

# Heavy Vehicles

## Road crashes in South Australia, 2019-2023

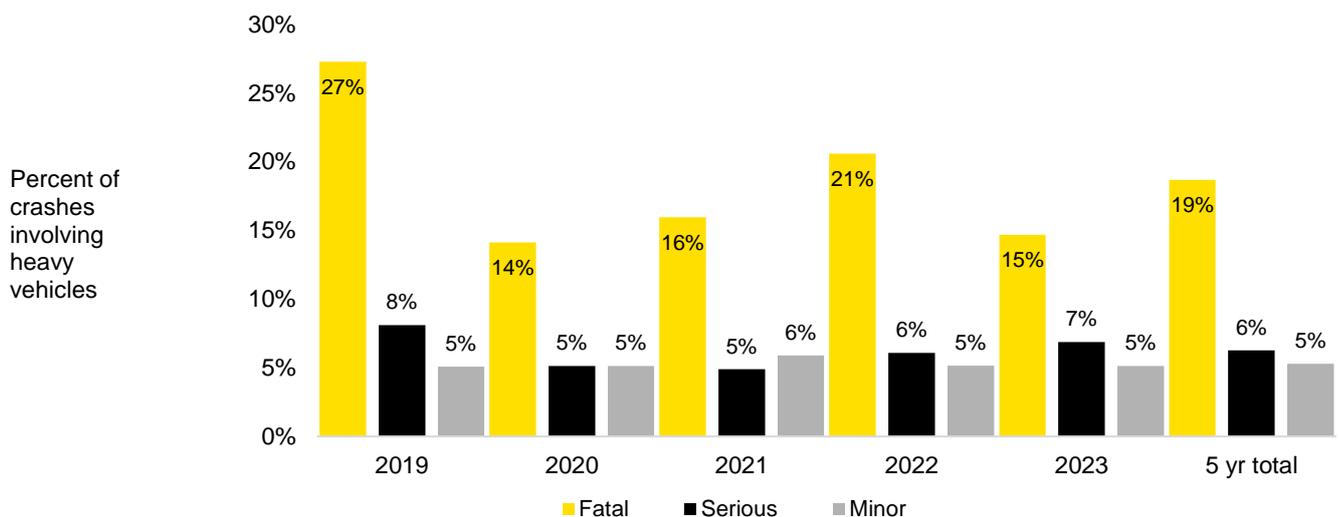
### Overview

Heavy vehicles<sup>1</sup> travel more than 1.3 billion kilometres per year in South Australia. Heavy vehicles are over-represented in crashes that result in a life lost. They represent 9% of the kilometres travelled in the State<sup>2</sup>. Between 2019 and 2023, heavy vehicles were involved in 19% of crashes where a life was lost, 6% of serious injury crashes and 5% of minor injury crashes.

Under the Heavy Vehicle National Law (HVNL), a 'heavy vehicle' is a vehicle or combination with a gross vehicle mass (GVM) or aggregate trailer mass (ATM) of more than 4.5 tonnes.

The greater 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 five years.

**Figure 1: Percent of heavy vehicle crashes as a representative of all crashes by severity and year, South Australia, 2019-2023**



<sup>1</sup> Heavy vehicle includes the following types: Rigid truck, Semi-trailer, Bus, B-Double and other defined motor vehicle

<sup>2</sup> 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, 2019-2023**

Year	Life lost	Serious injury crash	Minor injury crash	Total casualty crashes
2019	30	59	200	289
2020	12	32	167	211
2021	15	35	209	259
2022	14	35	150	199
2023	16	49	149	214
<b>5-year average</b>	<b>17</b>	<b>42</b>	<b>175</b>	<b>234</b>

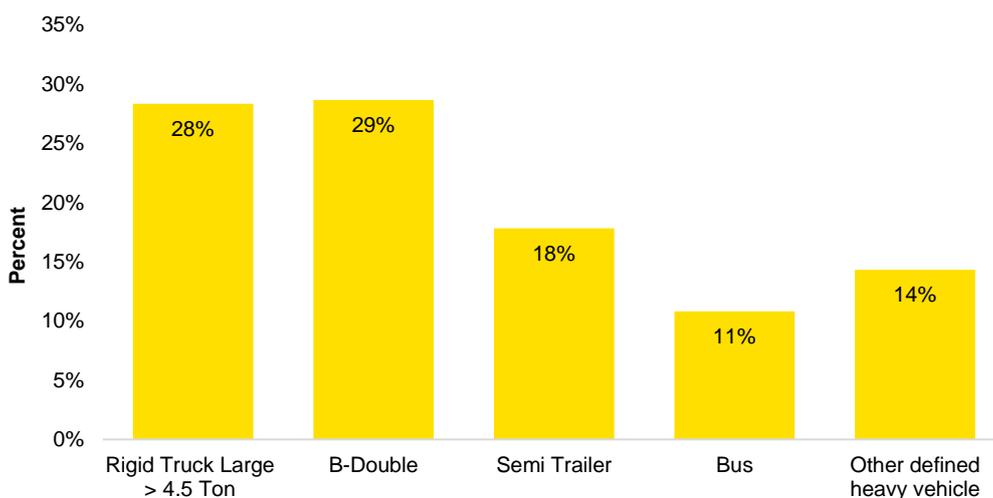
**Crash types**

The most common types of crash resulting in a life lost or serious injury involving heavy vehicles during 2019 and 2023 were head-on (22%), right angle (16%), rear end (12%), and sideswipe crashes (12%). Moreover, crashes involving rollovers represented 11% and involving a pedestrian represented 10% of heavy vehicle crashes over the past five 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 five years were rigid trucks with a GVM greater than 4.5 tonnes (28%) followed by B-doubles (29%) and Semi-trailers (18%). Other heavy vehicle types include, 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, 2019-2023**



## Responsibility for crashes

Between 2019 and 2023, there were 87 crashes where a life was lost involving heavy vehicles, of which 66 (76%) involved either a light vehicle, pedestrian, motorcyclist or cyclist. The heavy vehicle driver was deemed responsible in 39% of the 87 crashes.

## Location of crashes

Between 2019 and 2023, mid-block crashes (crashes not at an intersection) accounted for 67% 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 48% of serious injury crashes involving a heavy vehicle occurred in regional South Australia. Almost half (47%) of all crashes resulting in a life lost or serious injury occurred on roads speed limited to 100 or 110km/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 20% of all driver and rider fatalities in South Australia, there has only been one heavy vehicle driver fatality (out of 22) 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 five years.

## Seatbelts

Between 2019 and 2023, 19% 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 8% of light vehicle drivers killed or seriously injured were not wearing a seatbelt during this time.

## Fatigue

Under the HVNL, fatigue is defined as feeling sleepy, physically or mentally tired, or lacking energy<sup>3</sup>. Fatigue is a major safety hazard, as it can impair a driver's ability to drive a heavy vehicle safely. Driving a heavy vehicle while impaired by fatigue can increase the likelihood of being involved in a crash, as it reduces alertness and slows reaction times. Nationally the Australian Transport Safety Bureau<sup>4</sup> (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

<sup>3</sup> s223 of the Heavy Vehicle National Law.

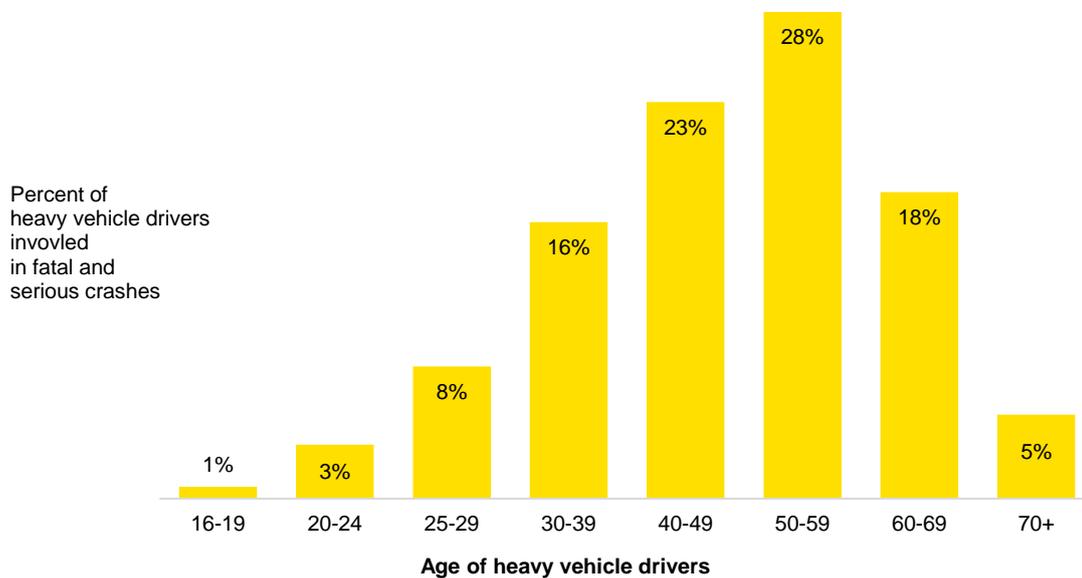
<sup>4</sup> Definition is from the ATSB Road Safety Research Report OR 23 'Fatigue-related crashes: An analysis of fatigue related crashes on Australian roads using an operational definition of fatigue'

hours of 6am and 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 heavy vehicle 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 five years. Compared with drivers of light vehicles involved in crashes, heavy vehicle drivers involved in crashes resulting in a life lost or serious injury tend to be older than light vehicle drivers and this is likely to reflect a higher proportion of heavy vehicle drivers in the older age groups<sup>5</sup>.

**Figure 3: Age of heavy vehicle drivers involved in lives lost and serious injury crashes, South Australia, 2019-2023**



<sup>5</sup> [www.jobsandskills.gov.au/data/occupation-and-industry-profiles/occupations/7331-truck-drivers](http://www.jobsandskills.gov.au/data/occupation-and-industry-profiles/occupations/7331-truck-drivers)

## 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 sites<sup>6</sup> in South Australia and show that proportion of heavy vehicles exceeding the speed limit reduced between 2010 and 2023.

**Table 2: Proportion of sample speeding - heavy vehicles from SA sites, 2010**

Excess speed (km/h)	Rigid	Articulated	B-double	Road train
≤ 5km/h	8%	35%	42%	35%
6-15km/h	2%	4%	3%	49%
> 15km/h	0%	0%	0%	2%
<b>Total speeding</b>	<b>10%</b>	<b>39%</b>	<b>46%</b>	<b>86%</b>

**Table 3: Proportion of sample speeding - heavy vehicles from SA sites, 2023**

Excess speed (km/h)	Rigid	Articulated	B-double	Road train
≤ 5km/h	10%	22%	24%	33%
6-15km/h	2%	6%	0%	12%
> 15km/h	0%	0%	0%	1%
<b>Total speeding</b>	<b>12%</b>	<b>28%</b>	<b>24%</b>	<b>46%</b>

<sup>6</sup> 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.

## Definitions of police reported casualty types:

**Casualty crash** – A 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 that require 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.

**Note** – Percentage totals may not add to 100% due to rounding.

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## Enquiries

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