liberty / Legacy / Outback	94-98	13.45	11.60	15.53	3.93
Subaru	Liberty / Legacy / Outback	99-03	13.52	11.48	15.86	4.38
Toyota	Corona	82-88	13.86	13.20	14.56	1.36
Toyota	Camry	83-86	15.24	13.67	16.95	3.29
Holden / Toyota	Apollo JK/JL / Camry / Vista	88-92	15.82	15.23	16.43	1.20
Toyota	Celica	81-85	17.20	15.27	19.32	4.05
Toyota	Celica	86-89	16.00	13.95	18.28	4.32
Toyota	Celica	90-93	16.46	14.43	18.71	4.28
Toyota	Celica	94-99	16.27	13.70	19.21	5.51
Toyota	Celica	00-05	14.01	9.97	19.34	9.37
Lexus	IS200 / IS300	99-04	13.27	9.22	18.75	9.53
Volvo	200 Series	82-93	13.80	12.11	15.70	3.59
Volkswagen	Passat	98-05	13.13	8.61	19.52	10.90
<b>People Movers</b>			15.83	15.24	16.45	1.21
Chrysler	Voyager	97-05	22.88	17.88	28.80	10.93
Mitsubishi	Nimbus / Chariot / Spacewagon	85-91	12.06	8.15	17.50	9.35
Mitsubishi	Nimbus / Chariot	92-98	14.20	11.24	17.77	6.53
Mitsubishi	Starwagon / L300	83-86	20.16	17.95	22.56	4.61
Mitsubishi	Starwagon / Delica Starwagon	87-93	17.51	16.14	18.96	2.81
Mitsubishi	Starwagon / Delica Spacegear	95-98	20.59	18.14	23.29	5.15
Mitsubishi	Starwagon / Delica Spacegear	98-03	17.45	14.36	21.04	6.68
Kia	Carnival	99-05	21.18	16.55	26.70	10.15
Mazda	MPV	94-99	20.21	14.86	26.89	12.03
Nissan	Prairie	84-86	12.35	8.20	18.19	9.99
Honda	Odyssey	95-00	15.55	11.69	20.39	8.69

Make	Model of Car	Years of Manufacture	Pr(Risk) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Toyota	Tarago	83-89	15.92	14.43	17.53	3.09
Toyota	Tarago / Previa / Estima	91-99	16.11	14.34	18.04	3.70
Toyota	Tarago / Previa / Estima	00-05	14.93	10.99	19.95	8.96
<b>Light Cars</b>			11.07	10.86	11.29	0.43
Daihatsu	Charade	82-86	11.81	9.86	14.08	4.22
Daihatsu	Charade	88-92	10.46	9.52	11.47	1.95
Daihatsu	Charade	93-00	12.30	11.25	13.43	2.18
Daihatsu	Pyzar	97-01	7.75	4.60	12.79	8.19
Daihatsu	Sirion / Storia	98-04	9.27	7.35	11.62	4.28
Daihatsu	Mira	90-96	10.23	7.74	13.41	5.67
Daewoo	1.5i	94-95	17.53	12.18	24.57	12.38
Daewoo	Cielo	95-97	11.84	10.57	13.23	2.66
Daewoo	Lanos	97-03	15.19	13.78	16.72	2.94
Daewoo	Matiz	99-04	10.50	7.83	13.96	6.13
Ford	Festiva WD/WH/WF	94-01	13.02	12.27	13.81	1.55
Ford	Ka	99-02	11.76	8.07	16.81	8.74
Holden	Barina XC	01-05	11.25	9.10	13.83	4.73
Holden	Barina SB	95-00	11.98	10.97	13.07	2.10
Hyundai	Excel	86-90	15.14	13.54	16.89	3.35
Hyundai	Excel	90-94	12.73	11.89	13.62	1.73
Hyundai	Excel / Accent	95-00	12.54	11.98	13.13	1.15
Hyundai	Getz	02-05	13.62	10.69	17.20	6.52
Hyundai	Accent	00-05	14.13	12.65	15.76	3.11
Mitsubishi	Mirage / Colt	82-88	13.10	12.27	13.98	1.71
Kia	Rio	00-05	13.27	11.00	15.93	4.93
Ford / Mazda	Festiva WA / 121	87-90	12.66	11.62	13.78	2.16
Mazda	121 / Autozam Review	94-96	10.20	8.91	11.65	2.74
Mazda	121 Metro / Demio	97-02	10.55	9.08	12.23	3.15
Nissan	Micra	95-97	11.47	8.97	14.56	5.58
Honda	CRX	87-91	14.17	9.40	20.81	11.41
Honda	CRX	92-98	14.13	8.34	22.92	14.58
Honda	Jazz	02-05	12.53	8.42	18.24	9.82
Honda	City	83-86	9.77	5.93	15.68	9.75
Peugoet	205	87-94	9.79	5.35	17.25	11.90
Peugeot	206	99-05	13.56	9.26	19.43	10.17
Subaru	Sherpa / Fiori / 700 / Rex	89-92	9.71	7.10	13.13	6.03
Suzuki	Swift	82-85	12.48	7.16	20.88	13.73
Holden / Suzuki	Barina / Swift / Cultus	86-88	12.07	10.71	13.59	2.88
Holden / Suzuki	Barina / Swift / Cultus	89-99	11.02	10.38	11.70	1.32
Suzuki	Hatch / Alto	82-84	11.96	9.10	15.56	6.46
Suzuki	Alto	85-00	14.61	9.25	22.30	13.05
Suzuki	Ignis	00-02	14.26	9.72	20.45	10.73
Toyota	Starlet	96-99	11.29	10.06	12.66	2.59
Toyota	Echo	99-05	9.78	8.51	11.22	2.71
Volkswagen	Polo	96-00	10.91	7.69	15.25	7.56
<b>Small Cars</b>			11.51	11.33	11.69	0.36
Alfa Romeo	33	83-92	7.18	4.62	11.00	6.38
Alfa Romeo	75	86-92	17.68	11.42	26.35	14.93
Audi	A4	95-01	12.64	9.32	16.91	7.60

Make	Model of Car	Years of Manufacture	Pr(Risk) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Audi	A3/S3	97-04	12.93	8.10	20.01	11.91
Audi	A4	01-05	12.87	8.71	18.60	9.89
Chrysler	Neon	96-99	12.47	9.05	16.94	7.88
Daihatsu	Applause	89-99	13.35	11.81	15.05	3.24
Daewoo	Nubira	97-03	12.50	10.88	14.33	3.44
Ford	Laser	91-94	12.97	12.22	13.76	1.54
Ford	Laser	95-97	11.52	10.29	12.87	2.58
Ford	Escort	82-82	14.90	12.98	17.04	4.06
Ford	Capri	89-94	14.52	12.35	16.99	4.63
Ford	Focus LR	02-05	11.15	8.14	15.08	6.95
Holden	Gemini	82-84	12.24	11.09	13.49	2.40
Holden	Gemini RB	86-87	11.41	9.10	14.21	5.11
Holden	Astra TR	96-98	12.16	9.83	14.95	5.12
Holden	Astra TS	98-05	11.76	10.69	12.92	2.23
Hyundai	Elantra	00-05	14.42	12.00	17.23	5.22
Hyundai	S Coupe	90-96	11.20	9.13	13.67	4.55
Hyundai	Lantra	91-95	13.89	12.06	15.93	3.87
Hyundai	Lantra	96-00	14.00	12.65	15.48	2.83
Hyundai	Coupe	96-00	14.79	11.73	18.49	6.76
Mitsubishi	Lancer / Mirage CA	89-90	11.63	10.49	12.88	2.40
Mitsubishi	Lancer / Mirage CB	91-92	14.43	12.08	17.15	5.07
Mitsubishi	Lancer / Mirage CC	93-95	11.24	10.28	12.27	2.00
Mitsubishi	Lancer / Mirage CE	96-03	12.30	11.63	13.01	1.38
Mitsubishi	Cordia	83-87	16.11	13.66	18.91	5.26
Mitsubishi	Lancer CH	03-05	13.84	10.21	18.49	8.28
Ford / Mazda	Laser / 323 / Familia	82-88	13.08	12.60	13.58	0.98
Mazda	323 / Familia / Lantis	90-93	12.39	10.98	13.96	2.98
Mazda	323 / Familia / Lantis	95-98	11.34	10.13	12.69	2.56
Ford / Mazda	Laser / 323	99-03	11.97	10.78	13.28	2.51
Mazda	MX5 / Eunos Roadster	89-97	14.31	10.41	19.37	8.96
Mazda	Eunos 30X / Presso / MX-3 / Autozam AZ-3	90-97	11.16	7.69	15.91	8.21
Mazda	3	03-05	13.65	10.07	18.26	8.19
Mercedes Benz	A-Class W168	98-05	12.76	8.00	19.73	11.72
Holden / Nissan	Astra / Pulsar / Langley	84-86	12.51	11.59	13.49	1.91
Holden / Nissan	Astra / Pulsar / Vector / Sentra	88-90	13.19	12.41	14.01	1.60
Nissan	Pulsar / Vector / Sentra	92-95	13.39	12.30	14.57	2.27
Nissan	Pulsar / Vector / Sentra	96-99	13.07	12.08	14.12	2.04
Nissan	Stanza	82-83	15.57	11.37	20.94	9.57
Nissan	Gazelle / Silvia	84-86	13.01	8.78	18.86	10.08
Nissan	Exa	83-86	20.57	15.56	26.70	11.14
Nissan	Exa	87-91	15.29	9.79	23.08	13.28
Nissan	NX/NX-R	91-96	18.09	14.67	22.10	7.43
Nissan	Pulsar	00-05	11.88	10.62	13.26	2.64
Honda	Civic	82-83	9.82	6.93	13.76	6.83
Honda	Civic / Ballade / Shuttle	84-87	13.53	11.70	15.59	3.89
Honda	Civic / Shuttle	88-91	12.96	11.61	14.44	2.83
Honda	Civic	92-95	12.70	11.45	14.07	2.62
Honda	Civic	96-00	14.67	13.32	16.12	2.80
Honda	Civic	01-05	10.21	7.63	13.52	5.89
Honda	Integra	86-88	12.67	9.39	16.87	7.48
Honda	Integra	90-92	16.44	12.75	20.94	8.20
Honda	Integra	93-01	13.11	10.28	16.56	6.28
Honda	Concerto	89-93	10.16	7.10	14.35	7.25

<b>Make</b>	<b>Model of Car</b>	<b>Years of Manufacture</b>	<b>Pr(Risk) %</b>	<b>Lower 95% Confidence Limit</b>	<b>Upper 95% Confidence Limit</b>	<b>Width of Confidence Interval</b>
Peugeot	306	94-01	11.36	8.95	14.32	5.37
Proton	Wira	95-96	12.92	10.62	15.64	5.02
Renault	19	91-96	13.55	8.91	20.07	11.15
Rover	Quintet	82-86	10.37	5.62	18.37	12.75
MG	MGF / MG TF	99-05	8.87	4.77	15.93	11.16
Subaru	Impreza	93-00	13.23	11.81	14.80	3.00
Subaru	Impreza	01-05	14.14	11.30	17.54	6.23
Suzuki	Baleno / Cultus Crescent	95-02	11.27	9.36	13.50	4.15
Toyota	Corolla	82-84	11.88	11.04	12.77	1.73
Toyota	Corolla	86-88	12.41	11.71	13.14	1.43
Toyota / Holden	Corolla / Nova	89-93	12.88	12.32	13.47	1.15
Toyota / Holden	Corolla / Nova	94-97	11.56	10.91	12.25	1.34
Toyota	Corolla	98-01	12.89	11.72	14.16	2.43
Toyota	Corolla	02-05	13.08	11.66	14.64	2.97
Toyota	Tercel	83-88	14.71	10.84	19.66	8.82
Toyota	Paseo / Cynos	91-99	11.34	9.35	13.68	4.33
Toyota	Corolla 4WD Wagon	92-96	17.62	13.34	22.91	9.56
Volvo	S40/V40	97-04	13.69	10.36	17.88	7.53
Volkswagen	Golf	82-94	12.11	7.53	18.92	11.39
Volkswagen	Golf	95-98	12.53	9.95	15.67	5.71
Volkswagen	Golf / Bora	99-04	13.34	10.91	16.21	5.31

## AGGRESSIVITY INJURY SEVERITY RATINGS

**New South Wales and Victoria Data (1987-2005), South Australia Data (1995-2005),  
Queensland, Western Australia and New Zealand Data (1991-2005)**

Make	Model of Car	Years of Manufacture	Pr(Severity) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
ALL VEHICLE AVERAGE			22.51			
<b>Compact Four Wheel Drive Vehicles</b>			21.84	20.45	23.30	2.85
Daihatsu	Feroza / Rocky	89-97	20.49	14.41	28.28	13.87
Daihatsu	Rocky / Rugger	85-98	30.35	20.97	41.72	20.75
Daihatsu	Terios	97-05	17.91	10.48	28.90	18.41
Holden	Cruze	02-05	19.44	6.38	46.05	39.67
Kia	Sportage	98-03	20.12	12.75	30.28	17.53
Ford / Mazda	Escape / Tribute	01-05	16.72	10.02	26.57	16.55
Nissan	X-Trail	01-05	25.09	15.37	38.20	22.84
Lada	Niva	84-99	25.16	16.41	36.52	20.11
Honda	CR-V	97-01	20.84	16.09	26.55	10.47
Honda	CR-V	02-05	25.67	17.24	36.40	19.16
Honda	HR-V	99-02	34.45	22.25	49.13	26.88
Subaru	Forester	97-02	15.92	11.28	22.00	10.72
Subaru	Forester	02-05	28.98	17.78	43.49	25.71
Suzuki	Vitara / Escudo	88-98	24.21	20.38	28.51	8.14
Suzuki	Grand Vitara	99-05	14.52	7.64	25.86	18.23
Holden / Suzuki	Drover / Sierra / Samurai / SJ410 / SJ413	82-99	22.07	18.52	26.07	7.54
Suzuki	Jimny	98-05	27.28	13.36	47.73	34.37
Toyota	RAV4	94-00	26.20	22.03	30.85	8.83
Toyota	RAV4	01-05	22.91	16.34	31.15	14.82
<b>Medium Four Wheel Drive Vehicles</b>			23.07	21.69	24.52	2.83
Daewoo	/Musso	98-02	26.41	14.79	42.59	27.80
Ssangong						
Holden / Isuzu	Jackaroo / Bighorn	82-91	25.75	20.19	32.22	12.04
Holden / Isuzu	Jackaroo / Bighorn	92-97	27.49	20.83	35.32	14.49
Holden / Isuzu	Jackaroo / Bighorn	98-02	25.55	17.54	35.63	18.09
Holden	Frontera / Mu	95-03	25.13	14.34	40.23	25.89
Hyundai	Santa Fe	00-05	19.31	9.78	34.58	24.80
Mitsubishi	Pajero	82-90	25.53	21.75	29.72	7.97
Mitsubishi	Pajero	92-99	23.94	20.48	27.78	7.30
Mitsubishi	Pajero NM / NP	00-05	22.57	13.58	35.09	21.51
Mitsubishi	Challenger	98-05	14.44	8.05	24.55	16.50
Jeep	Cherokee XJ	96-00	21.55	16.41	27.76	11.35
Jeep	Wrangler	96-04	23.30	14.42	35.40	20.98
Land Rover	Defender	92-05	23.29	14.13	35.90	21.77
Land Rover	Discovery	91-02	19.21	14.51	25.00	10.48
Nissan	Pathfinder / Terrano	88-94	22.41	18.28	27.17	8.89
Nissan	Pathfinder / Terrano / Regulus	95-05	27.82	21.08	35.75	14.67
Toyota	Landcruiser Prado	96-03	33.77	23.29	46.13	22.85
Toyota	Landcruiser Prado	03-05	31.77	20.30	45.99	25.69

Make	Model of Car	Years of Manufacture	Pr(Severity) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
<b>Large Four Wheel Drive Vehicles</b>			27.39	26.33	28.46	2.13
Ford	Bronco	82-87	26.65	15.80	41.29	25.49
Ford	Explorer	00-01	17.07	9.62	28.48	18.86
Jeep	Grand Cherokee ZG	96-99	22.16	13.63	33.95	20.32
Mercedes Benz	M-Class W163	98-05	16.39	9.34	27.17	17.83
Nissan	Patrol / Safari	82-87	28.53	23.64	33.97	10.33
Nissan / Ford	Patrol / Maverick / Safari	88-97	26.14	23.71	28.71	5.00
Nissan	Patrol / Safari	98-04	28.72	24.72	33.08	8.36
Land Rover	Range Rover	82-94	28.68	21.73	36.80	15.07
Toyota	Landcruiser	82-89	30.59	28.04	33.27	5.23
Toyota	Landcruiser	90-97	29.44	27.30	31.68	4.38
Toyota	Landcruiser	98-05	29.87	26.37	33.63	7.26
<b>Commercial Vehicles- Vans</b>			23.20	22.12	24.31	2.19
Daihatsu	Handivan	82-90	29.26	20.62	39.70	19.08
Ford	Falcon Panel Van	82-95	23.09	19.64	26.95	7.31
Ford	Falcon Panel Van	96-99	22.10	13.73	33.60	19.88
Ford	Transit	95-00	18.21	13.05	24.84	11.79
Ford	Transit	01-05	20.84	12.01	33.68	21.66
Holden	Shuttle / WFR Van	82-87	19.43	12.55	28.85	16.30
Kia	Pregio	02-05	21.89	10.58	39.90	29.32
Mercedes Benz	MB100 / MB140	99-04	20.02	10.64	34.48	23.84
Mercedes Benz	Vito / Viano	99-05	24.71	15.21	37.51	22.30
Mercedes Benz	Sprinter	98-04	18.71	10.40	31.34	20.95
Honda	Acty	83-86	13.38	6.31	26.16	19.85
Holden / Suzuki	Scurry / Carry	82-00	22.47	14.51	33.10	18.59
Toyota	Hiace/Liteace	82-86	27.55	24.87	30.41	5.54
Toyota	Hiace/Liteace	87-89	25.62	22.40	29.13	6.73
Toyota	Hiace/Liteace	90-95	23.78	21.37	26.37	4.99
Toyota	Hiace/Liteace	96-04	23.21	20.06	26.69	6.63
Volkswagen	Caravelle / Transporter	88-94	22.16	10.82	40.05	29.24
Volkswagen	Caravelle / Transporter	95-04	26.17	18.24	36.02	17.78
<b>Commercial Vehicles- Utes</b>			24.46	23.73	25.20	1.46
Ford / Nissan	Falcon Ute / XFN Ute	82-95	23.24	21.05	25.58	4.54
Ford	Falcon Ute	96-99	23.25	18.68	28.55	9.87
Ford	Falcon Ute AU	00-02	23.09	18.64	28.24	9.60
Ford	Falcon Ute BA/BF	03-05	27.15	18.61	37.80	19.19
Ford	Ford F-Series	82-92	27.93	21.86	34.94	13.08
Holden	Commodore Ute VG/VP	90-93	18.83	14.26	24.43	10.17
Holden / Isuzu	Rodeo / Pickup	82-85	29.22	22.10	37.52	15.42
Holden / Isuzu	Rodeo / Pickup	86-88	21.63	12.92	33.92	21.00
Holden / Isuzu	Rodeo / Pickup	89-95	27.87	25.09	30.82	5.73
Holden	Rodeo	96-98	25.46	21.38	30.02	8.64
Holden	Rodeo	99-02	26.41	21.97	31.38	9.41
Holden	WB Series	82-85	26.25	21.29	31.89	10.59
Holden	Commodore Ute VR/VS	94-00	26.13	23.19	29.30	6.11
Holden	Commodore VU Ute	00-02	27.03	20.31	34.99	14.68
Holden	Commodore VY/VZ Ute	02-05	36.07	27.70	45.37	17.67
Holden	Rodeo	03-04	25.00	17.44	34.46	17.02

Make	Model of Car	Years of Manufacture	Pr(Severity) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Mitsubishi	Triton MK	96-05	28.91	19.20	41.04	21.84
Kia	Ceres	92-00	25.97	17.54	36.65	19.11
Ford / Mazda	Courier / B-Series / Bounty	98-02	25.48	19.70	32.27	12.57
Ford / Mazda	Courier / Bravo / Bounty	03-05	27.53	15.79	43.50	27.71
Nissan	720 Ute	82-85	20.14	15.71	25.45	9.73
Nissan	Navara	86-91	25.80	22.69	29.16	6.47
Nissan	Navara	92-96	23.35	19.30	27.95	8.66
Nissan	Navara	97-05	24.58	19.41	30.60	11.19
Subaru	Brumby	82-92	26.63	20.86	33.33	12.46
Suzuki	Mighty Boy	85-88	21.20	11.62	35.51	23.90
Toyota	4Runner/Hilux	82-85	27.92	24.80	31.27	6.47
Toyota	4Runner/Hilux	86-88	26.56	23.56	29.79	6.23
Toyota	4Runner/Hilux	89-97	25.33	23.73	27.00	3.28
Toyota	Hilux	98-02	27.15	23.78	30.80	7.03
Toyota	Hilux	03-04	25.19	16.74	36.04	19.30
<b>Large Cars</b>			21.81	21.40	22.23	0.83
BMW	7 Series E23	82-88	13.53	5.63	29.11	23.48
BMW	7 Series E32	89-94	26.27	15.14	41.56	26.42
Ford	Falcon XE/XF	82-88	23.52	22.49	24.58	2.09
Ford	Fairlane Z & LTD F	82-87	23.24	20.48	26.25	5.77
Ford	Falcon EA / Falcon EB Series I	88-Mar 92	23.63	22.49	24.81	2.32
Ford	Falcon EB Series II / Falcon ED	Apr 92-94	23.27	21.65	24.98	3.33
Ford	Fairlane N & LTD D	88-94	22.23	19.16	25.64	6.48
Ford	Fairlane N & LTD D	95-98	22.64	17.96	28.13	10.17
Ford	Fairlane & LTD AU	99-02	23.01	16.02	31.89	15.87
Ford	Falcon EF/EL	94-98	22.64	21.47	23.85	2.38
Ford	Falcon AU	98-02	22.40	20.82	24.07	3.26
Ford	Taurus	96-98	22.49	14.32	33.51	19.19
Ford	Falcon BA/BF	02-05	23.26	19.54	27.45	7.91
Holden / Toyota	Commodore VN/VP / Lexcen	89-93	22.43	21.37	23.54	2.17
Holden	Statesman/Caprice WB	82-85	38.86	18.77	63.60	44.83
Holden	Stateman/Caprice VQ	90-93	24.25	16.66	33.90	17.24
Holden	Stateman/Caprice VR/VS	94-98	23.94	20.04	28.33	8.29
Holden / Toyota	Commodore VR/VS / Lexcen	93-97	22.96	21.78	24.19	2.41
Holden	Commodore VT/VX	97-02	22.76	21.40	24.18	2.78
Holden	Statesman/Caprice WH	99-03	21.18	14.98	29.08	14.11
Holden	Commodore VY/VZ	02-05	20.56	17.36	24.17	6.82
Holden	Monaro	01-05	32.53	20.81	46.95	26.14
Holden	Commodore VB-VL	82-88	22.94	21.81	24.10	2.29
Hyundai	Sonata	98-01	17.34	10.82	26.61	15.79
Hyundai	Sonata	89-97	24.96	21.08	29.29	8.21
Hyundai	Grandeaur / XG	99-00	22.22	10.38	41.35	30.97
Mitsubishi	Magna TM/TN/TP / Sigma / V3000	85-90	23.05	21.64	24.53	2.89
Mitsubishi	Magna TE/TF/TH/TJ / Verada KE/KF/KH/KJ / Diamante	96-03	20.79	18.98	22.73	3.75
Mitsubishi	Magna TR/TS / Verada KR/KS / V3000 / Diamante	91-96	21.79	20.39	23.26	2.87
Mitsubishi	Magna TL/TW / Verada KL/KW	03-05	30.31	16.85	48.29	31.44
Jaguar	XJ6	82-86	28.88	19.02	41.25	22.23
Jaguar	XJ6	87-94	19.96	12.05	31.22	19.17
Mazda	929 / Luce	82-90	19.53	16.37	23.13	6.77

Make	Model of Car	Years of Manufacture	Pr(Severity) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Mazda	929 / Sentia / Efini MS-9	92-96	48.69	31.63	66.07	34.44
Mercedes Benz	S-Class W126	82-92	18.59	12.27	27.15	14.88
Mercedes Benz	S-Class C140	93-98	23.75	12.81	39.79	26.99
Nissan	Skyline	83-88	21.19	18.60	24.03	5.44
Nissan	300ZX / Fairlady Z	90-95	26.21	18.09	36.36	18.27
Nissan	Maxima	90-94	22.91	17.68	29.13	11.45
Nissan	Maxima / Cefiro	95-99	18.71	13.99	24.57	10.58
Nissan	Maxima	00-02	23.34	15.22	34.06	18.84
Honda	Legend	86-95	24.57	18.34	32.09	13.75
Holden / Toyota	Apollo JM/JP / Camry / Sceptor	93-97	22.45	20.91	24.08	3.17
Toyota	Camry	98-02	23.35	21.25	25.59	4.33
Toyota	Crown / Cressida / Mark II	82-85	25.08	20.84	29.86	9.02
Toyota	Crown / Cressida / Mark II	86-88	25.99	18.78	34.79	16.01
Toyota	Cressida / Mark II	89-93	18.93	14.64	24.12	9.47
Toyota	Supra	82-90	27.12	19.03	37.08	18.06
Lexus	ES300 / Windom	92-01	19.12	12.78	27.63	14.85
Lexus	LS400 / Celsior	90-00	33.30	18.68	52.04	33.36
Toyota	Avalon	00-05	25.07	19.67	31.38	11.71
Toyota	Camry	02-05	23.14	17.15	30.45	13.31
Volvo	850/S70/V70/C70	92-04	25.83	20.38	32.15	11.77
Volvo	700/900 Series	84-92	22.48	17.73	28.08	10.35
<b>Medium Cars</b>			20.93	20.43	21.44	1.01
BMW	3 Series E30	82-91	21.29	17.82	25.23	7.41
BMW	3 Series E36	92-98	24.38	20.87	28.27	7.41
BMW	3 Series E46	99-04	22.16	16.67	28.82	12.15
BMW	5 Series E28	82-88	23.75	17.11	31.98	14.87
BMW	5 Series E34	89-95	27.64	21.02	35.41	14.39
BMW	5 Series E39	96-03	15.55	9.54	24.33	14.78
Daewoo	Espero	95-97	20.65	13.73	29.83	16.10
Daewoo	Leganza	97-02	27.20	18.06	38.78	20.73
Ford	Cortina	82-82	22.86	19.52	26.58	7.06
Ford	Mondeo	95-01	22.32	18.21	27.06	8.85
Ford	Probe	94-98	38.75	21.75	59.02	37.27
Holden	Calibra	94-97	26.78	18.71	36.77	18.06
Holden	Camira	82-89	22.08	20.33	23.93	3.60
Holden	Vectra	97-03	22.83	19.03	27.14	8.11
Mitsubishi	Sigma / Galant / Sapporo / Lambda	82-84	22.38	20.62	24.25	3.63
Mitsubishi	Galant	95-96	21.58	17.13	26.80	9.67
Ford / Mazda	Telstar / 626 / MX6 / Capella	83-86	21.42	19.59	23.36	3.77
Ford / Mazda	Telstar / 626 / MX6 / Capella	88-91	23.98	21.59	26.54	4.96
Ford / Mazda	Telstar / 626 / MX6 / Capella / Cronos	92-97	20.54	18.05	23.28	5.22
Mazda	626	98-02	27.25	21.90	33.34	11.44
Mazda	RX7	82-85	34.84	24.70	46.56	21.86
Mazda	RX7	86-91	18.56	11.12	29.34	18.22
Mazda	Eunos 500	93-99	20.55	10.69	35.85	25.17
Mercedes Benz	C-Class W201	87-93	23.80	16.47	33.10	16.64
Mercedes Benz	C-Class W202	95-00	24.82	18.14	32.97	14.83
Mercedes Benz	E-Class W123	82-85	17.88	10.27	29.29	19.01
Mercedes Benz	E-Class W124	86-94	26.45	20.05	34.01	13.96
Mercedes Benz	E-Class W210	96-02	23.21	15.63	33.03	17.41

Make	Model of Car	Years of Manufacture	Pr(Severity) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Mercedes Benz	C-Class W203	00-05	6.18	0.86	33.30	32.44
Nissan	Pintara	86-88	22.78	19.83	26.02	6.19
Nissan / Ford	Pintara / Corsair / Bluebird	89-92	24.08	21.80	26.53	4.74
Nissan	Bluebird	82-86	21.20	19.33	23.19	3.86
Nissan	Bluebird	93-97	18.28	14.82	22.33	7.51
Nissan	200SX / Silvia	94-02	26.03	18.13	35.88	17.75
Honda	Accord Euro	03-05	18.06	8.96	33.05	24.09
Honda	Accord	82-85	17.90	14.75	21.55	6.80
Honda	Accord	86-90	23.09	19.74	26.83	7.09
Honda	Accord	91-93	16.97	12.81	22.14	9.33
Honda	Accord	94-98	19.43	15.70	23.80	8.11
Honda	Accord	99-02	18.58	11.34	28.93	17.59
Honda	Prelude	82-82	16.78	6.40	37.30	30.90
Honda	Prelude	83-91	22.22	19.37	25.36	5.99
Honda	Prelude	92-96	20.71	15.71	26.79	11.09
Honda	Prelude	97-02	25.97	16.90	37.70	20.80
Peugeot	405	89-97	21.06	15.18	28.45	13.27
Peugeot	505	82-93	26.47	17.89	37.30	19.41
Peugeot	406	96-04	32.97	18.96	50.82	31.86
Renault	Feugo	82-87	13.61	6.40	26.65	20.24
Saab	900 Series	82-92	16.25	10.57	24.15	13.58
Saab	900/9-3	94-02	19.70	13.84	27.25	13.41
Saab	9000	86-97	17.52	11.72	25.38	13.66
Subaru	1800 / Leone / Omega / 4WD Wagon	82-93	19.11	16.72	21.75	5.03
Subaru	Liberty / Legacy	89-93	20.36	17.81	23.18	5.37
Subaru	Liberty / Legacy / Outback	94-98	25.02	20.40	30.29	9.88
Subaru	Liberty / Legacy / Outback	99-03	21.12	16.10	27.19	11.09
Toyota	Corona	82-88	23.21	21.53	24.98	3.44
Toyota	Camry	83-86	20.35	17.08	24.07	6.99
Holden / Toyota	Apollo JK/JL / Camry / Vista	88-92	21.07	19.76	22.45	2.69
Toyota	Celica	81-85	21.97	18.32	26.11	7.79
Toyota	Celica	86-89	24.11	19.72	29.12	9.40
Toyota	Celica	90-93	23.11	18.82	28.04	9.22
Toyota	Celica	94-99	21.24	15.54	28.32	12.78
Toyota	Celica	00-05	34.11	21.45	49.53	28.09
Lexus	IS200 / IS300	99-04	15.43	5.05	38.51	33.47
Volvo	200 Series	82-93	22.89	18.83	27.54	8.71
Volkswagen	Passat	98-05	24.91	13.77	40.79	27.02
<b>People Movers</b>			22.53	21.32	23.79	2.47
Chrysler	Voyager	97-05	23.55	14.51	35.87	21.36
Mitsubishi	Nimbus / Chariot / Spacewagon	85-91	20.13	14.22	27.71	13.49
Mitsubishi	Nimbus / Chariot	92-98	23.75	16.60	32.77	16.17
Mitsubishi	Starwagon / L300	83-86	24.25	20.96	27.87	6.91
Mitsubishi	Starwagon / Delica Starwagon	87-93	23.72	21.17	26.48	5.31
Mitsubishi	Starwagon / Delica Spacegear	95-98	20.81	16.25	26.23	9.98
Mitsubishi	Starwagon / Delica Spacegear	98-03	23.39	16.49	32.06	15.57
Kia	Carnival	99-05	22.73	14.20	34.33	20.13
Mazda	MPV	94-99	23.82	12.65	40.32	27.68
Nissan	Prairie	84-86	24.22	16.63	33.87	17.24
Honda	Odyssey	95-00	23.16	15.50	33.11	17.61
Toyota	Tarago	83-89	25.63	22.35	29.22	6.86

Make	Model of Car	Years of Manufacture	Pr(Severity) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Toyota	Tarago / Previa / Estima	91-99	22.11	18.35	26.40	8.05
Toyota	Tarago / Previa / Estima	00-05	25.40	15.15	39.38	24.22
<b>Light Cars</b>			19.97	19.35	20.61	1.27
Daihatsu	Charade	82-86	22.00	17.64	27.08	9.43
Daihatsu	Charade	88-92	20.24	17.29	23.55	6.26
Daihatsu	Charade	93-00	19.67	16.38	23.44	7.06
Daihatsu	Pyzar	97-01	18.18	8.18	35.67	27.49
Daihatsu	Sirion / Storia	98-04	17.56	10.72	27.43	16.71
Daihatsu	Mira	90-96	22.38	15.94	30.48	14.54
Daewoo	1.5i	94-95	12.44	3.18	38.06	34.88
Daewoo	Cielo	95-97	20.04	16.27	24.42	8.15
Daewoo	Lanos	97-03	21.15	17.74	25.03	7.30
Daewoo	Matiz	99-04	17.08	9.24	29.43	20.20
Ford	Festiva WD/WH/WF	94-01	19.71	17.61	21.99	4.38
Ford	Ka	99-02	25.64	14.98	40.30	25.32
Holden	Barina XC	01-05	17.79	12.29	25.06	12.77
Holden	Barina SB	95-00	22.42	19.17	26.05	6.88
Hyundai	Excel	86-90	20.96	17.45	24.96	7.51
Hyundai	Excel	90-94	21.65	19.14	24.38	5.24
Hyundai	Excel / Accent	95-00	21.55	19.86	23.35	3.49
Hyundai	Getz	02-05	38.92	28.01	51.06	23.06
Hyundai	Accent	00-05	18.00	14.31	22.40	8.09
Mitsubishi	Mirage / Colt	82-88	21.59	19.52	23.81	4.29
Kia	Rio	00-05	28.26	20.84	37.08	16.24
Ford / Mazda	Festiva WA / 121	87-90	19.27	16.49	22.39	5.90
Mazda	121 / Autozam Review	94-96	17.92	13.77	22.99	9.22
Mazda	121 Metro / Demio	97-02	17.24	12.88	22.69	9.80
Nissan	Micra	95-97	20.86	13.00	31.75	18.75
Honda	CRX	87-91	21.51	15.75	28.66	12.91
Honda	CRX	92-98	30.81	17.34	48.60	31.27
Honda	Jazz	02-05	28.51	15.60	46.26	30.66
Honda	City	83-86	21.03	15.48	27.91	12.43
Peugeot	205	87-94	18.82	8.54	36.52	27.98
Peugeot	206	99-05	20.58	9.71	38.42	28.71
Subaru	Sherpa / Fiori / 700 / Rex	89-92	20.95	14.71	28.95	14.24
Suzuki	Swift	82-85	23.24	11.14	42.24	31.09
Holden / Suzuki	Barina / Swift / Cultus	86-88	19.37	16.23	22.95	6.72
Holden / Suzuki	Barina / Swift / Cultus	89-99	20.88	18.83	23.09	4.26
Suzuki	Hatch / Alto	82-84	26.52	18.96	35.76	16.80
Suzuki	Alto	85-00	25.65	16.88	36.95	20.07
Suzuki	Ignis	00-02	15.15	6.79	30.44	23.65
Toyota	Starlet	96-99	21.86	17.98	26.30	8.32
Toyota	Echo	99-05	21.92	17.44	27.17	9.73
Volkswagen	Polo	96-00	18.29	10.29	30.40	20.12
<b>Small Cars</b>			20.48	20.02	20.95	0.93
Alfa Romeo	33	83-92	24.72	16.37	35.53	19.16
Alfa Romeo	75	86-92	22.08	9.44	43.52	34.08
Audi	A4	95-01	19.28	12.12	29.24	17.12
Audi	A3/S3	97-04	27.92	14.41	47.13	32.71
Audi	A4	01-05	18.61	9.64	32.91	23.27

Make	Model of Car	Years of Manufacture	Pr(Severity) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Chrysler	Neon	96-99	15.03	8.06	26.31	18.24
Daihatsu	Applause	89-99	18.54	14.68	23.14	8.45
Daewoo	Nubira	97-03	19.77	15.34	25.10	9.76
Ford	Laser	91-94	21.36	19.46	23.39	3.92
Ford	Laser	95-97	23.26	19.61	27.34	7.73
Ford	Escort	82-82	18.00	13.20	24.05	10.86
Ford	Capri	89-94	17.84	13.27	23.56	10.29
Ford	Focus LR	02-05	26.20	16.41	39.10	22.69
Holden	Gemini	82-84	21.25	18.36	24.46	6.10
Holden	Gemini RB	86-87	21.26	14.92	29.37	14.45
Holden	Astra TR	96-98	21.87	15.63	29.72	14.09
Holden	Astra TS	98-05	22.23	19.01	25.82	6.81
Hyundai	Elantra	00-05	18.99	12.50	27.79	15.29
Hyundai	S Coupe	90-96	18.06	12.31	25.71	13.40
Hyundai	Lantra	91-95	19.27	14.36	25.36	11.00
Hyundai	Lantra	96-00	21.69	18.17	25.69	7.52
Hyundai	Coupe	96-00	18.01	11.35	27.38	16.03
Mitsubishi	Lancer / Mirage CA	89-90	21.54	18.80	24.57	5.77
Mitsubishi	Lancer / Mirage CB	91-92	23.43	17.89	30.05	12.16
Mitsubishi	Lancer / Mirage CC	93-95	20.13	17.44	23.13	5.69
Mitsubishi	Lancer / Mirage CE	96-03	20.97	18.90	23.21	4.30
Mitsubishi	Cordia	83-87	26.37	22.46	30.70	8.24
Mitsubishi	Lancer CH	03-05	34.29	20.52	51.32	30.80
Ford / Mazda	Laser / 323 / Familia	82-88	21.09	20.04	22.18	2.13
Mazda	323 / Familia / Lantis	90-93	18.36	15.87	21.15	5.29
Mazda	323 / Familia / Lantis	95-98	19.04	15.63	22.99	7.36
Ford / Mazda	Laser / 323	99-03	19.44	15.99	23.43	7.44
Mazda	MX5 / Eunos Roadster	89-97	18.46	10.89	29.56	18.67
Mazda	Eunos 30X / Presso / MX-3 / Autozam AZ-3	90-97	24.61	13.49	40.59	27.11
Mazda	3	03-05	19.42	8.98	37.05	28.07
Mercedes Benz	A-Class W168	98-05	12.42	4.00	32.57	28.57
Holden / Nissan	Astra / Pulsar / Langley	84-86	24.50	22.18	26.99	4.81
Holden / Nissan	Astra / Pulsar / Vector / Sentra	88-90	23.33	21.33	25.47	4.14
Nissan	Pulsar / Vector / Sentra	92-95	22.70	20.11	25.52	5.41
Nissan	Pulsar / Vector / Sentra	96-99	19.78	17.12	22.74	5.62
Nissan	Stanza	82-83	32.15	21.66	44.82	23.16
Nissan	Gazelle / Silvia	84-86	23.72	17.15	31.84	14.69
Nissan	Exa	83-86	25.13	16.84	35.76	18.91
Nissan	Exa	87-91	32.40	19.71	48.34	28.63
Nissan	NX/NX-R	91-96	24.36	17.42	32.97	15.54
Nissan	Pulsar	00-05	25.00	20.47	30.15	9.68
Honda	Civic	82-83	21.59	16.02	28.44	12.42
Honda	Civic / Ballade / Shuttle	84-87	20.54	17.16	24.40	7.24
Honda	Civic / Shuttle	88-91	19.66	16.76	22.91	6.15
Honda	Civic	92-95	23.01	19.89	26.46	6.57
Honda	Civic	96-00	15.70	12.70	19.24	6.53
Honda	Civic	01-05	19.62	12.52	29.41	16.90
Honda	Integra	86-88	15.47	10.82	21.63	10.81
Honda	Integra	90-92	25.71	18.96	33.85	14.89
Honda	Integra	93-01	17.64	12.31	24.62	12.30
Honda	Concerto	89-93	24.74	17.42	33.86	16.44
Peugeot	306	94-01	22.82	16.64	30.45	13.81
Proton	Wira	95-96	25.25	17.93	34.32	16.39

<b>Make</b>	<b>Model of Car</b>	<b>Years of Manufacture</b>	<b>Pr(Severity) %</b>	<b>Lower 95% Confidence Limit</b>	<b>Upper 95% Confidence Limit</b>	<b>Width of Confidence Interval</b>
Renault	19	91-96	19.89	10.54	34.34	23.81
Rover	Quintet	82-86	8.12	2.50	23.34	20.84
MG	MGF / MG TF	99-05	12.50	3.14	38.64	35.50
Subaru	Impreza	93-00	26.99	23.11	31.26	8.15
Subaru	Impreza	01-05	13.78	7.91	22.93	15.02
Suzuki	Baleno / Cultus Crescent	95-02	13.93	9.05	20.84	11.80
Toyota	Corolla	82-84	20.38	18.48	22.42	3.94
Toyota	Corolla	86-88	22.59	20.82	24.47	3.65
Toyota / Holden	Corolla / Nova	89-93	22.08	20.62	23.61	2.99
Toyota / Holden	Corolla / Nova	94-97	20.84	18.93	22.89	3.96
Toyota	Corolla	98-01	22.74	19.28	26.60	7.32
Toyota	Corolla	02-05	21.01	17.06	25.58	8.52
Toyota	Tercel	83-88	17.83	10.17	29.37	19.20
Toyota	Paseo / Cynos	91-99	24.71	18.04	32.86	14.82
Toyota	Corolla 4WD Wagon	92-96	25.78	15.29	40.05	24.76
Volvo	S40/V40	97-04	17.37	8.76	31.51	22.75
Volkswagen	Golf	82-94	33.61	22.34	47.12	24.78
Volkswagen	Golf	95-98	27.77	19.61	37.73	18.12
Volkswagen	Golf / Bora	99-04	17.91	12.36	25.25	12.89

**AGGRESSIVITY RATINGS  
(WITH 95% CONFIDENCE LIMITS)**

**New South Wales and Victoria Data (1987-2005), South Australia Data (1995-2005),  
Queensland, Western Australia and New Zealand Data (1991-2005)**

<b>Make</b>	<b>Model of Car</b>	<b>Years of Manufacture</b>	<b>Serious injury rate per 100 drivers involved</b>	<b>Lower 95% Confidence Limit</b>	<b>Upper 95% Confidence Limit</b>	<b>Width of Confidence Interval</b>
<b>ALL VEHICLE AVERAGE</b>			3.29			
<b>Compact Four Wheel Drive Vehicles</b>			2.94	2.71	3.18	0.46
Daihatsu	Feroza / Rocky	89-97	3.64	2.48	5.36	2.88
Daihatsu	Rocky / Rugger	85-98	5.12	3.27	8.02	4.75
Daihatsu	Terios	97-05	2.66	1.49	4.77	3.29
Holden	Cruze	02-05	1.93	0.62	6.03	5.41
Kia	Sportage	98-03	3.43	2.07	5.69	3.62
Ford / Mazda	Escape / Tribute	01-05	2.05	1.13	3.72	2.59
Nissan	X-Trail	01-05	2.85	1.59	5.12	3.53
Lada	Niva	84-99	4.03	2.47	6.59	4.12
Honda	CR-V	97-01	2.89	2.14	3.91	1.77
Honda	CR-V	02-05	4.37	2.77	6.88	4.11
Honda	HR-V	99-02	5.29	3.15	8.90	5.76
Subaru	Forester	97-02	2.07	1.39	3.08	1.69
Subaru	Forester	02-05	4.24	2.36	7.62	5.26
Suzuki	Vitara / Escudo	88-98	3.68	3.01	4.50	1.49
Suzuki	Grand Vitara	99-05	1.73	0.83	3.63	2.80
Holden / Suzuki	Drover / Sierra / Samurai / SJ410 / SJ413	82-99	3.17	2.59	3.88	1.29
Suzuki	Jimny	98-05	4.25	1.92	9.42	7.50
Toyota	RAV4	94-00	4.10	3.31	5.07	1.76
Toyota	RAV4	01-05	3.22	2.18	4.77	2.59
<b>Medium Four Wheel Drive Vehicles</b>			3.87	3.59	4.17	0.59
Daewoo Ssangong	/Musso	98-02	2.69	1.26	5.75	4.49
Holden / Isuzu	Jackaroo / Bighorn	82-91	5.16	3.84	6.93	3.09
Holden / Isuzu	Jackaroo / Bighorn	92-97	4.82	3.45	6.75	3.31
Holden / Isuzu	Jackaroo / Bighorn	98-02	5.77	3.81	8.73	4.92
Holden	Frontera / Mu	95-03	3.86	2.04	7.31	5.27
Hyundai	Santa Fe	00-05	3.63	1.71	7.73	6.02
Mitsubishi	Pajero	82-90	4.83	3.95	5.90	1.95
Mitsubishi	Pajero	92-99	4.23	3.53	5.07	1.53
Mitsubishi	Pajero NM / NP	00-05	3.54	2.04	6.12	4.08
Mitsubishi	Challenger	98-05	2.92	1.55	5.49	3.94
Jeep	Cherokee XJ	96-00	4.15	3.06	5.62	2.56
Jeep	Wrangler	96-04	5.64	3.29	9.68	6.40
Land Rover	Defender	92-05	4.14	2.33	7.34	5.00
Land Rover	Discovery	91-02	3.46	2.48	4.83	2.35
Nissan	Pathfinder / Terrano	88-94	4.94	3.69	6.60	2.91
Nissan	Pathfinder / Terrano / Regulus	95-05	4.37	3.03	6.31	3.28

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Toyota	Landcruiser Prado	96-03	6.49	4.26	9.91	5.65
Toyota	Landcruiser Prado	03-05	4.88	2.85	8.35	5.50
<b>Large Four Wheel Drive Vehicles</b>			5.04	4.81	5.29	0.48
Ford	Bronco	82-87	6.95	3.85	12.54	8.69
Ford	Explorer	00-01	2.60	1.36	4.95	3.59
Jeep	Grand Cherokee ZG	96-99	3.59	2.00	6.44	4.43
Mercedes Benz	M-Class W163	98-05	4.44	2.40	8.23	5.83
Nissan	Patrol / Safari	82-87	6.04	4.82	7.57	2.75
Nissan / Ford	Patrol / Maverick / Safari	88-97	5.03	4.48	5.64	1.15
Nissan	Patrol / Safari	98-04	5.83	4.86	7.00	2.13
Land Rover	Range Rover	82-94	5.97	4.33	8.22	3.90
Toyota	Landcruiser	82-89	6.38	5.75	7.09	1.34
Toyota	Landcruiser	90-97	6.08	5.55	6.65	1.10
Toyota	Landcruiser	98-05	5.62	4.82	6.55	1.73
<b>Commercial Vehicles- Vans</b>			4.10	3.87	4.35	0.48
Daihatsu	Handivan	82-90	2.34	1.46	3.76	2.29
Ford	Falcon Panel Van	82-95	3.67	3.04	4.43	1.39
Ford	Falcon Panel Van	96-99	3.39	2.01	5.74	3.73
Ford	Transit	95-00	3.73	2.60	5.35	2.75
Ford	Transit	01-05	3.33	1.77	6.26	4.50
Holden	Shuttle / WFR Van	82-87	3.76	2.31	6.13	3.82
Kia	Pregio	02-05	3.85	1.79	8.26	6.46
Mercedes Benz	MB100 / MB140	99-04	4.74	2.45	9.18	6.73
Mercedes Benz	Vito / Viano	99-05	5.78	3.42	9.77	6.36
Mercedes Benz	Sprinter	98-04	3.84	2.05	7.19	5.14
Honda	Acty	83-86	1.57	0.66	3.69	3.02
Holden / Suzuki	Scurry / Carry	82-00	2.57	1.46	4.55	3.09
Toyota	Hiace/Liteace	82-86	5.44	4.74	6.25	1.51
Toyota	Hiace/Liteace	87-89	5.29	4.43	6.32	1.89
Toyota	Hiace/Liteace	90-95	5.35	4.71	6.08	1.37
Toyota	Hiace/Liteace	96-04	4.76	4.03	5.62	1.59
Volkswagen	Caravelle / Transporter	88-94	4.66	2.25	9.66	7.41
Volkswagen	Caravelle / Transporter	95-04	5.67	3.84	8.38	4.54
<b>Commercial Vehicles- Utes</b>			3.92	3.78	4.06	0.29
Ford / Nissan	Falcon Ute / XFN Ute	82-95	4.15	3.70	4.66	0.96
Ford	Falcon Ute	96-99	4.32	3.39	5.51	2.12
Ford	Falcon Ute AU	00-02	4.59	3.60	5.85	2.25
Ford	Falcon Ute BA/BF	03-05	5.00	3.29	7.58	4.28
Ford	Ford F-Series	82-92	6.22	4.71	8.21	3.50
Holden	Commodore Ute VG/VP	90-93	2.75	2.00	3.78	1.78
Holden / Isuzu	Rodeo / Pickup	82-85	4.63	3.22	6.67	3.45
Holden / Isuzu	Rodeo / Pickup	86-88	3.54	2.02	6.23	4.21
Holden / Isuzu	Rodeo / Pickup	89-95	4.98	4.40	5.64	1.25
Holden	Rodeo	96-98	4.49	3.66	5.49	1.83
Holden	Rodeo	99-02	4.98	4.02	6.18	2.15
Holden	WB Series	82-85	4.61	3.61	5.89	2.29

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Holden	Commodore Ute VR/VS	94-00	4.42	3.85	5.07	1.22
Holden	Commodore VU Ute	00-02	4.04	2.92	5.60	2.68
Holden	Commodore VY/VZ Ute	02-05	5.85	4.29	7.96	3.67
Holden	Rodeo	03-04	4.27	2.89	6.30	3.40
Mitsubishi	Triton MK	96-05	4.79	3.12	7.35	4.24
Kia	Ceres	92-00	3.29	2.13	5.09	2.95
Ford / Mazda	Courier / B-Series / Bounty	98-02	4.03	3.00	5.42	2.42
Ford / Mazda	Courier / Bravo / Bounty	03-05	4.11	2.18	7.74	5.56
Nissan	720 Ute	82-85	3.45	2.58	4.61	2.03
Nissan	Navara	86-91	4.46	3.80	5.23	1.43
Nissan	Navara	92-96	4.41	3.52	5.53	2.01
Nissan	Navara	97-05	4.40	3.34	5.81	2.47
Subaru	Brumby	82-92	3.88	2.87	5.24	2.37
Suzuki	Mighty Boy	85-88	2.19	1.08	4.43	3.35
Toyota	4Runner/Hilux	82-85	5.10	4.40	5.91	1.51
Toyota	4Runner/Hilux	86-88	4.75	4.07	5.54	1.46
Toyota	4Runner/Hilux	89-97	4.50	4.16	4.88	0.72
Toyota	Hilux	98-02	4.90	4.20	5.72	1.53
Toyota	Hilux	03-04	4.95	3.19	7.68	4.49
<b>Large Cars</b>			<b>3.10</b>	<b>3.03</b>	<b>3.17</b>	<b>0.14</b>
BMW	7 Series E23	82-88	2.36	0.94	5.96	5.03
BMW	7 Series E32	89-94	4.96	2.58	9.53	6.95
Ford	Falcon XE/XF	82-88	3.82	3.62	4.04	0.42
Ford	Fairlane Z & LTD F	82-87	3.62	3.12	4.20	1.08
Ford	Falcon EA / Falcon EB Series I	88-Mar 92	3.78	3.56	4.01	0.44
Ford	Falcon EB Series II / Falcon ED	Apr 92-94	3.81	3.50	4.15	0.65
Ford	Fairlane N & LTD D	88-94	3.22	2.70	3.84	1.15
Ford	Fairlane N & LTD D	95-98	3.93	3.01	5.13	2.12
Ford	Fairlane & LTD AU	99-02	3.41	2.26	5.16	2.90
Ford	Falcon EF/EL	94-98	3.73	3.51	3.97	0.46
Ford	Falcon AU	98-02	3.70	3.40	4.04	0.64
Ford	Taurus	96-98	3.75	2.24	6.29	4.05
Ford	Falcon BA/BF	02-05	3.69	3.02	4.50	1.48
Holden / Toyota	Commodore VN/VP / Lexcen	89-93	3.29	3.10	3.48	0.38
Holden	Statesman/Caprice WB	82-85	7.44	3.56	15.54	11.98
Holden	Stateman/Caprice VQ	90-93	3.45	2.22	5.38	3.17
Holden	Stateman/Caprice VR/VS	94-98	3.28	2.66	4.04	1.37
Holden / Toyota	Commodore VR/VS / Lexcen	93-97	3.31	3.11	3.52	0.41
Holden	Commodore VT/VX	97-02	3.79	3.53	4.07	0.54
Holden	Statesman/Caprice WH	99-03	3.36	2.27	4.97	2.71
Holden	Commodore VY/VZ	02-05	3.34	2.77	4.03	1.26
Holden	Monaro	01-05	6.24	3.82	10.19	6.36
Holden	Commodore VB-VL	82-88	3.57	3.36	3.79	0.43
Hyundai	Sonata	98-01	2.54	1.54	4.21	2.67
Hyundai	Sonata	89-97	3.51	2.88	4.27	1.39
Hyundai	Grandeur / XG	99-00	4.00	1.82	8.79	6.98
Mitsubishi	Magna TM/TN/TP / Sigma / V3000	85-90	3.47	3.22	3.74	0.52
Mitsubishi	Magna TE/TF/TH/TJ / Verada KE/KF/KH/KJ / Diamante	96-03	3.30	2.97	3.65	0.68

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Mitsubishi	Magna TR/TS / Verada KR/KS / V3000 / Diamante	91-96	3.43	3.17	3.70	0.53
Mitsubishi	Magna TL/TW / Verada KL/KW	03-05	4.65	2.53	8.53	5.99
Jaguar	XJ6	82-86	5.46	3.24	9.21	5.97
Jaguar	XJ6	87-94	4.25	2.47	7.32	4.85
Mazda	929 / Luce	82-90	3.16	2.57	3.89	1.32
Mazda	929 / Sentia / Efini MS-9	92-96	6.69	3.74	11.96	8.21
Mercedes Benz	S-Class W126	82-92	2.48	1.57	3.93	2.36
Mercedes Benz	S-Class C140	93-98	3.50	1.68	7.31	5.63
Nissan	Skyline	83-88	3.47	2.96	4.05	1.09
Nissan	300ZX / Fairlady Z	90-95	5.12	3.30	7.97	4.67
Nissan	Maxima	90-94	3.31	2.36	4.66	2.30
Nissan	Maxima / Cefiro	95-99	2.74	1.94	3.86	1.92
Nissan	Maxima	00-02	3.92	2.30	6.67	4.37
Honda	Legend	86-95	4.57	3.23	6.47	3.23
Holden / Toyota	Apollo JM/JP / Camry / Sceptor	93-97	3.40	3.14	3.69	0.55
Toyota	Camry	98-02	3.66	3.29	4.07	0.79
Toyota	Crown / Cressida / Mark II	82-85	4.01	3.18	5.05	1.88
Toyota	Crown / Cressida / Mark II	86-88	3.38	2.27	5.01	2.74
Toyota	Cressida / Mark II	89-93	2.50	1.87	3.35	1.49
Toyota	Supra	82-90	6.64	4.40	10.01	5.61
Lexus	ES300 / Windom	92-01	3.38	2.11	5.39	3.28
Lexus	LS400 / Celsius	90-00	4.28	2.10	8.72	6.61
Toyota	Avalon	00-05	4.51	3.43	5.92	2.50
Toyota	Camry	02-05	3.34	2.42	4.61	2.20
Volvo	850/S70/V70/C70	92-04	4.38	3.34	5.76	2.42
Volvo	700/900 Series	84-92	3.50	2.67	4.60	1.94
<b>Medium Cars</b>			2.72	2.64	2.80	0.16
BMW	3 Series E30	82-91	2.74	2.21	3.41	1.20
BMW	3 Series E36	92-98	2.94	2.43	3.55	1.12
BMW	3 Series E46	99-04	2.96	2.14	4.08	1.94
BMW	5 Series E28	82-88	3.89	2.65	5.71	3.06
BMW	5 Series E34	89-95	3.60	2.49	5.22	2.74
BMW	5 Series E39	96-03	2.25	1.32	3.86	2.54
Daewoo	Espero	95-97	3.08	1.97	4.82	2.86
Daewoo	Leganza	97-02	4.11	2.60	6.51	3.91
Ford	Cortina	82-82	3.55	2.94	4.28	1.34
Ford	Mondeo	95-01	3.23	2.53	4.12	1.59
Ford	Probe	94-98	5.45	2.80	10.61	7.81
Holden	Calibra	94-97	4.36	2.76	6.90	4.13
Holden	Camira	82-89	3.45	3.13	3.81	0.68
Holden	Vectra	97-03	3.27	2.63	4.06	1.43
Mitsubishi	Sigma / Galant / Sapporo / Lambda	82-84	3.17	2.87	3.50	0.63
Mitsubishi	Galant	95-96	3.00	2.26	3.98	1.72
Ford / Mazda	Telstar / 626 / MX6 / Capella	83-86	3.01	2.68	3.37	0.69
Ford / Mazda	Telstar / 626 / MX6 / Capella	88-91	3.28	2.85	3.77	0.91
Ford / Mazda	Telstar / 626 / MX6 / Capella / Cronos	92-97	2.52	2.15	2.96	0.81
Mazda	626	98-02	3.29	2.50	4.31	1.81

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Mazda	RX7	82-85	4.37	2.73	7.02	4.29
Mazda	RX7	86-91	3.01	1.63	5.56	3.93
Mazda	Eunos 500	93-99	2.81	1.35	5.86	4.51
Mercedes Benz	C-Class W201	87-93	2.94	1.90	4.56	2.65
Mercedes Benz	C-Class W202	95-00	2.39	1.64	3.49	1.85
Mercedes Benz	E-Class W123	82-85	2.59	1.41	4.75	3.33
Mercedes Benz	E-Class W124	86-94	3.38	2.42	4.71	2.29
Mercedes Benz	E-Class W210	96-02	3.72	2.38	5.83	3.46
Mercedes Benz	C-Class W203	00-05	0.75	0.11	5.17	5.06
Nissan	Pintara	86-88	3.38	2.87	3.97	1.10
Nissan / Ford	Pintara / Corsair / Bluebird	89-92	3.47	3.07	3.91	0.84
Nissan	Bluebird	82-86	2.89	2.58	3.24	0.66
Nissan	Bluebird	93-97	2.51	1.93	3.28	1.35
Nissan	200SX / Silvia	94-02	3.67	2.43	5.56	3.13
Honda	Accord Euro	03-05	1.82	0.80	4.15	3.35
Honda	Accord	82-85	2.26	1.75	2.92	1.17
Honda	Accord	86-90	3.05	2.46	3.78	1.32
Honda	Accord	91-93	2.36	1.70	3.27	1.57
Honda	Accord	94-98	3.04	2.39	3.86	1.47
Honda	Accord	99-02	2.85	1.65	4.92	3.27
Honda	Prelude	82-82	1.74	0.58	5.20	4.62
Honda	Prelude	83-91	2.94	2.44	3.54	1.10
Honda	Prelude	92-96	2.73	1.96	3.79	1.83
Honda	Prelude	97-02	2.82	1.67	4.77	3.09
Peugeot	405	89-97	2.28	1.44	3.61	2.17
Peugeot	505	82-93	3.42	2.12	5.51	3.39
Peugeot	406	96-04	2.12	0.88	5.10	4.22
Renault	Feugo	82-87	1.69	0.71	4.02	3.31
Saab	900 Series	82-92	2.10	1.30	3.39	2.09
Saab	900/9-3	94-02	2.81	1.89	4.16	2.26
Saab	9000	86-97	2.48	1.59	3.86	2.27
Subaru	1800 / Leone / Omega / 4WD Wagon	82-93	2.44	2.07	2.87	0.80
Subaru	Liberty / Legacy	89-93	2.92	2.48	3.43	0.95
Subaru	Liberty / Legacy / Outback	94-98	3.36	2.63	4.30	1.67
Subaru	Liberty / Legacy / Outback	99-03	2.86	2.10	3.89	1.79
Toyota	Corona	82-88	3.22	2.94	3.52	0.57
Toyota	Camry	83-86	3.10	2.53	3.80	1.27
Holden / Toyota	Apollo JK/JL / Camry / Vista	88-92	3.33	3.09	3.59	0.49
Toyota	Celica	81-85	3.78	3.05	4.68	1.62
Toyota	Celica	86-89	3.86	3.04	4.89	1.85
Toyota	Celica	90-93	3.80	3.00	4.83	1.83
Toyota	Celica	94-99	3.46	2.45	4.88	2.43
Toyota	Celica	00-05	4.78	2.79	8.18	5.38
Lexus	IS200 / IS300	99-04	2.05	0.68	6.17	5.49
Volvo	200 Series	82-93	3.16	2.51	3.98	1.47
Volkswagen	Passat	98-05	3.27	1.65	6.49	4.84
<b>People Movers</b>			<b>3.57</b>	<b>3.34</b>	<b>3.81</b>	<b>0.48</b>
Chrysler	Voyager	97-05	5.39	3.22	9.02	5.80
Mitsubishi	Nimbus / Chariot / Spacewagon	85-91	2.43	1.46	4.04	2.58

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Mitsubishi	Nimbus / Chariot	92-98	3.37	2.23	5.09	2.85
Mitsubishi	Starwagon / L300	83-86	4.89	4.07	5.87	1.80
Mitsubishi	Starwagon / Delica Starwagon	87-93	4.15	3.62	4.77	1.15
Mitsubishi	Starwagon / Delica Spacegear	95-98	4.28	3.27	5.62	2.35
Mitsubishi	Starwagon / Delica Spacegear	98-03	4.08	2.78	6.00	3.22
Kia	Carnival	99-05	4.81	2.91	7.98	5.07
Mazda	MPV	94-99	4.82	2.49	9.30	6.80
Nissan	Prairie	84-86	2.99	1.75	5.11	3.36
Honda	Odyssey	95-00	3.60	2.25	5.77	3.53
Toyota	Tarago	83-89	4.08	3.46	4.81	1.36
Toyota	Tarago / Previa / Estima	91-99	3.56	2.87	4.42	1.55
Toyota	Tarago / Previa / Estima	00-05	3.79	2.15	6.68	4.53
<b>Light Cars</b>			2.21	2.13	2.30	0.16
Daihatsu	Charade	82-86	2.60	1.97	3.43	1.47
Daihatsu	Charade	88-92	2.12	1.77	2.54	0.77
Daihatsu	Charade	93-00	2.42	1.98	2.96	0.98
Daihatsu	Pyzar	97-01	1.41	0.57	3.49	2.92
Daihatsu	Sirion / Storia	98-04	1.63	0.96	2.75	1.79
Daihatsu	Mira	90-96	2.29	1.50	3.51	2.01
Daewoo	1.5i	94-95	2.18	0.58	8.24	7.67
Daewoo	Cielo	95-97	2.37	1.88	2.99	1.11
Daewoo	Lanos	97-03	3.21	2.64	3.92	1.28
Daewoo	Matiz	99-04	1.79	0.93	3.45	2.51
Ford	Festiva WD/WH/WF	94-01	2.57	2.26	2.91	0.65
Ford	Ka	99-02	3.01	1.62	5.60	3.98
Holden	Barina XC	01-05	2.00	1.32	3.03	1.71
Holden	Barina SB	95-00	2.69	2.25	3.21	0.95
Hyundai	Excel	86-90	3.17	2.57	3.92	1.35
Hyundai	Excel	90-94	2.76	2.40	3.17	0.77
Hyundai	Excel / Accent	95-00	2.70	2.46	2.97	0.50
Hyundai	Getz	02-05	5.30	3.61	7.78	4.17
Hyundai	Accent	00-05	2.54	1.98	3.27	1.28
Mitsubishi	Mirage / Colt	82-88	2.83	2.51	3.19	0.67
Kia	Rio	00-05	3.75	2.66	5.29	2.63
Ford / Mazda	Festiva WA / 121	87-90	2.44	2.05	2.91	0.86
Mazda	121 / Autozam Review	94-96	1.83	1.37	2.44	1.07
Mazda	121 Metro / Demio	97-02	1.82	1.32	2.51	1.19
Nissan	Micra	95-97	2.39	1.44	3.99	2.55
Honda	CRX	87-91	3.05	1.85	5.02	3.17
Honda	CRX	92-98	4.35	2.10	9.01	6.91
Honda	Jazz	02-05	3.57	1.82	7.00	5.18
Honda	City	83-86	2.05	1.16	3.64	2.47
Peugeot	205	87-94	1.84	0.72	4.74	4.02
Peugeot	206	99-05	2.79	1.27	6.15	4.89
Subaru	Sherpa / Fiori / 700 / Rex	89-92	2.03	1.29	3.22	1.93
Suzuki	Swift	82-85	2.90	1.22	6.89	5.67
Holden / Suzuki	Barina / Swift / Cultus	86-88	2.34	1.89	2.89	0.99
Holden / Suzuki	Barina / Swift / Cultus	89-99	2.30	2.04	2.59	0.55
Suzuki	Hatch / Alto	82-84	3.17	2.09	4.81	2.72
Suzuki	Alto	85-00	3.75	2.07	6.77	4.70

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Suzuki	Ignis	00-02	2.16	0.93	5.04	4.12
Toyota	Starlet	96-99	2.47	1.98	3.08	1.11
Toyota	Echo	99-05	2.14	1.65	2.79	1.13
Volkswagen	Polo	96-00	1.99	1.05	3.80	2.76
<b>Small Cars</b>			2.36	2.29	2.42	0.13
Alfa Romeo	33	83-92	1.78	0.99	3.18	2.19
Alfa Romeo	75	86-92	3.90	1.61	9.46	7.85
Audi	A4	95-01	2.44	1.43	4.16	2.73
Audi	A3/S3	97-04	3.61	1.70	7.67	5.97
Audi	A4	01-05	2.39	1.16	4.96	3.80
Chrysler	Neon	96-99	1.87	0.96	3.68	2.72
Daihatsu	Applause	89-99	2.48	1.91	3.20	1.29
Daewoo	Nubira	97-03	2.47	1.86	3.28	1.41
Ford	Laser	91-94	2.77	2.48	3.09	0.61
Ford	Laser	95-97	2.68	2.19	3.27	1.08
Ford	Escort	82-82	2.68	1.93	3.73	1.80
Ford	Capri	89-94	2.59	1.86	3.60	1.73
Ford	Focus LR	02-05	2.92	1.71	4.99	3.28
Holden	Gemini	82-84	2.60	2.19	3.09	0.91
Holden	Gemini RB	86-87	2.43	1.62	3.64	2.03
Holden	Astra TR	96-98	2.66	1.81	3.91	2.10
Holden	Astra TS	98-05	2.61	2.18	3.13	0.95
Hyundai	Elantra	00-05	2.74	1.76	4.25	2.49
Hyundai	S Coupe	90-96	2.02	1.33	3.08	1.75
Hyundai	Lantra	91-95	2.68	1.95	3.67	1.73
Hyundai	Lantra	96-00	3.04	2.49	3.71	1.23
Hyundai	Coupe	96-00	2.66	1.62	4.38	2.77
Mitsubishi	Lancer / Mirage CA	89-90	2.51	2.12	2.97	0.85
Mitsubishi	Lancer / Mirage CB	91-92	3.38	2.47	4.63	2.16
Mitsubishi	Lancer / Mirage CC	93-95	2.26	1.91	2.67	0.76
Mitsubishi	Lancer / Mirage CE	96-03	2.58	2.30	2.90	0.60
Mitsubishi	Cordia	83-87	4.25	3.39	5.33	1.94
Mitsubishi	Lancer CH	03-05	4.75	2.74	8.22	5.48
Ford / Mazda	Laser / 323 / Familia	82-88	2.76	2.59	2.94	0.35
Mazda	323 / Familia / Lantis	90-93	2.28	1.89	2.74	0.86
Mazda	323 / Familia / Lantis	95-98	2.16	1.73	2.70	0.97
Ford / Mazda	Laser / 323	99-03	2.33	1.87	2.89	1.02
Mazda	MX5 / Eunos Roadster	89-97	2.64	1.46	4.77	3.31
Mazda	Eunos 30X / Presso / MX-3 / Autozam AZ-3	90-97	2.74	1.41	5.34	3.93
Mazda	3	03-05	2.65	1.22	5.78	4.56
Mercedes Benz	A-Class W168	98-05	1.58	0.49	5.08	4.58
Holden / Nissan	Astra / Pulsar / Langley	84-86	3.06	2.71	3.47	0.76
Holden / Nissan	Astra / Pulsar / Vector / Sentra	88-90	3.08	2.76	3.43	0.66
Nissan	Pulsar / Vector / Sentra	92-95	3.04	2.63	3.52	0.89
Nissan	Pulsar / Vector / Sentra	96-99	2.58	2.20	3.04	0.84
Nissan	Stanza	82-83	5.00	3.11	8.06	4.96
Nissan	Gazelle / Silvia	84-86	3.09	1.88	5.05	3.17
Nissan	Exa	83-86	5.17	3.25	8.24	4.99
Nissan	Exa	87-91	4.95	2.65	9.25	6.60

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
Nissan	NX/NX-R	91-96	4.41	3.01	6.45	3.43
Nissan	Pulsar	00-05	2.97	2.37	3.71	1.34
Honda	Civic	82-83	2.12	1.35	3.32	1.97
Honda	Civic / Ballade / Shuttle	84-87	2.78	2.21	3.49	1.27
Honda	Civic / Shuttle	88-91	2.55	2.10	3.08	0.98
Honda	Civic	92-95	2.92	2.45	3.49	1.04
Honda	Civic	96-00	2.30	1.83	2.89	1.06
Honda	Civic	01-05	2.00	1.20	3.36	2.16
Honda	Integra	86-88	1.96	1.24	3.09	1.84
Honda	Integra	90-92	4.23	2.88	6.20	3.31
Honda	Integra	93-01	2.31	1.52	3.52	2.01
Honda	Concerto	89-93	2.51	1.55	4.09	2.54
Peugeot	306	94-01	2.59	1.77	3.80	2.04
Proton	Wira	95-96	3.26	2.23	4.77	2.53
Renault	19	91-96	2.69	1.31	5.55	4.24
Rover	Quintet	82-86	0.84	0.23	3.04	2.81
MG	MGF / MG TF	99-05	1.11	0.26	4.65	4.38
Subaru	Impreza	93-00	3.57	2.96	4.31	1.36
Subaru	Impreza	01-05	1.95	1.09	3.48	2.38
Suzuki	Baleno / Cultus Crescent	95-02	1.57	0.99	2.48	1.49
Toyota	Corolla	82-84	2.42	2.15	2.73	0.59
Toyota	Corolla	86-88	2.80	2.54	3.09	0.56
Toyota / Holden	Corolla / Nova	89-93	2.84	2.62	3.08	0.46
Toyota / Holden	Corolla / Nova	94-97	2.41	2.16	2.69	0.54
Toyota	Corolla	98-01	2.93	2.43	3.53	1.10
Toyota	Corolla	02-05	2.75	2.18	3.47	1.29
Toyota	Tercel	83-88	2.62	1.42	4.84	3.42
Toyota	Paseo / Cynos	91-99	2.80	1.96	4.00	2.04
Toyota	Corolla 4WD Wagon	92-96	4.54	2.60	7.92	5.32
Volvo	S40/V40	97-04	2.38	1.18	4.80	3.62
Volkswagen	Golf	82-94	4.07	2.24	7.39	5.14
Volkswagen	Golf	95-98	3.48	2.33	5.19	2.85
Volkswagen	Golf / Bora	99-04	2.39	1.59	3.60	2.01

**AGGRESSIVITY RATINGS  
(WITH 90% CONFIDENCE LIMITS)**

**New South Wales and Victoria Data (1987-2005), South Australia Data (1995-2005),  
Queensland, Western Australia and New Zealand Data (1991-2005)**

<b>Make</b>	<b>Model of Car</b>	<b>Years of Manufacture</b>	<b>Serious injury rate per 100 drivers involved</b>	<b>Lower 90% Confidence Limit</b>	<b>Upper 90% Confidence Limit</b>	<b>Width of Confidence Interval</b>
<b>ALL VEHICLE AVERAGE</b>			3.29			
<b>Compact Four Wheel Drive Vehicles</b>			2.94	2.75	3.14	0.39
Daihatsu	Feroza / Rocky	89-97	3.64	2.64	5.03	2.39
Daihatsu	Rocky / Rugged	85-98	5.12	3.52	7.46	3.94
Daihatsu	Terios	97-05	2.66	1.64	4.34	2.70
Holden	Cruze	02-05	1.93	0.74	5.00	4.26
Kia	Sportage	98-03	3.43	2.25	5.24	2.99
Ford / Mazda	Escape / Tribute	01-05	2.05	1.25	3.38	2.13
Nissan	X-Trail	01-05	2.85	1.74	4.65	2.91
Lada	Niva	84-99	4.03	2.68	6.08	3.40
Honda	CR-V	97-01	2.89	2.25	3.72	1.47
Honda	CR-V	02-05	4.37	2.99	6.39	3.41
Honda	HR-V	99-02	5.29	3.43	8.18	4.75
Subaru	Forester	97-02	2.07	1.48	2.89	1.40
Subaru	Forester	02-05	4.24	2.60	6.93	4.32
Suzuki	Vitara / Escudo	88-98	3.68	3.11	4.36	1.24
Suzuki	Grand Vitara	99-05	1.73	0.93	3.22	2.28
Holden / Suzuki	Drover / Sierra / Samurai / SJ410 / SJ413	82-99	3.17	2.68	3.76	1.08
Suzuki	Jimny	98-05	4.25	2.19	8.27	6.09
Toyota	RAV4	94-00	4.10	3.43	4.89	1.47
Toyota	RAV4	01-05	3.22	2.32	4.47	2.15
<b>Medium Four Wheel Drive Vehicles</b>			3.87	3.63	4.12	0.49
Daewoo / Ssangong	Musso	98-02	2.69	1.43	5.08	3.66
Holden / Isuzu	Jackaroo / Bighorn	82-91	5.16	4.03	6.60	2.57
Holden / Isuzu	Jackaroo / Bighorn	92-97	4.82	3.64	6.39	2.75
Holden / Isuzu	Jackaroo / Bighorn	98-02	5.77	4.08	8.16	4.08
Holden	Frontera / Mu	95-03	3.86	2.26	6.59	4.33
Hyundai	Santa Fe	00-05	3.63	1.93	6.83	4.90
Mitsubishi	Pajero	82-90	4.83	4.08	5.71	1.63
Mitsubishi	Pajero	92-99	4.23	3.64	4.92	1.28
Mitsubishi	Pajero NM / NP	00-05	3.54	2.23	5.60	3.36
Mitsubishi	Challenger	98-05	2.92	1.72	4.95	3.23
Jeep	Cherokee XJ	96-00	4.15	3.21	5.35	2.13
Jeep	Wrangler	96-04	5.64	3.59	8.87	5.28
Land Rover	Defender	92-05	4.14	2.56	6.68	4.12
Land Rover	Discovery	91-02	3.46	2.62	4.57	1.96
Nissan	Pathfinder / Terrano	88-94	4.94	3.87	6.30	2.42
Nissan	Pathfinder / Terrano / Regulus	95-05	4.37	3.21	5.94	2.73

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 90% Confidence Limit	Upper 90% Confidence Limit	Width of Confidence Interval
Toyota	Landcruiser Prado	96-03	6.49	4.56	9.25	4.68
Toyota	Landcruiser Prado	03-05	4.88	3.11	7.65	4.54
<b>Large Four Wheel Drive Vehicles</b>			5.04	4.85	5.25	0.40
Ford	Bronco	82-87	6.95	4.24	11.39	7.15
Ford	Explorer	00-01	2.60	1.52	4.46	2.94
Jeep	Grand Cherokee ZG	96-99	3.59	2.20	5.85	3.65
Mercedes Benz	M-Class W163	98-05	4.44	2.65	7.44	4.79
Nissan	Patrol / Safari	82-87	6.04	5.01	7.30	2.29
Nissan / Ford	Patrol / Maverick / Safari	88-97	5.03	4.57	5.53	0.96
Nissan	Patrol / Safari	98-04	5.83	5.01	6.79	1.78
Land Rover	Range Rover	82-94	5.97	4.56	7.80	3.24
Toyota	Landcruiser	82-89	6.38	5.85	6.97	1.12
Toyota	Landcruiser	90-97	6.08	5.64	6.55	0.92
Toyota	Landcruiser	98-05	5.62	4.94	6.39	1.45
<b>Commercial Vehicles- Vans</b>			4.10	3.91	4.31	0.40
Daihatsu	Handivan	82-90	2.34	1.58	3.48	1.90
Ford	Falcon Panel Van	82-95	3.67	3.14	4.30	1.16
Ford	Falcon Panel Van	96-99	3.39	2.19	5.27	3.08
Ford	Transit	95-00	3.73	2.75	5.04	2.29
Ford	Transit	01-05	3.33	1.96	5.65	3.69
Holden	Shuttle / WFR Van	82-87	3.76	2.50	5.66	3.16
Kia	Pregio	02-05	3.85	2.03	7.29	5.26
Mercedes Benz	MB100 / MB140	99-04	4.74	2.73	8.24	5.51
Mercedes Benz	Vito / Viano	99-05	5.78	3.72	8.97	5.25
Mercedes Benz	Sprinter	98-04	3.84	2.27	6.49	4.22
Honda	Acty	83-86	1.57	0.76	3.21	2.44
Holden / Suzuki	Scurry / Carry	82-00	2.57	1.60	4.14	2.54
Toyota	Hiace/Liteace	82-86	5.44	4.85	6.11	1.26
Toyota	Hiace/Liteace	87-89	5.29	4.56	6.14	1.58
Toyota	Hiace/Liteace	90-95	5.35	4.81	5.95	1.15
Toyota	Hiace/Liteace	96-04	4.76	4.15	5.47	1.33
Volkswagen	Caravelle / Transporter	88-94	4.66	2.53	8.57	6.04
Volkswagen	Caravelle / Transporter	95-04	5.67	4.09	7.86	3.77
<b>Commercial Vehicles- Utes</b>			3.92	3.80	4.04	0.24
Ford / Nissan	Falcon Ute / XFN Ute	82-95	4.15	3.77	4.57	0.80
Ford	Falcon Ute	96-99	4.32	3.53	5.30	1.77
Ford	Falcon Ute AU	00-02	4.59	3.74	5.62	1.88
Ford	Falcon Ute BA/BF	03-05	5.00	3.53	7.08	3.55
Ford	Ford F-Series	82-92	6.22	4.93	7.84	2.92
Holden	Commodore Ute VG/VP	90-93	2.75	2.11	3.59	1.48
Holden / Isuzu	Rodeo / Pickup	82-85	4.63	3.42	6.28	2.87
Holden / Isuzu	Rodeo / Pickup	86-88	3.54	2.21	5.68	3.47
Holden / Isuzu	Rodeo / Pickup	89-95	4.98	4.49	5.53	1.04
Holden	Rodeo	96-98	4.49	3.79	5.32	1.53
Holden	Rodeo	99-02	4.98	4.17	5.96	1.80
Holden	WB Series	82-85	4.61	3.76	5.66	1.91

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 90% Confidence Limit	Upper 90% Confidence Limit	Width of Confidence Interval
Holden	Commodore Ute VR/VS	94-00	4.42	3.93	4.95	1.02
Holden	Commodore VU Ute	00-02	4.04	3.08	5.31	2.23
Holden	Commodore VY/VZ Ute	02-05	5.85	4.52	7.57	3.06
Holden	Rodeo	03-04	4.27	3.08	5.91	2.83
Mitsubishi	Triton MK	96-05	4.79	3.34	6.86	3.51
Kia	Ceres	92-00	3.29	2.29	4.74	2.45
Ford / Mazda	Courier / B-Series / Bounty	98-02	4.03	3.14	5.16	2.02
Ford / Mazda	Courier / Bravo / Bounty	03-05	4.11	2.42	6.98	4.56
Nissan	720 Ute	82-85	3.45	2.71	4.40	1.69
Nissan	Navara	86-91	4.46	3.90	5.10	1.20
Nissan	Navara	92-96	4.41	3.66	5.33	1.67
Nissan	Navara	97-05	4.40	3.49	5.55	2.06
Subaru	Brumby	82-92	3.88	3.02	4.99	1.98
Suzuki	Mighty Boy	85-88	2.19	1.22	3.95	2.73
Toyota	4Runner/Hilux	82-85	5.10	4.51	5.77	1.26
Toyota	4Runner/Hilux	86-88	4.75	4.18	5.40	1.22
Toyota	4Runner/Hilux	89-97	4.50	4.21	4.81	0.60
Toyota	Hilux	98-02	4.90	4.30	5.58	1.28
Toyota	Hilux	03-04	4.95	3.43	7.14	3.72
<b>Large Cars</b>			<b>3.10</b>	<b>3.04</b>	<b>3.16</b>	<b>0.12</b>
BMW	7 Series E23	82-88	2.36	1.09	5.13	4.04
BMW	7 Series E32	89-94	4.96	2.87	8.57	5.70
Ford	Falcon XE/XF	82-88	3.82	3.65	4.00	0.35
Ford	Fairlane Z & LTD F	82-87	3.62	3.19	4.10	0.91
Ford	Falcon EA / Falcon EB Series I	88-Mar 92	3.78	3.60	3.97	0.37
Ford	Falcon EB Series II / Falcon ED	Apr 92-94	3.81	3.55	4.09	0.54
Ford	Fairlane N & LTD D	88-94	3.22	2.78	3.73	0.96
Ford	Fairlane N & LTD D	95-98	3.93	3.14	4.91	1.77
Ford	Fairlane & LTD AU	99-02	3.41	2.42	4.82	2.41
Ford	Falcon EF/EL	94-98	3.73	3.54	3.93	0.39
Ford	Falcon AU	98-02	3.70	3.45	3.98	0.54
Ford	Taurus	96-98	3.75	2.44	5.78	3.34
Ford	Falcon BA/BF	02-05	3.69	3.12	4.36	1.24
Holden / Toyota	Commodore VN/VP / Lexcen	89-93	3.29	3.13	3.45	0.32
Holden	Statesman/Caprice WB	82-85	7.44	4.01	13.78	9.77
Holden	Stateman/Caprice VQ	90-93	3.45	2.38	5.01	2.62
Holden	Stateman/Caprice VR/VS	94-98	3.28	2.76	3.90	1.15
Holden / Toyota	Commodore VR/VS / Lexcen	93-97	3.31	3.14	3.48	0.34
Holden	Commodore VT/VX	97-02	3.79	3.57	4.03	0.45
Holden	Statesman/Caprice WH	99-03	3.36	2.42	4.67	2.25
Holden	Commodore VY/VZ	02-05	3.34	2.86	3.91	1.05
Holden	Monaro	01-05	6.24	4.14	9.40	5.26
Holden	Commodore VB-VL	82-88	3.57	3.39	3.75	0.36
Hyundai	Sonata	98-01	2.54	1.67	3.87	2.21
Hyundai	Sonata	89-97	3.51	2.97	4.14	1.16
Hyundai	Grandeur / XG	99-00	4.00	2.07	7.73	5.67
Mitsubishi	Magna TM/TN/TP / Sigma / V3000	85-90	3.47	3.26	3.70	0.44
Mitsubishi	Magna TE/TF/TH/TJ / Verada KE/KF/KH/KJ / Diamante	96-03	3.30	3.02	3.59	0.57

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 90% Confidence Limit	Upper 90% Confidence Limit	Width of Confidence Interval
Mitsubishi	Magna TR/TS / Verada KR/KS / V3000 / Diamante	91-96	3.43	3.21	3.65	0.44
Mitsubishi	Magna TL/TW / Verada KL/KW	03-05	4.65	2.80	7.72	4.92
Jaguar	XJ6	82-86	5.46	3.52	8.45	4.93
Jaguar	XJ6	87-94	4.25	2.70	6.70	4.00
Mazda	929 / Luce	82-90	3.16	2.65	3.76	1.10
Mazda	929 / Sentia / Efina MS-9	92-96	6.69	4.11	10.87	6.76
Mercedes Benz	S-Class W126	82-92	2.48	1.69	3.65	1.95
Mercedes Benz	S-Class C140	93-98	3.50	1.89	6.49	4.59
Nissan	Skyline	83-88	3.47	3.04	3.95	0.91
Nissan	300ZX / Fairlady Z	90-95	5.12	3.54	7.41	3.87
Nissan	Maxima	90-94	3.31	2.49	4.41	1.92
Nissan	Maxima / Cefiro	95-99	2.74	2.05	3.65	1.60
Nissan	Maxima	00-02	3.92	2.51	6.12	3.61
Honda	Legend	86-95	4.57	3.42	6.11	2.69
Holden / Toyota	Apollo JM/JP / Camry / Sceptor	93-97	3.40	3.18	3.64	0.46
Toyota	Camry	98-02	3.66	3.34	4.00	0.66
Toyota	Crown / Cressida / Mark II	82-85	4.01	3.30	4.87	1.57
Toyota	Crown / Cressida / Mark II	86-88	3.38	2.42	4.70	2.27
Toyota	Cressida / Mark II	89-93	2.50	1.96	3.20	1.24
Toyota	Supra	82-90	6.64	4.71	9.36	4.66
Lexus	ES300 / Windom	92-01	3.38	2.28	4.99	2.71
Lexus	LS400 / Celsius	90-00	4.28	2.36	7.76	5.40
Toyota	Avalon	00-05	4.51	3.58	5.66	2.08
Toyota	Camry	02-05	3.34	2.55	4.38	1.83
Volvo	850/S70/V70/C70	92-04	4.38	3.49	5.51	2.02
Volvo	700/900 Series	84-92	3.50	2.79	4.40	1.61
<b>Medium Cars</b>			2.72	2.65	2.79	0.13
BMW	3 Series E30	82-91	2.74	2.29	3.29	1.00
BMW	3 Series E36	92-98	2.94	2.51	3.44	0.93
BMW	3 Series E46	99-04	2.96	2.26	3.87	1.62
BMW	5 Series E28	82-88	3.89	2.82	5.36	2.54
BMW	5 Series E34	89-95	3.60	2.64	4.92	2.28
BMW	5 Series E39	96-03	2.25	1.44	3.53	2.10
Daewoo	Espero	95-97	3.08	2.12	4.48	2.37
Daewoo	Leganza	97-02	4.11	2.80	6.04	3.23
Ford	Cortina	82-82	3.55	3.03	4.15	1.12
Ford	Mondeo	95-01	3.23	2.63	3.96	1.33
Ford	Probe	94-98	5.45	3.12	9.52	6.39
Holden	Calibra	94-97	4.36	2.98	6.40	3.42
Holden	Camira	82-89	3.45	3.18	3.75	0.57
Holden	Vectra	97-03	3.27	2.72	3.92	1.19
Mitsubishi	Sigma / Galant / Sapporo / Lambda	82-84	3.17	2.92	3.45	0.53
Mitsubishi	Galant	95-96	3.00	2.37	3.80	1.43
Ford / Mazda	Telstar / 626 / MX6 / Capella	83-86	3.01	2.73	3.31	0.58
Ford / Mazda	Telstar / 626 / MX6 / Capella	88-91	3.28	2.92	3.68	0.76
Ford / Mazda	Telstar / 626 / MX6 / Capella / Cronos	92-97	2.52	2.21	2.88	0.67
Mazda	626	98-02	3.29	2.62	4.12	1.51

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 90% Confidence Limit	Upper 90% Confidence Limit	Width of Confidence Interval
Mazda	RX7	82-85	4.37	2.95	6.49	3.55
Mazda	RX7	86-91	3.01	1.80	5.03	3.23
Mazda	Eunos 500	93-99	2.81	1.52	5.20	3.68
Mercedes Benz	C-Class W201	87-93	2.94	2.04	4.24	2.20
Mercedes Benz	C-Class W202	95-00	2.39	1.74	3.28	1.54
Mercedes Benz	E-Class W123	82-85	2.59	1.56	4.30	2.74
Mercedes Benz	E-Class W124	86-94	3.38	2.56	4.46	1.90
Mercedes Benz	E-Class W210	96-02	3.72	2.56	5.42	2.86
Mercedes Benz	C-Class W203	00-05	0.75	0.15	3.77	3.62
Nissan	Pintara	86-88	3.38	2.95	3.87	0.92
Nissan / Ford	Pintara / Corsair / Bluebird	89-92	3.47	3.13	3.84	0.70
Nissan	Bluebird	82-86	2.89	2.63	3.18	0.55
Nissan	Bluebird	93-97	2.51	2.01	3.14	1.13
Nissan	200SX / Silvia	94-02	3.67	2.60	5.20	2.60
Honda	Accord Euro	03-05	1.82	0.91	3.62	2.71
Honda	Accord	82-85	2.26	1.83	2.80	0.98
Honda	Accord	86-90	3.05	2.55	3.65	1.10
Honda	Accord	91-93	2.36	1.80	3.10	1.30
Honda	Accord	94-98	3.04	2.49	3.71	1.22
Honda	Accord	99-02	2.85	1.81	4.50	2.69
Honda	Prelude	82-82	1.74	0.70	4.35	3.65
Honda	Prelude	83-91	2.94	2.52	3.44	0.92
Honda	Prelude	92-96	2.73	2.07	3.59	1.52
Honda	Prelude	97-02	2.82	1.82	4.38	2.55
Peugeot	405	89-97	2.28	1.55	3.35	1.80
Peugeot	505	82-93	3.42	2.29	5.10	2.81
Peugeot	406	96-04	2.12	1.01	4.42	3.40
Renault	Feugo	82-87	1.69	0.82	3.49	2.67
Saab	900 Series	82-92	2.10	1.41	3.14	1.73
Saab	900/9-3	94-02	2.81	2.02	3.90	1.88
Saab	9000	86-97	2.48	1.71	3.59	1.88
Subaru	1800 / Leone / Omega / 4WD Wagon	82-93	2.44	2.13	2.79	0.67
Subaru	Liberty / Legacy	89-93	2.92	2.54	3.34	0.80
Subaru	Liberty / Legacy / Outback	94-98	3.36	2.74	4.13	1.39
Subaru	Liberty / Legacy / Outback	99-03	2.86	2.21	3.70	1.49
Toyota	Corona	82-88	3.22	2.99	3.47	0.48
Toyota	Camry	83-86	3.10	2.62	3.67	1.06
Holden / Toyota	Apollo JK/JL / Camry / Vista	88-92	3.33	3.13	3.55	0.41
Toyota	Celica	81-85	3.78	3.16	4.52	1.35
Toyota	Celica	86-89	3.86	3.16	4.70	1.54
Toyota	Celica	90-93	3.80	3.12	4.64	1.53
Toyota	Celica	94-99	3.46	2.59	4.61	2.02
Toyota	Celica	00-05	4.78	3.05	7.49	4.44
Lexus	IS200 / IS300	99-04	2.05	0.81	5.15	4.34
Volvo	200 Series	82-93	3.16	2.61	3.83	1.23
Volkswagen	Passat	98-05	3.27	1.84	5.80	3.96
<b>People Movers</b>			<b>3.57</b>	<b>3.37</b>	<b>3.77</b>	<b>0.40</b>
Chrysler	Voyager	97-05	5.39	3.50	8.29	4.79
Mitsubishi	Nimbus / Chariot / Spacewagon	85-91	2.43	1.59	3.72	2.13

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 90% Confidence Limit	Upper 90% Confidence Limit	Width of Confidence Interval
Mitsubishi	Nimbus / Chariot	92-98	3.37	2.39	4.76	2.37
Mitsubishi	Starwagon / L300	83-86	4.89	4.20	5.70	1.50
Mitsubishi	Starwagon / Delica Starwagon	87-93	4.15	3.70	4.66	0.96
Mitsubishi	Starwagon / Delica Spacegear	95-98	4.28	3.42	5.37	1.96
Mitsubishi	Starwagon / Delica Spacegear	98-03	4.08	2.96	5.63	2.67
Kia	Carnival	99-05	4.81	3.16	7.35	4.19
Mazda	MPV	94-99	4.82	2.78	8.35	5.57
Nissan	Prairie	84-86	2.99	1.91	4.69	2.77
Honda	Odyssey	95-00	3.60	2.43	5.35	2.92
Toyota	Tarago	83-89	4.08	3.55	4.69	1.13
Toyota	Tarago / Previa / Estima	91-99	3.56	2.97	4.26	1.29
Toyota	Tarago / Previa / Estima	00-05	3.79	2.36	6.09	3.73
<b>Light Cars</b>			2.21	2.14	2.28	0.14
Daihatsu	Charade	82-86	2.60	2.06	3.28	1.22
Daihatsu	Charade	88-92	2.12	1.82	2.46	0.64
Daihatsu	Charade	93-00	2.42	2.05	2.86	0.81
Daihatsu	Pyzar	97-01	1.41	0.66	3.01	2.35
Daihatsu	Sirion / Storia	98-04	1.63	1.05	2.53	1.48
Daihatsu	Mira	90-96	2.29	1.60	3.27	1.67
Daewoo	1.5i	94-95	2.18	0.72	6.63	5.92
Daewoo	Cielo	95-97	2.37	1.95	2.88	0.93
Daewoo	Lanos	97-03	3.21	2.72	3.79	1.07
Daewoo	Matiz	99-04	1.79	1.04	3.10	2.06
Ford	Festiva WD/WH/WF	94-01	2.57	2.31	2.85	0.54
Ford	Ka	99-02	3.01	1.79	5.06	3.27
Holden	Barina XC	01-05	2.00	1.42	2.83	1.42
Holden	Barina SB	95-00	2.69	2.32	3.11	0.80
Hyundai	Excel	86-90	3.17	2.66	3.78	1.12
Hyundai	Excel	90-94	2.76	2.45	3.09	0.64
Hyundai	Excel / Accent	95-00	2.70	2.50	2.92	0.42
Hyundai	Getz	02-05	5.30	3.84	7.31	3.47
Hyundai	Accent	00-05	2.54	2.06	3.14	1.07
Mitsubishi	Mirage / Colt	82-88	2.83	2.56	3.12	0.56
Kia	Rio	00-05	3.75	2.81	5.00	2.18
Ford / Mazda	Festiva WA / 121	87-90	2.44	2.11	2.82	0.72
Mazda	121 / Autozam Review	94-96	1.83	1.43	2.33	0.89
Mazda	121 Metro / Demio	97-02	1.82	1.39	2.38	0.99
Nissan	Micra	95-97	2.39	1.56	3.67	2.11
Honda	CRX	87-91	3.05	2.01	4.63	2.62
Honda	CRX	92-98	4.35	2.37	8.00	5.64
Honda	Jazz	02-05	3.57	2.03	6.27	4.24
Honda	City	83-86	2.05	1.27	3.31	2.04
Peugoet	205	87-94	1.84	0.84	4.06	3.22
Peugeot	206	99-05	2.79	1.44	5.41	3.97
Subaru	Sherpa / Fiori / 700 / Rex	89-92	2.03	1.39	2.99	1.60
Suzuki	Swift	82-85	2.90	1.41	5.98	4.58
Holden / Suzuki	Barina / Swift / Cultus	86-88	2.34	1.96	2.79	0.83
Holden / Suzuki	Barina / Swift / Cultus	89-99	2.30	2.08	2.54	0.46
Suzuki	Hatch / Alto	82-84	3.17	2.24	4.49	2.26
Suzuki	Alto	85-00	3.75	2.28	6.15	3.86

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 90% Confidence Limit	Upper 90% Confidence Limit	Width of Confidence Interval
Suzuki	Ignis	00-02	2.16	1.06	4.39	3.33
Toyota	Starlet	96-99	2.47	2.05	2.97	0.92
Toyota	Echo	99-05	2.14	1.72	2.67	0.95
Volkswagen	Polo	96-00	1.99	1.16	3.42	2.26
<b>Small Cars</b>			2.36	2.30	2.41	0.11
Alfa Romeo	33	83-92	1.78	1.09	2.89	1.81
Alfa Romeo	75	86-92	3.90	1.86	8.19	6.33
Audi	A4	95-01	2.44	1.56	3.81	2.25
Audi	A3/S3	97-04	3.61	1.92	6.78	4.86
Audi	A4	01-05	2.39	1.30	4.40	3.10
Chrysler	Neon	96-99	1.87	1.07	3.29	2.23
Daihatsu	Applause	89-99	2.48	1.99	3.07	1.08
Daewoo	Nubira	97-03	2.47	1.95	3.13	1.18
Ford	Laser	91-94	2.77	2.53	3.04	0.51
Ford	Laser	95-97	2.68	2.27	3.17	0.90
Ford	Escort	82-82	2.68	2.03	3.53	1.50
Ford	Capri	89-94	2.59	1.97	3.41	1.44
Ford	Focus LR	02-05	2.92	1.87	4.57	2.71
Holden	Gemini	82-84	2.60	2.25	3.01	0.76
Holden	Gemini RB	86-87	2.43	1.73	3.41	1.68
Holden	Astra TR	96-98	2.66	1.93	3.67	1.74
Holden	Astra TS	98-05	2.61	2.25	3.04	0.79
Hyundai	Elantra	00-05	2.74	1.89	3.96	2.06
Hyundai	S Coupe	90-96	2.02	1.42	2.88	1.46
Hyundai	Lantra	91-95	2.68	2.05	3.49	1.44
Hyundai	Lantra	96-00	3.04	2.57	3.59	1.03
Hyundai	Coupe	96-00	2.66	1.76	4.04	2.29
Mitsubishi	Lancer / Mirage CA	89-90	2.51	2.18	2.89	0.71
Mitsubishi	Lancer / Mirage CB	91-92	3.38	2.60	4.39	1.79
Mitsubishi	Lancer / Mirage CC	93-95	2.26	1.97	2.60	0.63
Mitsubishi	Lancer / Mirage CE	96-03	2.58	2.34	2.85	0.51
Mitsubishi	Cordia	83-87	4.25	3.52	5.13	1.62
Mitsubishi	Lancer CH	03-05	4.75	3.00	7.52	4.52
Ford / Mazda	Laser / 323 / Familia	82-88	2.76	2.62	2.91	0.29
Mazda	323 / Familia / Lantis	90-93	2.28	1.94	2.66	0.72
Mazda	323 / Familia / Lantis	95-98	2.16	1.79	2.60	0.81
Ford / Mazda	Laser / 323	99-03	2.33	1.94	2.79	0.85
Mazda	MX5 / Eunos Roadster	89-97	2.64	1.61	4.33	2.72
Mazda	Eunos 30X / Presso / MX-3 / Autozam AZ-3	90-97	2.74	1.57	4.79	3.22
Mazda	3	03-05	2.65	1.38	5.09	3.71
Mercedes Benz	A-Class W168	98-05	1.58	0.60	4.20	3.60
Holden / Nissan	Astra / Pulsar / Langley	84-86	3.06	2.76	3.40	0.64
Holden / Nissan	Astra / Pulsar / Vector / Sentra	88-90	3.08	2.81	3.37	0.55
Nissan	Pulsar / Vector / Sentra	92-95	3.04	2.69	3.43	0.75
Nissan	Pulsar / Vector / Sentra	96-99	2.58	2.26	2.96	0.70
Nissan	Stanza	82-83	5.00	3.36	7.46	4.10
Nissan	Gazelle / Silvia	84-86	3.09	2.04	4.66	2.62
Nissan	Exa	83-86	5.17	3.50	7.63	4.13
Nissan	Exa	87-91	4.95	2.94	8.35	5.42

Make	Model of Car	Years of Manufacture	Serious injury rate per 100 drivers involved	Lower 90% Confidence Limit	Upper 90% Confidence Limit	Width of Confidence Interval
Nissan	NX/NX-R	91-96	4.41	3.21	6.06	2.85
Nissan	Pulsar	00-05	2.97	2.46	3.58	1.12
Honda	Civic	82-83	2.12	1.46	3.09	1.63
Honda	Civic / Ballade / Shuttle	84-87	2.78	2.30	3.36	1.06
Honda	Civic / Shuttle	88-91	2.55	2.17	2.99	0.82
Honda	Civic	92-95	2.92	2.52	3.39	0.87
Honda	Civic	96-00	2.30	1.90	2.79	0.89
Honda	Civic	01-05	2.00	1.30	3.08	1.78
Honda	Integra	86-88	1.96	1.34	2.87	1.53
Honda	Integra	90-92	4.23	3.07	5.82	2.75
Honda	Integra	93-01	2.31	1.62	3.29	1.66
Honda	Concerto	89-93	2.51	1.67	3.77	2.10
Peugeot	306	94-01	2.59	1.88	3.57	1.69
Proton	Wira	95-96	3.26	2.38	4.48	2.11
Renault	19	91-96	2.69	1.47	4.93	3.46
Rover	Quintet	82-86	0.84	0.29	2.46	2.18
MG	MGF / MG TF	99-05	1.11	0.33	3.68	3.34
Subaru	Impreza	93-00	3.57	3.05	4.18	1.13
Subaru	Impreza	01-05	1.95	1.20	3.16	1.96
Suzuki	Baleno / Cultus Crescent	95-02	1.57	1.07	2.30	1.23
Toyota	Corolla	82-84	2.42	2.19	2.68	0.49
Toyota	Corolla	86-88	2.80	2.58	3.05	0.47
Toyota / Holden	Corolla / Nova	89-93	2.84	2.66	3.04	0.39
Toyota / Holden	Corolla / Nova	94-97	2.41	2.20	2.64	0.45
Toyota	Corolla	98-01	2.93	2.51	3.43	0.92
Toyota	Corolla	02-05	2.75	2.26	3.34	1.08
Toyota	Tercel	83-88	2.62	1.57	4.38	2.81
Toyota	Paseo / Cynos	91-99	2.80	2.08	3.77	1.69
Toyota	Corolla 4WD Wagon	92-96	4.54	2.85	7.23	4.38
Volvo	S40/V40	97-04	2.38	1.32	4.28	2.96
Volkswagen	Golf	82-94	4.07	2.47	6.70	4.23
Volkswagen	Golf	95-98	3.48	2.49	4.86	2.37
Volkswagen	Golf / Bora	99-04	2.39	1.70	3.37	1.67

**PRESENTATION OF CRASHWORTHINESS AND AGGRESSIVITY  
RATINGS FOR CONSUMER INFORMATION**



## CRASHWORTHINESS AND AGGRESSIVITY RATINGS

**Victoria and New South Wales Data (1987-2005), South Australia Data (1995-2005),  
Queensland, Western Australia and New Zealand Data (1991-2005)**

Make	Model of Car	Years of Manufacture	CRASHWORTHINESS					AGGRESSIVITY
			Significantly less than 15% better than average	Significantly better than average but not significantly less than 15% better than average	Not significantly different from average	Significantly worse than average but not significantly greater than 15% worse than average	Significantly greater than 15% worse than average	
<b>Compact Four Wheel Drive Vehicles</b>								
Daihatsu	Feroza / Rocky	89-97						o
Daihatsu	Rocky / Rugged	85-98						
Daihatsu	Terios	97-05						o
Kia	Sportage	98-03						o
Ford / Mazda	Escape / Tribute	01-05						+
Nissan	X-Trail	01-05						o
Honda	CR-V	97-01						o
Honda	CR-V	02-05						
Subaru	Forester	97-02						++
Subaru	Forester	02-05						
Suzuki	Vitara / Escudo	88-98						o
Suzuki	Grand Vitara	99-05						+
Holden / Suzuki	Drover / Sierra / Samurai / SJ410 / SJ413	82-99						o
Toyota	RAV4	94-00						o
<b>Medium Four Wheel Drive Vehicles</b>								
Holden / Isuzu	Jackaroo / Bighorn	82-91						xx
Holden / Isuzu	Jackaroo / Bighorn	92-97						x
Holden / Isuzu	Jackaroo / Bighorn	98-02						xx
Mitsubishi	Pajero	82-90						xx
Mitsubishi	Pajero	92-99						x
Mitsubishi	Pajero NM / NP	00-05						
Mitsubishi	Challenger	98-05						
Jeep	Cherokee XJ	96-00						o
Land Rover	Defender	92-05						
Land Rover	Discovery	91-02						o
Nissan	Pathfinder / Terrano	88-94						x
Nissan	Pathfinder / Terrano / Regulus	95-05						o
Toyota	Landcruiser Prado	96-03						xx
Toyota	Landcruiser Prado	03-05						
<b>Large Four Wheel Drive Vehicle</b>								
Ford	Explorer	01-05						

Make	Model of Car	Years of Manufacture	CRASHWORTHINESS					AGGRESSIVITY	
			Significantly less than 15% better than average	Significantly better than average but not significantly less than 15% better than average	Not significantly different from average	Significantly worse than average but not significantly greater than 15% worse than average	Significantly greater than 15% worse than average		
Nissan	Patrol / Safari	82-87							XX
Nissan / Ford	Patrol / Maverick / Safari	88-97							XX
Nissan	Patrol / Safari	98-04							XX
Land Rover	Range Rover	82-94							XX
Toyota	Landcruiser	82-89							XX
Toyota	Landcruiser	90-97							XX
Toyota	Landcruiser	98-05							XX
<b>Commercial Vehicles- Vans</b>									
Daihatsu	Handivan	82-90							o
Daihatsu	Hi-Jet	82-90							o
Ford	Falcon Panel Van	82-95							o
Ford	Falcon Panel Van	96-99							
Ford	Transit	95-00							o
Ford	Transit	01-05							
Holden	Shuttle / WFR Van	82-87							
Holden / Suzuki	Scurry / Carry	82-00							o
Toyota	Hiace/Liteace	82-86							XX
Toyota	Hiace/Liteace	87-89							XX
Toyota	Hiace/Liteace	90-95							XX
Toyota	Hiace/Liteace	96-04							XX
Volkswagen	Caravelle / Transporter	95-04							XX
<b>Commercial Vehicles- Utes</b>									
Ford / Nissan	Falcon Ute / XFN Ute	82-95							X
Ford	Falcon Ute	96-99							X
Ford	Falcon Ute AU	00-02							X
Ford	Falcon Ute BA/BF	03-05							
Ford	Ford F-Series	82-92							XX
Holden	Commodore Ute VG/VP	90-93							o
Holden / Isuzu	Rodeo / Pickup	86-88							
Holden / Isuzu	Rodeo / Pickup	89-95							XX
Holden	Rodeo	96-98							X
Holden	Rodeo	99-02							XX
Holden	Commodore Ute VR/VS	94-00							X
Holden	Commodore VU Ute	00-02							o
Holden	Commodore VY/VZ Ute	02-05							XX
Holden	Rodeo	03-04							o
Mitsubishi	Triton MK	96-05							
Kia	Ceres	92-00							o
Ford / Mazda	Courier / B-Series / Bounty	98-02							o
Nissan	Navara	86-91							X
Nissan	Navara	92-96							X
Nissan	Navara	97-05							X
Subaru	Brumby	82-92							o

Make	Model of Car	Years of Manufacture	CRASHWORTHINESS					AGGRESSIVITY
			Significantly less than 15% better than average	Significantly better than average but not significantly less than 15% better than average	Not significantly different from average	Significantly worse than average but not significantly greater than 15% worse than average	Significantly greater than 15% worse than average	
Suzuki	Mighty Boy	85-88						o
Toyota	4Runner/Hilux	86-88						xx
Toyota	4Runner/Hilux	89-97						xx
Toyota	Hilux	98-02						xx
Toyota	Hilux	03-04						
<b>Large Cars</b>								
BMW	7 Series E23	82-88						
Ford	Falcon XE/XF	82-88						x
Ford	Fairlane Z & LTD F	82-87						o
Ford	Falcon EA / Falcon EB Series I	88-Mar 92						x
Ford	Falcon EB Series II / Falcon ED	Apr 92-94						x
Ford	Fairlane N & LTD D	88-94						o
Ford	Fairlane N & LTD D	95-98						o
Ford	Fairlane & LTD AU	99-02						o
Ford	Falcon EF/EL	94-98						x
Ford	Falcon AU	98-02						x
Ford	Taurus	96-98						
Ford	Falcon BA/BF	02-05						o
Holden / Toyota	Commodore VN/VP / Lexcen	89-93						o
Holden	Stateman/Caprice VQ	90-93						o
Holden	Stateman/Caprice VR/VS	94-98						o
Holden / Toyota	Commodore VR/VS / Lexcen	93-97						o
Holden	Commodore VT/VX	97-02						x
Holden	Statesman/Caprice WH	99-03						o
Holden	Commodore VY/VZ	02-05						o
Holden	Commodore VB-VL	82-88						o
Hyundai	Sonata	98-01						o
Hyundai	Sonata	89-97						o
Mitsubishi	Magna TM/TN/TP / Sigma / V3000	85-90						o
Mitsubishi	Magna TE/TF/TH/TJ / Verada KE/KF/KH/KJ / Diamante	96-03						o
Mitsubishi	Magna TR/TS / Verada KR/KS / V3000 / Diamante	91-96						o
Jaguar	XJ6	87-94						
Mazda	929 / Luce	82-90						o
Mercedes Benz	S-Class W126	82-92						o
Nissan	Skyline	83-88						o
Nissan	300ZX / Fairlady Z	90-95						
Nissan	Maxima	90-94						o
Nissan	Maxima / Cefiro	95-99						o
Nissan	Maxima	00-02						

Make	Model of Car	Years of Manufacture	CRASHWORTHINESS					AGGRESSIVITY
			Significantly less than 15% better than average	Significantly better than average but not significantly less than 15% better than average	Not significantly different from average	Significantly worse than average but not significantly greater than 15% worse than average	Significantly greater than 15% worse than average	
Honda	Legend	86-95						o
Holden / Toyota	Apollo JM/JP / Camry / Sceptor	93-97						o
Toyota	Camry	98-02						o
Toyota	Crown / Cressida / Mark II	86-88						o
Toyota	Cressida / Mark II	89-93						+
Lexus	ES300 / Windom	92-01						o
Toyota	Avalon	00-05						x
Toyota	Camry	02-05						o
Volvo	850/S70/V70/C70	92-04						x
Volvo	700/900 Series	84-92						o
<b>Medium Cars</b>								
BMW	3 Series E30	82-91						+
BMW	3 Series E36	92-98						o
BMW	3 Series E46	99-04						o
BMW	5 Series E28	82-88						o
BMW	5 Series E34	89-95						o
BMW	5 Series E39	96-03						o
Daewoo	Espero	95-97						o
Daewoo	Leganza	97-02						o
Ford	Mondeo	95-01						o
Holden	Calibra	94-97						o
Holden	Camira	82-89						o
Holden	Vectra	97-03						o
Mitsubishi	Sigma / Galant / Sapporo / Lambda	82-84						o
Mitsubishi	Starion	82-87						o
Mitsubishi	Galant	95-96						o
Ford / Mazda	Telstar / 626 / MX6 / Capella	83-86						+
Ford / Mazda	Telstar / 626 / MX6 / Capella	88-91						o
Ford / Mazda	Telstar / 626 / MX6 / Capella / Cronos	92-97						++
Mazda	626	98-02						o
Mazda	RX7	86-91						o
Mercedes Benz	C-Class W201	87-93						o
Mercedes Benz	C-Class W202	95-00						+
Mercedes Benz	E-Class W124	86-94						o
Mercedes Benz	E-Class W210	96-02						o
Nissan	Pintara	86-88						o
Nissan / Ford	Pintara / Corsair / Bluebird	89-92						o
Nissan	Bluebird	82-86						+
Nissan	Bluebird	93-97						+
Nissan	200SX / Silvia	94-02						o
Honda	Accord	86-90						o

Make	Model of Car	Years of Manufacture	CRASHWORTHINESS					AGGRESSIVITY
			Significantly less than 15% better than average	Significantly better than average but not significantly less than 15% better than average	Not significantly different from average	Significantly worse than average but not significantly greater than 15% worse than average	Significantly greater than 15% worse than average	
Honda	Accord	91-93						+
Honda	Accord	94-98						o
Honda	Accord	99-02						o
Honda	Prelude	83-91						+
Honda	Prelude	92-96						o
Honda	Prelude	97-02						o
Peugeot	405	89-97						+
Peugeot	505	82-93						o
Peugeot	406	96-04						
Saab	900 Series	82-92						+
Saab	900/9-3	94-02						o
Saab	9000	86-97						o
Subaru	1800 / Leone / Omega / 4WD Wagon	82-93						++
Subaru	Liberty / Legacy	89-93						+
Subaru	Liberty / Legacy / Outback	94-98						o
Subaru	Liberty / Legacy / Outback	99-03						o
Toyota	Corona	82-88						o
Toyota	Camry	83-86						o
Holden / Toyota	Apollo JK/JL / Camry / Vista	88-92						o
Toyota	Celica	86-89						o
Toyota	Celica	90-93						o
Toyota	Celica	94-99						o
Volvo	200 Series	82-93						o
Volkswagen	Passat	98-05						
<b>People Movers</b>								
Mitsubishi	Nimbus / Chariot / Spacewagon	85-91						o
Mitsubishi	Nimbus / Chariot	92-98						o
Mitsubishi	Starwagon / L300	83-86						xx
Mitsubishi	Starwagon / Delica Starwagon	87-93						x
Mitsubishi	Starwagon / Delica Spacegear	95-98						o
Mitsubishi	Starwagon / Delica Spacegear	98-03						o
Kia	Carnival	99-05						
Mazda	MPV	94-99						
Nissan	Serena	92-95						
Honda	Odyssey	95-00						o
Toyota	Tarago	83-89						x
Toyota	Tarago / Previa / Estima	91-99						o
Toyota	Tarago / Previa / Estima	00-05						
<b>Light Cars</b>								

Make	Model of Car	Years of Manufacture	CRASHWORTHINESS					AGGRESSIVITY
			Significantly less than 15% better than average	Significantly better than average but not significantly less than 15% better than average	Not significantly different from average	Significantly worse than average but not significantly greater than 15% worse than average	Significantly greater than 15% worse than average	
Daihatsu	Charade	82-86						+
Daihatsu	Charade	88-92						++
Daihatsu	Charade	93-00						++
Daihatsu	Sirion / Storia	98-04						++
Daihatsu	Mira	90-96						+
Daewoo	Cielo	95-97						++
Daewoo	Lanos	97-03						o
Daewoo	Matiz	99-04						+
Daewoo	Kalos	03-04						
Ford	Festiva WD/WH/WF	94-01						++
Holden	Barina XC	01-05						++
Holden	Barina SB	95-00						+
Hyundai	Excel	86-90						o
Hyundai	Excel	90-94						+
Hyundai	Excel / Accent	95-00						++
Hyundai	Getz	02-05						
Hyundai	Accent	00-05						+
Mitsubishi	Mirage / Colt	82-88						+
Kia	Rio	00-05						o
Ford / Mazda	Festiva WA / 121	87-90						++
Mazda	121 / Autozam Review	94-96						++
Mazda	121 Metro / Demio	97-02						++
Nissan	Micra	95-97						o
Honda	CRX	87-91						o
Honda	City	83-86						+
Subaru	Sherpa / Fiori / 700 / Rex	89-92						+
Holden / Suzuki	Barina / Swift / Cultus	86-88						++
Holden / Suzuki	Barina / Swift / Cultus	89-99						++
Suzuki	Alto	85-00						
Toyota	Starlet	96-99						+
Toyota	Echo	99-05						++
<b>Small Cars</b>								
Alfa Romeo	33	83-92						++
Audi	A4	95-01						o
Daihatsu	Applause	89-99						+
Daewoo	Nubira	97-03						+
Ford	Laser	91-94						+
Ford	Laser	95-97						+
Ford	Capri	89-94						+
Ford	Focus LR	02-05						o
Holden	Gemini RB	86-87						+
Holden	Astra TR	96-98						o
Holden	Astra TS	98-05						+
Hyundai	Elantra	00-05						o

Make	Model of Car	Years of Manufacture	CRASHWORTHINESS					AGGRESSIVITY
			Significantly less than 15% better than average	Significantly better than average but not significantly less than 15% better than average	Not significantly different from average	Significantly worse than average but not significantly greater than 15% worse than average	Significantly greater than 15% worse than average	
Hyundai	S Coupe	90-96						++
Hyundai	Lantra	91-95						o
Hyundai	Lantra	96-00						o
Hyundai	Coupe	96-00						o
Mitsubishi	Lancer / Mirage CA	89-90						++
Mitsubishi	Lancer / Mirage CB	91-92						o
Mitsubishi	Lancer / Mirage CC	93-95						++
Mitsubishi	Lancer / Mirage CE	96-03						++
Mitsubishi	Cordia	83-87						x
Ford / Mazda	Laser / 323 / Familia	82-88						++
Mazda	323 / Familia / Lantis	90-93						++
Mazda	323 / Familia / Lantis	95-98						++
Ford / Mazda	Laser / 323	99-03						++
Mazda	Eunos 30X / Presso / MX-3 / Autozam AZ-3	90-97						
Mazda	3	03-05						
Holden / Nissan	Astra / Pulsar / Langley	84-86						+
Holden / Nissan	Astra / Pulsar / Vector / Sentra	88-90						+
Nissan	Pulsar / Vector / Sentra	92-95						+
Nissan	Pulsar / Vector / Sentra	96-99						+
Nissan	Gazelle / Silvia	84-86						o
Nissan	Exa	83-86						o
Nissan	NX/NX-R	91-96						o
Nissan	Pulsar	00-05						o
Honda	Civic / Ballade / Shuttle	84-87						+
Honda	Civic / Shuttle	88-91						+
Honda	Civic	92-95						+
Honda	Civic	96-00						++
Honda	Civic	01-05						+
Honda	Integra	86-88						++
Honda	Integra	90-92						o
Honda	Integra	93-01						+
Honda	Concerto	89-93						o
Peugeot	306	94-01	1					o
Proton	Wira	95-96						o
Subaru	Impreza	93-00						o
Subaru	Impreza	01-05						+
Suzuki	Baleno / Cultus Crescent	95-02						++
Toyota	Corolla	86-88						+
Toyota / Holden	Corolla / Nova	89-93						+
Toyota / Holden	Corolla / Nova	94-97						++
Toyota	Corolla	98-01						+
Toyota	Corolla	02-05						+
Toyota	MR2	87-90						
Toyota	Paseo / Cynos	91-99						o
Volvo	S40/V40	97-04						o
Volkswagen	Golf	82-94						

Make	Model of Car	Years of Manufacture	CRASHWORTHINESS					AGGRESSIVITY
			Significantly less than 15% better than average	Significantly better than average but not significantly less than 15% better than average	Not significantly different from average	Significantly worse than average but not significantly greater than 15% worse than average	Significantly greater than 15% worse than average	
Volkswagen	Golf	95-98						<b>o</b>
Volkswagen	Golf / Bora	99-04						<b>+</b>

**CRASHWORTHINESS, INJURY RISK AND INJURY SEVERITY  
ESTIMATES BY YEAR OF VEHICLE MANUFACTURE FOR THE  
AUSTRALIAN VEHICLE FLEET**



## INJURY RISK BY YEAR OF VEHICLE MANUFACTURE

Year of Manufacture	Coefficient of Car Year	Standard Error of Coefficient	Pr(Risk) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
<b>AVERAGE</b>	<b>-1.6230</b>		<b>16.48</b>			
1964	0.3664	0.0521	22.16	20.45	23.97	3.52
1965	0.4495	0.0550	23.62	21.73	25.62	3.89
1966	0.2964	0.0492	20.97	19.42	22.62	3.20
1967	0.3704	0.0388	22.23	20.94	23.57	2.63
1968	0.3285	0.0346	21.51	20.39	22.68	2.29
1969	0.3230	0.0310	21.42	20.41	22.46	2.05
1970	0.3184	0.0234	21.34	20.58	22.12	1.54
1971	0.2602	0.0212	20.38	19.71	21.06	1.35
1972	0.2859	0.0202	20.80	20.15	21.46	1.30
1973	0.3073	0.0184	21.15	20.56	21.76	1.20
1974	0.2630	0.0148	20.42	19.96	20.90	0.94
1975	0.1667	0.0147	18.90	18.47	19.35	0.88
1976	0.1610	0.0132	18.82	18.42	19.21	0.79
1977	0.1159	0.0135	18.14	17.75	18.53	0.79
1978	0.0960	0.0119	17.84	17.50	18.19	0.68
1979	0.0262	0.0111	16.84	16.54	17.15	0.61
1980	0.0699	0.0106	17.46	17.17	17.77	0.60
1981	0.0504	0.0100	17.18	16.91	17.47	0.56
1982	0.0439	0.00943	17.09	16.83	17.36	0.52
1983	0.0529	0.00965	17.22	16.95	17.49	0.54
1984	-0.0062	0.00876	16.39	16.16	16.63	0.47
1985	0.0040	0.00823	16.54	16.31	16.76	0.45
1986	-0.0608	0.00919	15.66	15.42	15.90	0.48
1987	-0.0834	0.00963	15.36	15.12	15.61	0.49
1988	-0.0980	0.00887	15.17	14.95	15.40	0.45
1989	-0.1402	0.00847	14.64	14.43	14.85	0.41
1990	-0.1282	0.00853	14.79	14.58	15.00	0.42
1991	-0.1408	0.00926	14.63	14.41	14.86	0.45
1992	-0.1665	0.00925	14.31	14.09	14.54	0.44
1993	-0.2202	0.00937	13.67	13.45	13.89	0.43
1994	-0.2015	0.00908	13.89	13.68	14.10	0.43
1995	-0.2313	0.00928	13.54	13.33	13.75	0.43
1996	-0.1992	0.00979	13.92	13.69	14.15	0.46
1997	-0.2134	0.00974	13.75	13.52	13.98	0.45
1998	-0.2178	0.00974	13.70	13.47	13.92	0.45
1999	-0.2383	0.0107	13.46	13.21	13.70	0.49
2000	-0.2896	0.0118	12.87	12.61	13.13	0.52
2001	-0.3513	0.0136	12.19	11.91	12.48	0.57
2002	-0.3368	0.0152	12.35	12.03	12.68	0.64
2003	-0.3542	0.0175	12.16	11.80	12.53	0.73
2004	-0.3724	0.0237	11.97	11.49	12.47	0.98
2005	-0.3058	0.0437	12.69	11.77	13.67	1.90

## INJURY SEVERITY BY YEAR OF VEHICLE MANUFACTURE

Year of Manufacture	Coefficient of Car Year	Standard Error of Coefficient	Pr(Severity) %	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
<b>AVERAGE</b>	<b>-1.2414</b>		<b>22.42</b>			
1964	0.2441	0.0873	26.95	23.71	30.45	6.73
1965	0.0183	0.0992	22.74	19.51	26.33	6.83
1966	0.1123	0.0839	24.43	21.53	27.59	6.07
1967	0.1507	0.0663	25.15	22.78	27.67	4.89
1968	0.1076	0.06	24.35	22.25	26.58	4.33
1969	0.3397	0.0509	28.87	26.87	30.96	4.10
1970	0.2253	0.0396	26.58	25.09	28.12	3.03
1971	0.1960	0.0365	26.01	24.66	27.41	2.75
1972	0.1987	0.0347	26.06	24.77	27.39	2.62
1973	0.2184	0.0314	26.44	25.26	27.66	2.39
1974	0.1062	0.0267	24.32	23.37	25.30	1.93
1975	0.1657	0.026	25.43	24.48	26.41	1.93
1976	0.0730	0.0243	23.71	22.86	24.59	1.72
1977	0.1019	0.0249	24.24	23.36	25.15	1.79
1978	0.0519	0.0223	23.34	22.56	24.13	1.56
1979	0.0740	0.0207	23.73	23.01	24.47	1.47
1980	0.0284	0.0204	22.92	22.22	23.63	1.41
1981	0.0407	0.0195	23.14	22.46	23.82	1.36
1982	0.0615	0.0183	23.51	22.87	24.16	1.29
1983	0.0162	0.019	22.70	22.06	23.36	1.31
1984	0.0134	0.0174	22.65	22.06	23.26	1.20
1985	0.0114	0.0167	22.62	22.05	23.20	1.15
1986	0.00395	0.0185	22.49	21.86	23.13	1.26
1987	0.00203	0.0196	22.45	21.79	23.13	1.34
1988	-0.00633	0.0184	22.31	21.69	22.94	1.25
1989	-0.0187	0.0179	22.10	21.50	22.71	1.21
1990	-0.0370	0.0182	21.78	21.18	22.40	1.22
1991	-0.0545	0.0203	21.49	20.82	22.16	1.34
1992	-0.0799	0.0206	21.06	20.40	21.74	1.34
1993	-0.0606	0.021	21.38	20.70	22.08	1.38
1994	-0.1228	0.0209	20.36	19.70	21.03	1.33
1995	-0.1347	0.0215	20.16	19.49	20.85	1.36
1996	-0.1437	0.0229	20.02	19.31	20.75	1.44
1997	-0.1342	0.0231	20.17	19.45	20.91	1.46
1998	-0.1974	0.0241	19.17	18.45	19.92	1.46
1999	-0.1683	0.0264	19.63	18.82	20.46	1.63
2000	-0.2117	0.0291	18.95	18.09	19.84	1.75
2001	-0.1860	0.0324	19.35	18.38	20.36	1.98
2002	-0.2092	0.0372	18.99	17.89	20.14	2.24
2003	-0.3408	0.0454	17.05	15.83	18.34	2.52
2004	-0.2266	0.0637	18.72	16.90	20.70	3.80
2005	-0.2286	0.142	18.69	14.83	23.30	8.47

## CRASHWORTHINESS BY YEAR OF VEHICLE MANUFACTURE

Year of Manufacture	Pr(Risk) %	Pr(Severity) %	Serious injury rate per 100 drivers involved	Overall rank order	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
<b>AVERAGE</b>	<b>16.48</b>	<b>22.42</b>	<b>3.69</b>				
1964	22.16	26.95	5.97	41	5.15	6.92	1.78
1965	23.62	22.74	5.37	36	4.53	6.38	1.85
1966	20.97	24.43	5.12	33	4.43	5.93	1.50
1967	22.23	25.15	5.59	38	4.99	6.26	1.28
1968	21.51	24.35	5.24	34	4.72	5.81	1.09
1969	21.42	28.87	6.18	42	5.68	6.74	1.06
1970	21.34	26.58	5.67	40	5.30	6.07	0.77
1971	20.38	26.01	5.30	35	4.98	5.64	0.66
1972	20.80	26.06	5.42	37	5.11	5.75	0.64
1973	21.15	26.44	5.59	39	5.30	5.90	0.60
1974	20.42	24.32	4.97	32	4.74	5.20	0.46
1975	18.90	25.43	4.81	31	4.60	5.03	0.43
1976	18.82	23.71	4.46	30	4.28	4.65	0.37
1977	18.14	24.24	4.40	29	4.21	4.59	0.38
1978	17.84	23.34	4.16	28	4.01	4.33	0.32
1979	16.84	23.73	4.00	25	3.86	4.14	0.29
1980	17.46	22.92	4.00	26	3.86	4.15	0.28
1981	17.18	23.14	3.98	24	3.84	4.11	0.27
1982	17.09	23.51	4.02	27	3.89	4.15	0.25
1983	17.22	22.70	3.91	23	3.78	4.04	0.26
1984	16.39	22.65	3.71	21	3.60	3.83	0.22
1985	16.54	22.62	3.74	22	3.63	3.85	0.21
1986	15.66	22.49	3.52	20	3.41	3.64	0.23
1987	15.36	22.45	3.45	19	3.34	3.57	0.23
1988	15.17	22.31	3.39	18	3.28	3.49	0.21
1989	14.64	22.10	3.23	17	3.14	3.34	0.20
1990	14.79	21.78	3.22	16	3.12	3.32	0.20
1991	14.63	21.49	3.14	15	3.04	3.26	0.22
1992	14.31	21.06	3.01	14	2.91	3.12	0.21
1993	13.67	21.38	2.92	13	2.82	3.03	0.21
1994	13.89	20.36	2.83	12	2.73	2.93	0.20
1995	13.54	20.16	2.73	9	2.63	2.83	0.20
1996	13.92	20.02	2.79	11	2.68	2.90	0.22
1997	13.75	20.17	2.77	10	2.67	2.89	0.22
1998	13.70	19.17	2.63	7	2.52	2.74	0.22
1999	13.46	19.63	2.64	8	2.52	2.76	0.24
2000	12.87	18.95	2.44	6	2.32	2.57	0.25
2001	12.19	19.35	2.36	4	2.23	2.50	0.27
2002	12.35	18.99	2.35	3	2.20	2.50	0.30
2003	12.16	17.05	2.07	1	1.91	2.25	0.33
2004	11.97	18.72	2.24	2	2.01	2.50	0.49
2005	12.69	18.69	2.37	5	1.87	3.01	1.14



**CRASHWORTHINESS, INJURY RISK AND INJURY SEVERITY  
ESTIMATES BY YEAR OF VEHICLE MANUFACTURE BY MARKET  
GROUP FOR THE AUSTRALIAN VEHICLE FLEET**



## CRASHWORTHINESS BY YEAR OF VEHICLE MANUFACTURE BY MARKET GROUP

Year of Manufacture	Pr(Risk) %	Pr(Severity) %	Serious injury rate per 100 drivers involved	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
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### Compact Four Wheel Drive Vehicles

1982	28.61	12.10	3.46	2.76	4.34	1.59
1983	26.78	25.70	6.88	6.07	7.80	1.72
1984	26.16	24.56	6.42	5.93	6.95	1.02
1985	28.73	17.26	4.96	4.68	5.26	0.58
1986	25.49	19.02	4.85	4.18	5.63	1.45
1987	25.84	28.28	7.31	6.55	8.15	1.60
1988	23.37	16.62	3.88	3.46	4.36	0.89
1989	22.82	21.05	4.80	4.59	5.02	0.43
1990	20.81	19.80	4.12	3.95	4.31	0.36
1991	21.37	20.84	4.45	4.23	4.69	0.45
1992	21.44	20.32	4.36	4.13	4.60	0.47
1993	19.51	24.83	4.85	4.58	5.12	0.54
1994	16.94	17.86	3.03	2.82	3.24	0.42
1995	17.18	13.70	2.35	2.09	2.65	0.56
1996	17.31	17.07	2.96	2.72	3.21	0.49
1997	15.01	17.12	2.57	2.41	2.74	0.33
1998	15.01	20.81	3.12	3.01	3.24	0.23
1999	13.33	18.72	2.50	2.39	2.61	0.23
2000	13.95	18.18	2.54	2.40	2.68	0.28
2001	11.89	18.34	2.18	2.04	2.33	0.29
2002	14.59	14.33	2.09	1.97	2.22	0.25
2003	14.54	21.25	3.09	2.91	3.28	0.38
2004	14.24	22.48	3.20	2.88	3.55	0.67
2005	19.20	16.88	3.24	2.06	5.11	3.05

### Medium Four Wheel Drive Vehicles

1982	28.81	29.61	8.53	6.42	11.34	4.92
1983	18.11	30.28	5.49	4.27	7.05	2.79
1984	18.15	12.80	2.32	1.74	3.10	1.35
1985	18.82	30.57	5.75	5.35	6.19	0.84
1986	13.86	11.65	1.61	1.07	2.45	1.38
1987	15.98	24.71	3.95	2.99	5.21	2.22
1988	15.51	39.80	6.17	5.55	6.86	1.31
1989	15.35	14.78	2.27	2.04	2.53	0.49
1990	14.77	18.83	2.78	2.51	3.09	0.58
1991	19.68	16.72	3.29	2.64	4.10	1.46
1992	11.96	14.60	1.75	1.58	1.93	0.35
1993	12.22	21.24	2.60	2.43	2.77	0.34
1994	10.46	18.71	1.96	1.78	2.15	0.37
1995	10.69	22.05	2.36	2.17	2.56	0.39
1996	11.73	23.68	2.78	2.59	2.98	0.39
1997	11.52	23.02	2.65	2.51	2.80	0.29

Year of Manufacture	Pr(Risk) %	Pr(Severity) %	Serious injury rate per 100 drivers involved	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
1998	13.50	19.37	2.61	2.42	2.83	0.41
1999	11.97	21.07	2.52	2.29	2.77	0.48
2000	11.15	9.52	1.06	0.80	1.41	0.61
2001	9.84	18.18	1.79	1.58	2.03	0.45
2002	10.54	21.96	2.31	2.04	2.63	0.60
2003	9.88	8.67	0.86	0.53	1.39	0.86
2004	8.71	23.45	2.04	1.73	2.41	0.68

#### Large Four Wheel Drive Vehicles

1982	15.24	21.89	3.34	3.17	3.51	0.34
1983	14.51	25.09	3.64	3.47	3.82	0.36
1984	13.43	22.02	2.96	2.84	3.07	0.23
1985	15.79	27.11	4.28	4.19	4.38	0.19
1986	12.17	20.08	2.44	2.28	2.62	0.34
1987	15.78	20.96	3.31	3.10	3.53	0.44
1988	13.51	25.76	3.48	3.38	3.59	0.21
1989	12.63	22.41	2.83	2.76	2.90	0.14
1990	12.06	17.21	2.07	2.01	2.15	0.14
1991	11.02	20.00	2.20	2.12	2.29	0.17
1992	11.31	24.15	2.73	2.65	2.81	0.16
1993	11.12	21.49	2.39	2.31	2.47	0.17
1994	11.68	20.32	2.37	2.29	2.46	0.16
1995	11.42	24.70	2.82	2.72	2.93	0.21
1996	12.03	27.08	3.26	3.16	3.36	0.20
1997	10.89	19.85	2.16	2.08	2.25	0.17
1998	12.02	18.14	2.18	2.11	2.26	0.15
1999	11.97	21.35	2.55	2.46	2.65	0.20
2000	10.19	20.43	2.08	1.95	2.22	0.27
2001	8.90	24.80	2.21	1.97	2.47	0.50
2002	9.95	13.87	1.38	1.14	1.67	0.52
2003	10.47	16.03	1.68	1.39	2.03	0.65
2004	8.87	22.71	2.01	1.46	2.78	1.32

#### Commercial Vehicles - Vans

1982	23.20	23.14	5.37	5.17	5.57	0.41
1983	24.04	26.17	6.29	6.09	6.50	0.41
1984	22.49	23.85	5.36	5.22	5.51	0.29
1985	20.59	21.98	4.53	4.39	4.67	0.28
1986	20.10	20.67	4.16	4.02	4.29	0.27
1987	20.12	16.49	3.32	3.14	3.51	0.37
1988	20.17	26.98	5.44	5.28	5.61	0.32
1989	19.26	23.37	4.50	4.30	4.71	0.41
1990	18.21	19.64	3.58	3.38	3.78	0.40
1991	15.90	24.97	3.97	3.72	4.23	0.51
1992	17.59	20.62	3.63	3.40	3.87	0.47
1993	14.90	24.12	3.59	3.34	3.87	0.52
1994	16.60	24.85	4.13	3.91	4.35	0.44
1995	16.42	22.79	3.74	3.56	3.94	0.38
1996	15.22	15.29	2.33	2.11	2.56	0.45

Year of Manufacture	Pr(Risk) %	Pr(Severity) %	Serious injury rate per 100 drivers involved	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
1997	16.01	24.34	3.90	3.64	4.17	0.52
1998	16.44	14.94	2.46	2.24	2.69	0.45
1999	14.12	18.47	2.61	2.37	2.86	0.49
2000	13.52	20.25	2.74	2.49	3.01	0.51
2001	12.44	23.14	2.88	2.53	3.28	0.75
2002	13.61	14.82	2.02	1.62	2.51	0.90
2003	10.07	10.64	1.07	0.66	1.73	1.06
2004	15.18	16.47	2.50	1.54	4.05	2.51

#### Commercial Vehicles - Utes

1982	18.01	23.72	4.27	4.19	4.35	0.16
1983	16.29	25.30	4.12	4.03	4.22	0.19
1984	16.95	21.60	3.66	3.61	3.71	0.10
1985	19.19	24.31	4.67	4.62	4.71	0.10
1986	17.28	21.11	3.65	3.59	3.70	0.11
1987	17.34	19.46	3.37	3.30	3.45	0.15
1988	16.79	23.74	3.99	3.94	4.04	0.10
1989	16.36	21.11	3.45	3.42	3.49	0.07
1990	15.83	20.22	3.20	3.17	3.23	0.07
1991	15.09	21.84	3.30	3.25	3.34	0.08
1992	16.08	20.69	3.33	3.29	3.37	0.08
1993	14.78	24.39	3.61	3.57	3.65	0.08
1994	14.92	21.40	3.19	3.16	3.23	0.07
1995	14.23	20.49	2.92	2.88	2.95	0.07
1996	14.92	21.13	3.15	3.11	3.19	0.08
1997	15.04	21.35	3.21	3.17	3.25	0.08
1998	14.30	19.84	2.84	2.80	2.88	0.08
1999	14.84	21.55	3.20	3.15	3.25	0.10
2000	13.48	18.83	2.54	2.48	2.59	0.11
2001	12.33	19.30	2.38	2.31	2.44	0.13
2002	11.30	17.58	1.99	1.92	2.06	0.14
2003	10.82	19.47	2.11	2.03	2.19	0.16
2004	13.12	19.74	2.59	2.45	2.74	0.29
2005	15.58	27.27	4.25	3.53	5.10	1.57

#### Large Cars

1982	17.32	23.48	4.07	4.06	4.08	0.02
1983	17.80	23.16	4.12	4.11	4.14	0.03
1984	17.45	22.17	3.87	3.86	3.88	0.02
1985	17.16	21.70	3.72	3.71	3.73	0.02
1986	16.86	21.46	3.62	3.61	3.63	0.02
1987	16.66	22.03	3.67	3.66	3.68	0.02
1988	16.09	21.85	3.52	3.51	3.52	0.01
1989	15.74	21.80	3.43	3.42	3.44	0.01
1990	16.22	21.60	3.50	3.50	3.51	0.01
1991	15.82	20.52	3.25	3.24	3.25	0.02
1992	15.30	19.51	2.98	2.98	2.99	0.01
1993	14.34	19.87	2.85	2.84	2.86	0.01
1994	14.68	19.21	2.82	2.81	2.83	0.01

Year of Manufacture	Pr(Risk) %	Pr(Severity) %	Serious injury rate per 100 drivers involved	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
1995	14.48	19.58	2.83	2.83	2.84	0.01
1996	14.87	17.95	2.67	2.66	2.68	0.02
1997	14.17	18.81	2.66	2.66	2.67	0.02
1998	14.33	17.38	2.49	2.48	2.50	0.02
1999	14.27	18.63	2.66	2.65	2.67	0.02
2000	13.90	17.28	2.40	2.39	2.42	0.03
2001	14.02	18.82	2.64	2.62	2.66	0.04
2002	13.91	18.88	2.63	2.60	2.65	0.05
2003	14.07	13.15	1.85	1.82	1.89	0.07
2004	13.64	16.25	2.22	2.14	2.29	0.15
2005	14.31	17.74	2.54	2.15	3.00	0.85

### Medium Cars

1982	19.79	21.96	4.35	4.33	4.36	0.02
1983	19.26	20.70	3.99	3.98	4.00	0.02
1984	19.09	21.56	4.12	4.10	4.13	0.02
1985	19.27	20.83	4.01	4.00	4.03	0.03
1986	18.31	22.28	4.08	4.06	4.10	0.04
1987	18.29	19.88	3.64	3.61	3.66	0.05
1988	17.51	21.77	3.81	3.79	3.83	0.04
1989	17.66	21.63	3.82	3.80	3.83	0.03
1990	16.53	21.03	3.48	3.46	3.49	0.03
1991	17.45	21.21	3.70	3.68	3.72	0.04
1992	15.54	19.67	3.06	3.03	3.08	0.04
1993	14.76	20.01	2.95	2.93	2.98	0.05
1994	14.33	19.73	2.83	2.80	2.85	0.05
1995	14.32	17.63	2.52	2.50	2.55	0.05
1996	14.32	21.02	3.01	2.98	3.04	0.07
1997	14.40	19.18	2.76	2.72	2.80	0.08
1998	13.93	15.71	2.19	2.13	2.25	0.11
1999	14.29	16.06	2.30	2.23	2.36	0.13
2000	12.85	16.42	2.11	2.04	2.18	0.14
2001	14.04	19.81	2.78	2.69	2.87	0.18
2002	13.41	17.99	2.41	2.29	2.54	0.26
2003	12.79	15.23	1.95	1.79	2.12	0.34
2004	12.62	27.37	3.45	3.15	3.79	0.64
2005	15.82	16.83	2.66	1.63	4.34	2.71

### People Movers

1982	24.94	31.90	7.96	7.66	8.26	0.60
1983	22.94	23.57	5.41	5.30	5.52	0.23
1984	22.79	25.78	5.88	5.77	5.98	0.20
1985	23.24	21.73	5.05	4.93	5.17	0.23
1986	23.34	22.34	5.21	5.00	5.44	0.44
1987	20.30	18.00	3.65	3.28	4.07	0.80
1988	18.88	16.81	3.17	2.99	3.37	0.39
1989	20.44	26.98	5.52	5.39	5.65	0.26
1990	16.96	21.86	3.71	3.53	3.89	0.36

Year of Manufacture	Pr(Risk) %	Pr(Severity) %	Serious injury rate per 100 drivers involved	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Width of Confidence Interval
1991	17.80	19.63	3.49	3.31	3.69	0.37
1992	16.95	16.02	2.72	2.55	2.89	0.34
1993	15.13	25.34	3.83	3.66	4.02	0.36
1994	15.41	20.07	3.09	2.89	3.31	0.42
1995	12.90	23.76	3.07	2.82	3.33	0.52
1996	13.12	17.14	2.25	2.00	2.53	0.53
1997	13.71	18.52	2.54	2.26	2.85	0.58
1998	13.47	13.08	1.76	1.45	2.14	0.68
1999	12.82	16.25	2.08	1.79	2.42	0.63
2000	11.98	24.11	2.89	2.52	3.31	0.79
2002	10.49	15.18	1.59	1.06	2.39	1.33
2003	11.26	39.88	4.49	3.76	5.36	1.61

### Light Cars

1982	26.22	25.65	6.73	6.61	6.84	0.22
1983	27.63	20.14	5.56	5.48	5.64	0.16
1984	24.44	19.83	4.84	4.79	4.90	0.11
1985	25.70	26.23	6.74	6.70	6.78	0.09
1986	23.70	24.11	5.72	5.65	5.78	0.12
1987	24.32	25.67	6.24	6.18	6.30	0.12
1988	24.37	21.44	5.23	5.17	5.28	0.10
1989	22.33	23.01	5.14	5.10	5.17	0.07
1990	23.36	24.01	5.61	5.57	5.65	0.07
1991	22.04	22.13	4.88	4.85	4.91	0.05
1992	22.15	24.36	5.40	5.37	5.42	0.05
1993	22.01	23.02	5.07	5.04	5.09	0.05
1994	21.06	20.79	4.38	4.36	4.40	0.04
1995	20.65	21.37	4.41	4.40	4.43	0.03
1996	20.99	20.59	4.32	4.30	4.34	0.04
1997	20.53	21.30	4.37	4.35	4.39	0.04
1998	20.07	20.78	4.17	4.15	4.19	0.04
1999	19.68	20.63	4.06	4.03	4.09	0.06
2000	19.30	20.19	3.90	3.86	3.93	0.08
2001	17.23	21.77	3.75	3.69	3.81	0.12
2002	18.09	20.67	3.74	3.66	3.82	0.16
2003	18.36	22.66	4.16	4.05	4.28	0.23
2004	18.07	23.51	4.25	4.06	4.44	0.38
2005	17.00	18.77	3.19	2.48	4.11	1.63

### Small Cars

1982	22.25	22.98	5.11	5.10	5.13	0.03
1983	22.84	21.73	4.96	4.95	4.98	0.03
1984	21.40	21.39	4.58	4.56	4.59	0.03
1985	22.23	21.77	4.84	4.82	4.85	0.03
1986	20.99	21.14	4.44	4.42	4.45	0.03
1987	20.44	21.93	4.48	4.46	4.50	0.04
1988	20.25	21.40	4.33	4.32	4.35	0.03
1989	19.09	22.08	4.21	4.20	4.23	0.03
1990	18.67	21.43	4.00	3.99	4.01	0.02

<b>Year of Manufacture</b>	<b>Pr(Risk) %</b>	<b>Pr(Severity) %</b>	<b>Serious injury rate per 100 drivers involved</b>	<b>Lower 95% Confidence Limit</b>	<b>Upper 95% Confidence Limit</b>	<b>Width of Confidence Interval</b>
1991	18.72	21.17	3.96	3.95	3.98	0.03
1992	18.27	20.48	3.74	3.73	3.75	0.03
1993	17.87	19.54	3.49	3.48	3.50	0.03
1994	18.41	18.90	3.48	3.46	3.50	0.03
1995	16.61	20.24	3.36	3.34	3.38	0.03
1996	17.33	19.22	3.33	3.31	3.35	0.04
1997	17.41	20.48	3.57	3.55	3.58	0.03
1998	17.00	20.02	3.40	3.39	3.42	0.03
1999	16.89	18.59	3.14	3.12	3.16	0.04
2000	16.29	20.32	3.31	3.29	3.33	0.04
2001	15.66	18.14	2.84	2.82	2.87	0.05
2002	16.04	20.28	3.25	3.22	3.29	0.07
2003	16.33	17.36	2.83	2.79	2.88	0.09
2004	15.77	14.35	2.26	2.16	2.37	0.21
2005	17.04	22.12	3.77	3.44	4.13	0.69