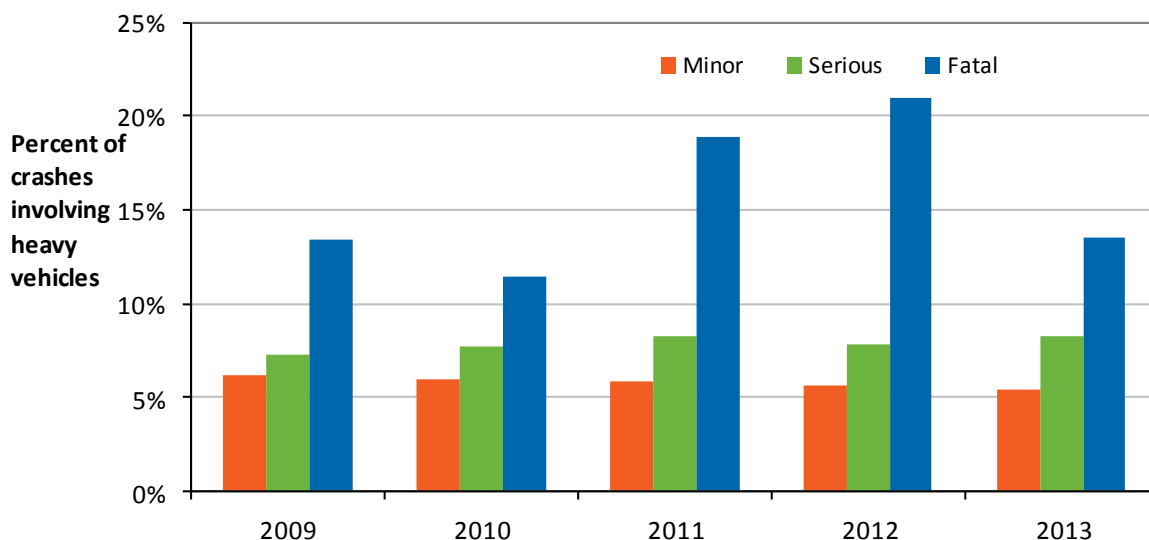


HEAVY VEHICLE DRIVERS INVOLVED IN ROAD CRASHES IN SOUTH AUSTRALIA

Heavy vehicles¹ travel more than 1.3 billion kilometres per year in South Australia. They represent 8% of the kilometres travelled in the State² and are involved on average (2009 -2013) in 15% of fatal crashes and 8% of serious injury crashes.

The mass and rigidity of heavy vehicles can contribute to the severity of crashes especially if another vehicle collides with them. Figure 1 shows that heavy vehicles are not over-represented in minor and serious injury crashes, they are however over-represented in fatal crashes. Table 1 shows the number of fatal and serious injury crashes involving heavy vehicles.

Figure 1: Percent of heavy vehicle crashes as a representative of all crashes, South Australia, 2009-2013



¹ Heavy vehicle includes the following types: Rigid truck, Semi Trailer, Bus, B Double & Other defined motor vehicle over 4.5 tonnes

² Data sourced from Australian Bureau of Statistics 'Survey of Motor Vehicle Use', 12 months ended 30 June 2012, Cat. No. 9208.0. Includes vehicles exceeding 3.5 GVM.

Table 1: Fatal and serious crashes involving heavy vehicles, South Australia, 2009-2013

Year	Fatal	Serious Injury	Total
2009	14	66	80
2010	12	68	80
2011	18	64	82
2012	18	50	68
2013	12	55	67
5yr Avg	15	61	75

Crash types

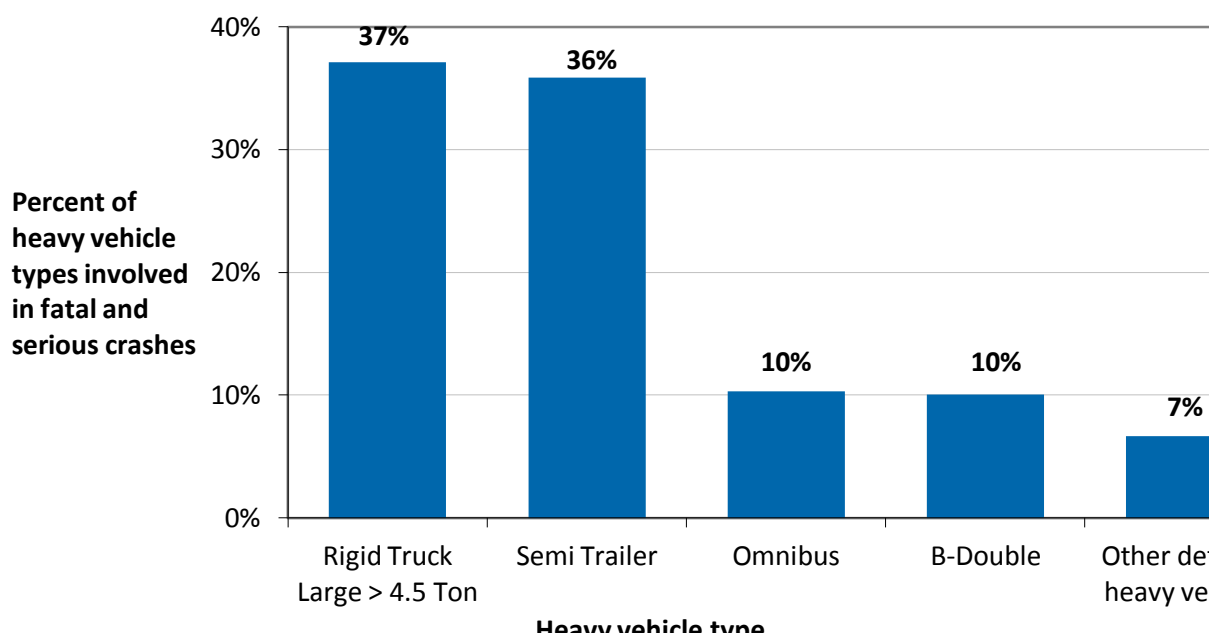
The most common type of serious casualty crash involving heavy vehicles during 2009-2013 was right angle crashes (20%). Head on collisions represented 16% of crashes, rear end 14%, rollovers 12% and side swipe 12%.

Vehicle types

The majority of heavy vehicles involved in serious casualty crashes, outlined in Figure 2, are rigid trucks larger than 4.5 tonne representing 37% of the total number of heavy vehicles involved in serious casualty crashes. However, there has been a decline in this heavy vehicle type involvement in serious casualty crashes from 40% in 2009 to the lowest on record for the last five years of 31% in 2013.

Other defined heavy vehicle includes vehicles such as, but not limited to; fire trucks, garbage trucks, animal transporter vehicles and drilling rigs all over 4.5 tonnes.

Figure 2: Types of heavy vehicles involved in fatal and serious crashes, South Australia 2009-2013



Responsible

For the five years from 2009 to 2013, there were 74 fatal crashes involving heavy vehicles of which 89 percent involved a light vehicle, pedestrian or cyclist. The heavy vehicle driver was deemed responsible in just 27 percent of these crashes.

Location of crashes

Over the past 5 years (2009 – 2013) midblock crashes (crashes not at in intersection) accounted for 59% of serious casualty crashes involving at least one heavy vehicle, roads in which midblock crashes most frequently occurred on are

- Dukes Highway – 19 serious casualty crashes
- Port Augusta to Port Wakefield Road – 14 serious casualty crashes
- Sturt Highway – 13 serious casualty crashes
- South East Highway – 6 serious casualty crashes
- Eyre Highway – 6 serious casualty crashes

Alcohol and Drugs

Most driver and rider fatalities and a proportion of serious injuries are tested for either or both alcohol and drugs. Even in a serious crash, truck drivers may only receive minor or no injuries, and as a result, may not be tested for alcohol or drugs. While alcohol is a factor in 27% of all driver and rider fatalities in South Australia there have been no heavy vehicle driver fatalities with an illegal BAC in the last 5 years. Similarly for drugs, although 21% of fatally injured drivers or riders test positive to an illegal drug, there was one heavy vehicle driver fatality that tested positive to an illegal drug.

Seatbelts

For the 5 year period 2009 – 2013, 23% of heavy vehicle drivers killed or seriously injured were not wearing a seatbelt at the time of the crash. This is well above the average of all drivers where about 10% of light vehicle drivers killed or seriously injured were not wearing a seatbelt.

Fatigue

Fatigue is a known contributing factor to road crashes but the number of crashes in which fatigue plays a part is often difficult to accurately determine.

There is no universal definition of fatigue and it is difficult to objectively measure the degree of driver fatigue following a crash. However the Australian Transport Bureau³ (ATSB) constructed an operational definition of

³ Definition is from the ATSB Road Safety Research Report OR 23 'Fatigue-related crashes: An analysis of fatigue related crashes on Australian roads using an operational definition of fatigue'

a fatigue-related crash. The definition is based on a set of well-researched selection criteria and uses crash characteristics routinely collected by different traffic authorities.

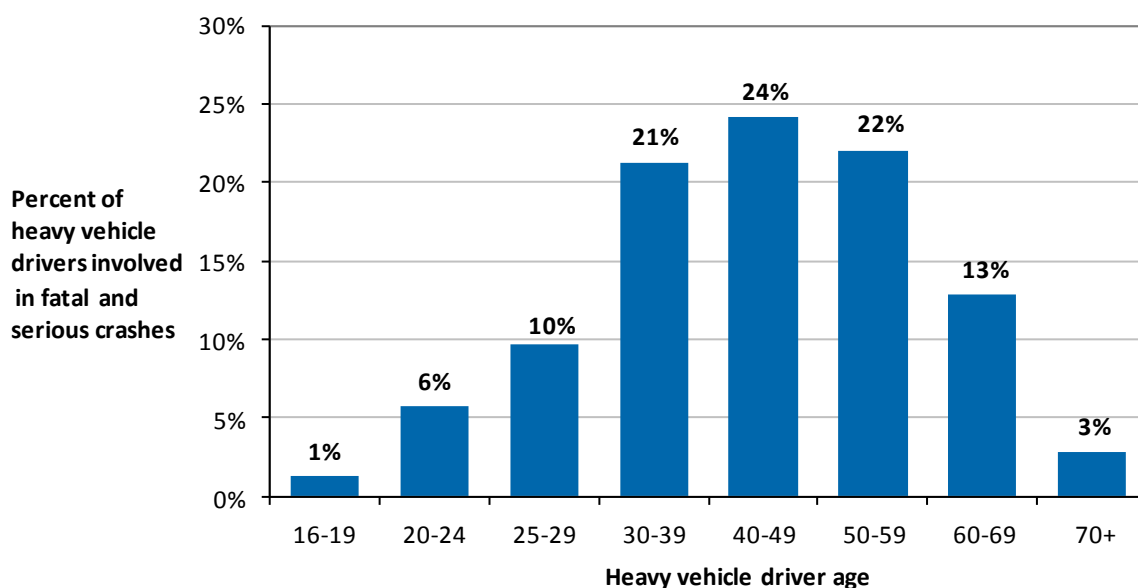
Using the ATSB definition it was found that 15% of fatal crashes involving heavy vehicles in SA were due to fatigue (11 fatal crashes). Four fatal crashes were single vehicle and the remaining seven involved another vehicle. The heavy vehicle driver was deemed responsible in six of the 11 of these fatal crashes.

Nationally ATSB found that a third of articulated truck crashes involved driver fatigue, more than double the proportion of non-articulated truck crashes that involved driver fatigue over the same period. Nearly 80% of the fatigue-related articulated truck crashes involved more than one vehicle and 62% occurred during the day time hours of 6am-6pm. Again it wasn't necessarily the truck driver that was fatigued; in fact where it could be identified which driver was fatigued in a two car collision, more than two thirds were drivers of passenger cars.

Age of driver

The heavy vehicle drivers involved in serious casualty crashes are generally older than the passenger vehicle drivers. This is likely to reflect that there are a greater number of heavy vehicle drivers in the older age groups. The following figure is an overview of the age of heavy vehicle drivers involved in serious casualty crashes in the last 5 years.

Figure 3 – Age of heavy vehicle drivers involved in fatal and serious crashes, South Australia, 2009-2013



Speed

Vehicle travel speeds affect both the risk of crash involvement and the severity of any crashes that happen, including crashes caused by factors other than speed.

A national study of heavy vehicles and speeding has shown that a high proportion of heavy vehicles exceed sign posted speed limits on both open rural and urban roads⁴. A paper on speed and heavy vehicle safety estimated a 29% reduction in heavy vehicle crashes if all heavy vehicles complied with speed limits⁵.

The following tables contain data collected from rural Culway sites in South Australia, it shows the proportion of heavy vehicles exceeding the speed limit for 2006 and 2013⁶. Since 2006, the overall proportion of heavy vehicles speeding has decreased apart from rigid trucks which have remained constant.

Table 2 – Degree of speeding from SA sites, 2006

Proportion of Sample Speeding				
Excess Speed (km/h)	Rigid	Articulated	B-Double	Road Train
≤ 5km/h	8%	45%	54%	34%
6-15km/h	3%	5%	6%	46%
> 15km/h	0%	0%	0%	3%
Total speeding	11%	51%	61%	84%

Table 3 – Degree of speeding from SA sites, 2013

Proportion of Sample Speeding				
Excess Speed (km/h)	Rigid	Articulated	B-Double	Road Train
≤ 5km/h	9%	38%	51%	36%
6-15km/h	2%	3%	1%	10%
> 15km/h	0%	0%	0%	1%
Total speeding	11%	42%	52%	47%

⁴ National Transport Commission, Australia (2005). *Heavy vehicle speed compliance: Review of Regulatory Approaches, discussion paper*, Melbourne, October 2005.

⁵ Brooks, C. (2002). *Speed and Heavy Vehicle Safety*. Papers for the NRTC/ATSB National Heavy Vehicle Safety Seminar, Melbourne, October 2002.

⁶ 2006/2013 Culway speed distribution data from Road Asset Management Section, RAMS, DPTI

Definitions of police reported casualty types:

Casualty Crash - A crash where at least one fatality, serious injury or minor injury occurs.

Casualty – A fatality, serious injury or minor injury.

Fatal Crash - A crash for which there is at least one fatality.

Fatality - A person who dies within 30 days of a crash as a result of injuries sustained in that crash.

Serious Casualty Crash - A crash where at least one fatality or serious injury occurs

Serious Casualty – A fatality or serious injury.

Serious Injury Crash - A non-fatal crash in which at least one person is seriously injured.

Serious Injury - A person who sustains injuries and is admitted to hospital as a result of a road crash and who does not die as a result of those injuries within 30 days of the crash.

Minor Injury Crash - A crash for at least one person sustains injury but no person is admitted to hospital or dies within 30 days of the crash.

Minor Injury – A person who sustains injuries requiring medical treatment, either by a doctor or in a hospital, as a result of a road crash and who does not die as a result of those injuries with 30 days of the crash.

Data sources

The data presented in this report was obtained from the Department of Planning, Transport and Infrastructure Road Crash Database. The information was compiled from police reported road casualty crashes only.

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