

Heavy Vehicles

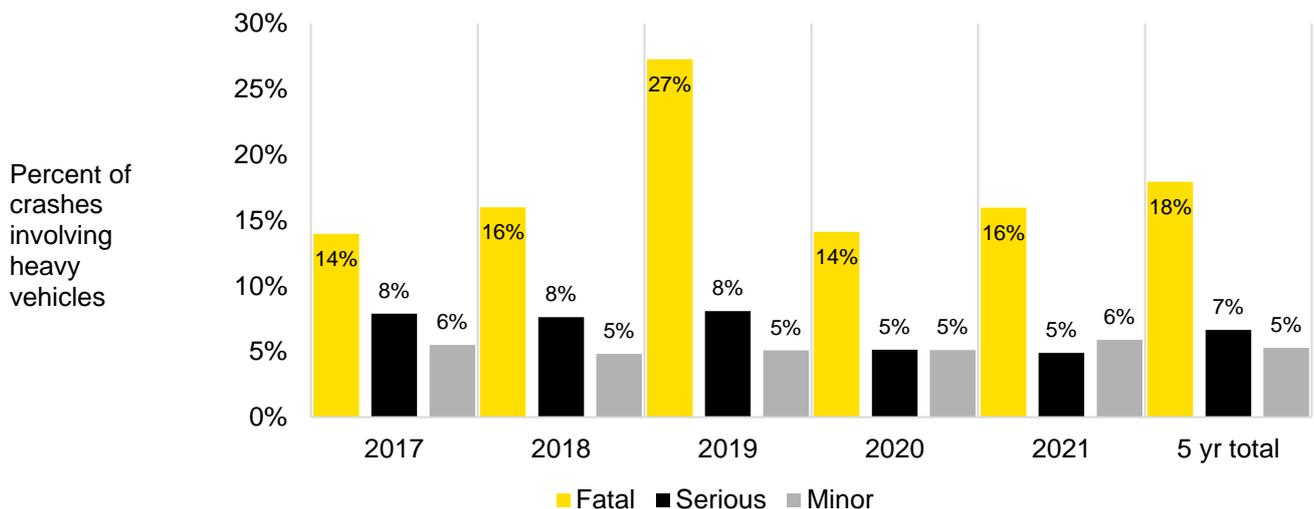
Involved in Road Crashes in South Australia

Overview

Heavy vehicles¹ travel more than 1.3 billion kilometres per year in South Australia. Heavy vehicles are over-represented in crashes resulting in a life lost. They represent 9% of the kilometres travelled in the State² and over the past 5 years (2017-2021) were involved in 18% of crashes where a life was lost, 7% of serious injury crashes and 5% of minor 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 the proportion of heavy vehicles involved in crashes by crash severity and Table 1 shows the number of fatal and serious and minor injury crashes involving heavy vehicles over the past 5 years.

Figure 1: Percent of heavy vehicle crashes as a representative of all crashes by severity and year, South Australia, 2017-2021



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

² Data sourced from Australian Bureau of Statistics 'Survey of Motor Vehicle Use', 12 months ended 30 June 2020, Cat. No. 9208.0. Includes vehicles exceeding 3.5 GVM.

Table 1: Crashes involving heavy vehicles by year and severity, South Australia, 2017-2021

Year	Life lost	Serious injury crash	Minor injury crash	Total casualty crashes
2017	13	42	241	296
2018	12	37	212	261
2019	30	59	200	289
2020	12	32	167	211
2021	15	35	209	259
5yr Avg	16	41	206	263

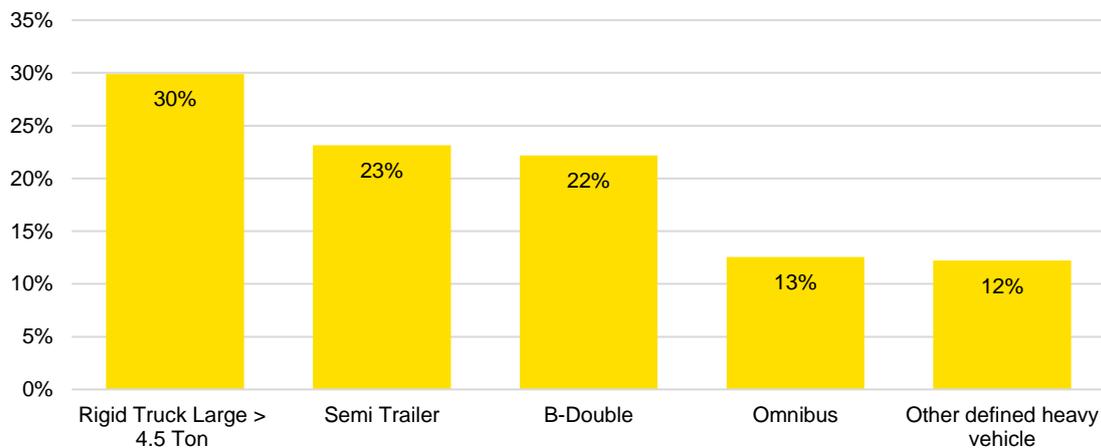
Crash types

The most common type of crash resulting in a life lost or serious injury involving heavy vehicles during 2017-2021 was head-on (22%), right angle (17%) rear end (16%) and sideswipe crashes (11%). Crashes involving a pedestrian represented 10% and rollovers represented 9% of heavy vehicle crashes over the past 5 years.

Vehicle types

Figure 2 shows that most heavy vehicles involved in a crash resulting in a life lost or serious injury in the last 5 years were rigid trucks larger than 4.5 tonnes (30%). Semi-trailers represent (23%) and B-Doubles (22%). Other defined heavy vehicles include vehicles such as, but not limited to; fire trucks, garbage trucks, animal transporter vehicles and drilling rigs over 4.5 tonnes.

Figure 2: Types of heavy vehicles involved in life lost and serious injury crashes, South Australia, 2017-2021



Responsibility for crashes

For the five years from 2017 to 2021, there were 82 crashes where a life was lost involving heavy vehicles of which 65 (79%) involved either a light vehicle, pedestrian, motorcyclist or cyclist. The heavy vehicle driver was deemed responsible in 38% of the 82 crashes.

Location of crashes

Over the past 5 years (2017-2021) midblock crashes (crashes not at an intersection) accounted for 65% of crashes resulting in a life lost or serious injury involving at least one heavy vehicle. The majority (67%) of crashes where a life was lost and 42% of serious injury crashes involving a heavy vehicle occurred in rural South Australia. Almost half (47%) of all crashes resulting in a life lost or serious injury occurred on roads speed limited to 100 or 110 km/h.

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. A zero blood alcohol concentration (BAC) policy applies to drivers of all heavy vehicles including buses. While alcohol is a factor in 19% of all driver and rider fatalities in South Australia, there has been just one heavy vehicle driver fatality (out of 19) in the last five-year period who had a BAC reading of more than 0.05. There were two heavy vehicle driver lives lost that tested positive to an illegal drug in the past 5 years.

Seatbelts

For the five-year period 2017-2021, 21% of heavy vehicle drivers killed or seriously injured were not wearing a seatbelt at the time of the crash. This is higher than the proportion of car drivers, where 9% of light vehicle drivers killed or seriously injured were not wearing a seatbelt during this time.

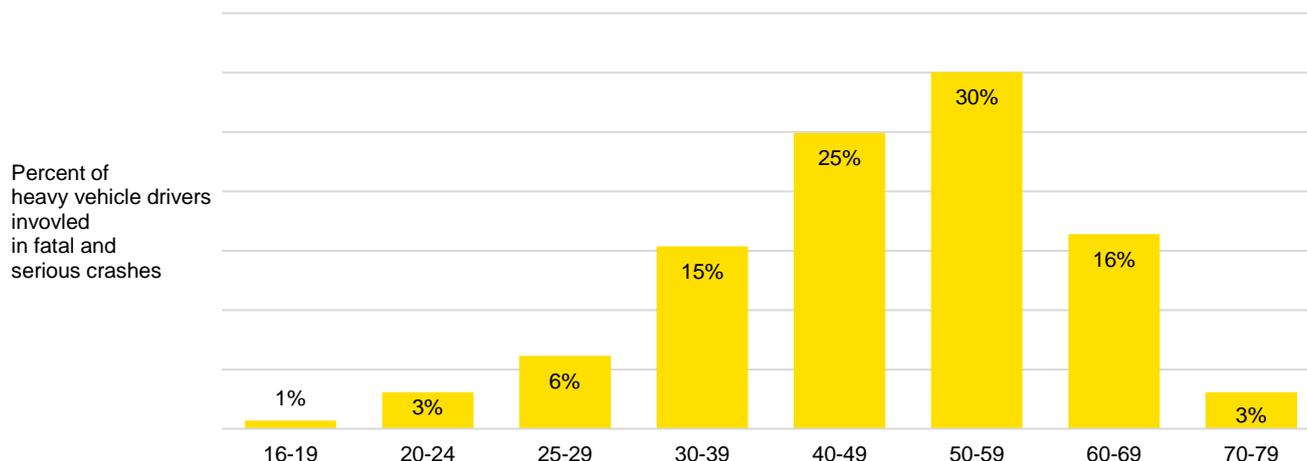
Fatigue

Nationally the 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 daytime hours of 6am-6pm. In crashes where it could be identified which driver was fatigued in a multi-vehicle collision, more than two thirds were drivers of the passenger vehicle.

Age of driver

Figure 3 shows the age of heavy vehicle drivers involved in a crash resulting in a life lost or serious injury in the last 5 years. Compared with passenger vehicle crashes, heavy vehicle drivers involved in crashes resulting in a life lost or serious injury tend to be older than passenger vehicle drivers and this is likely to reflect a higher proportion of heavy vehicle drivers in the older age groups.

Figure 3: Age of heavy vehicle drivers involved in lives lost and serious injury crashes, South Australia, 2017-2021



Speed

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

The following tables contain data collected from rural CULWAY sites¹ in South Australia and show that proportion of heavy vehicles exceeding the speed limit in 2007 was greater than in 2017.

Table 2: Proportion of sample speeding - heavy vehicles from SA sites, 2007

Excess Speed (km/h)	Rigid	Articulated	B-Double	Road Train
≤ 5 km/h	8%	44%	54%	32%
6-15 km/h	3%	5%	6%	50%
> 15 km/h	0%	0%	0%	3%
Total speeding	11%	49%	60%	85%

¹ CULWAY is a high-speed weigh-in-motion system and provides data on axle loads as well as vehicle classifications and speeds which is currently used in Australia. It has been installed in many culvert sites in most states and territories including South Australia.

Table 3: Proportion of sample speeding - heavy vehicles from SA sites, 2017

Excess Speed (km/h)	Rigid	Articulated	B-Double	Road Train
≤ 5 km/h	7%	26%	33%	32%
6-15 km/h	1%	3%	0%	9%
> 15 km/h	0%	0%	0%	0%
Total speeding	8%	9%	33%	41%

Definitions of police reported casualty types:

Casualty Crash – crash where at least one life lost, serious injury or minor injury occurs.

Casualty – A life lost, serious injury or minor injury.

Fatal Crash – A crash for which there is at least one life lost.

Life lost – A person who dies within 30 days of a crash as a result of injuries sustained in that crash.

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 for a minimum period of an overnight stay 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 in which at least one person sustains injury, but no person is seriously injured 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 was not admitted to hospital and who does not die as a result of those injuries within 30 days of the crash.

Data sources

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

Enquiries

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