



Fatal light truck crashes in Australia

This monograph examines the incidence and characteristics of fatal crashes involving light trucks (that is, trucks weighing less than 4.5 tonnes gross vehicle mass). Light trucks tend to be driven by couriers, tradespeople, farmers, etc. to deliver goods locally, to transport tools and materials and a range of other short distance activities.

Data used in this monograph was extracted from the ATSB fatality crash database (1992-1997) and is the latest available data.

Key findings

- ▶ At least one light truck was involved in 6 per cent of all fatal road crashes in 1996 and 1997.
- ▶ There was a 48 per cent reduction in the number of fatal light truck crashes between 1992 and 1997. By comparison, the reduction in fatal crashes for all vehicle types was six per cent.
- ▶ Fatal light truck crashes comprised multiple vehicle crashes (54 per cent), single vehicle crashes (26 per cent), and pedestrian crashes (20 per cent).
- ▶ The most common light truck crashes were head-on collisions.
- ▶ The incidence of light truck crashes was higher in rural areas than in urban areas.
- ▶ Fatigue and alcohol were the most common contributing factors in light truck crashes where the cause of the crash was attributed to the light truck driver.
- ▶ Fifteen per cent of light truck drivers had a blood alcohol concentration greater than 0.05g/100ml at the time of the crash. Compared with 3 per cent of heavy truck drivers and 24 per cent of passenger vehicle drivers.

General trends, 1992 to 1997

Both fatal crashes and fatalities involving light trucks decreased by 48 per cent between 1992 and 1997. In 1992 there were 165 fatal crashes and 192 fatalities, compared with 85 fatal crashes and 99 fatalities in 1997 (see figure 1). By comparison, fatal crashes for all vehicle types indicated a much smaller decrease in the number crashes (6 per cent) and fatalities (9 per cent) over the same period.

Light truck crashes, 1996 and 1997

For the above period, six per cent of all fatal crashes involved at least one light truck, whereas 14 per cent of all fatal crashes involved at least one heavy truck which is more than double the proportion of light truck crashes.

Coroners' findings indicated that light truck drivers were responsible for 35 per cent of light truck crashes involving two or more vehicles and no pedestrians, compared with drivers of passenger vehicles being responsible for 36 per cent of these crashes. On the other hand, in multiple vehicle heavy truck crashes, heavy truck drivers were responsible for 23 per cent of crashes, compared with the drivers of passenger vehicles being responsible for 56 per cent of these crashes.

Figure 1: Fatal light truck crashes and fatalities, 1992 – 1997

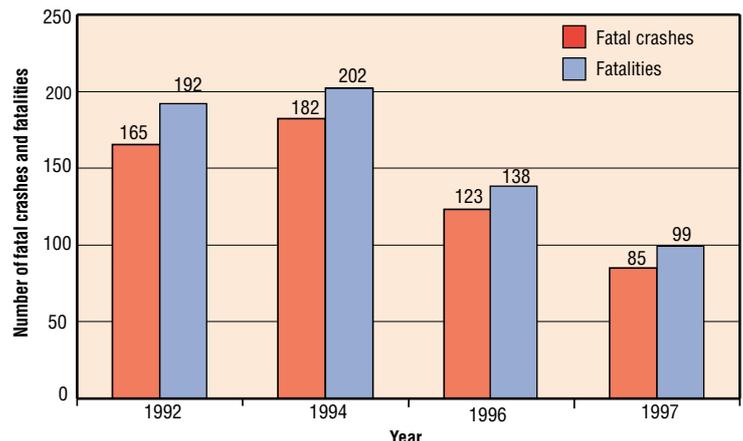
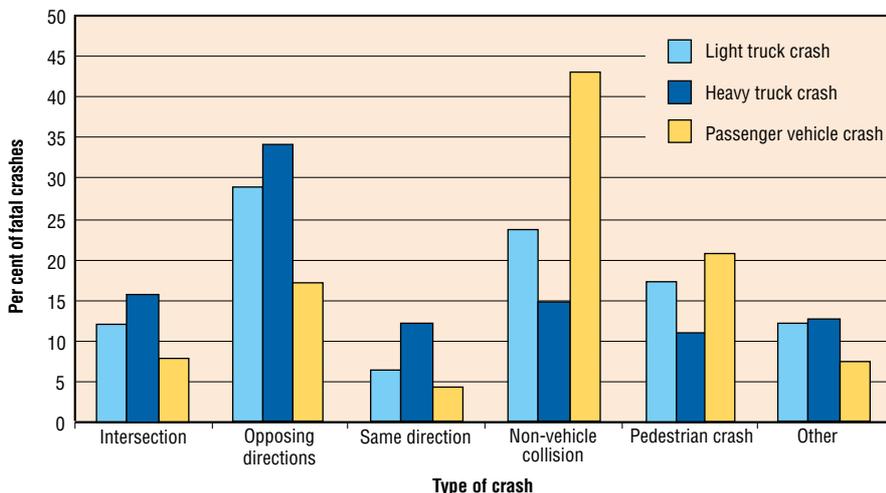


Figure 2: Fatal crashes by the type of crash and vehicle crash type, 1996 and 1997



Crash characteristics, 1996 and 1997

Number of vehicles involved

Of all fatal light truck crashes, 54 per cent were multiple vehicle crashes, 26 per cent were single vehicle crashes involving only the light truck, and 20 per cent involved pedestrians.

Type of crash

The most common light truck crashes were collisions involving two vehicles approaching from opposing directions (29 per cent) (see figure 2). Three-quarters of these opposing direction crashes were head-on collisions. The second most common crashes were non-vehicle collisions (24 per cent). Non-vehicle collisions include instances where the vehicle leaves the road and may or may not impact with an object.

Location

For those instances where the location of the fatal crash was recorded in the data, over half of fatal light truck crashes (56 per cent) occurred in rural areas. Similarly, over half of heavy truck crashes (58 per cent), while slightly under half of passenger vehicle crashes (48 per cent) occurred in rural areas.

Time of day and day of week

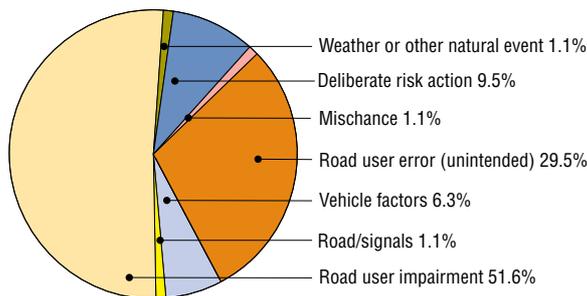
The greater proportion of light truck crashes occurred during the daytime hours of 6:00am to 5:59pm (63 per cent). Of these, 54 per cent

occurred during the afternoon¹ and 46 per cent occurred during the morning². More light truck fatal crashes occurred on weekdays (69 per cent) than the weekend³.

Contributing factors

The major contributing factor in light truck crashes, attributed to the light truck driver, was 'road user impairment' (52 per cent) (see figure 3). Road user impairment included instances where drivers were fatigued (47 per cent) or were influenced by alcohol use (39 per cent). The second major contributing factor was 'road user error (unintended)' (30 per cent). This factor included instances of drivers failing to see other road users, signals, or road conditions. Approximately 10 per cent of all fatal light truck crashes involved a deliberate risk or action. Three-quarters of these risk related crashes involved vehicles being driven at excessive speeds.

Figure 3: Contributing factors in fatal light truck crashes where the light truck driver was responsible, 1996 and 1997



¹ Afternoon starts midday and finishes 5:59pm
² Morning starts 6:00am and finishes 11:59am
³ Weekend starts 6:00pm Friday and finishes 5:59am Monday

Figure 4a: People fatally injured in multiple vehicle crashes involving light trucks, 1996 and 1997

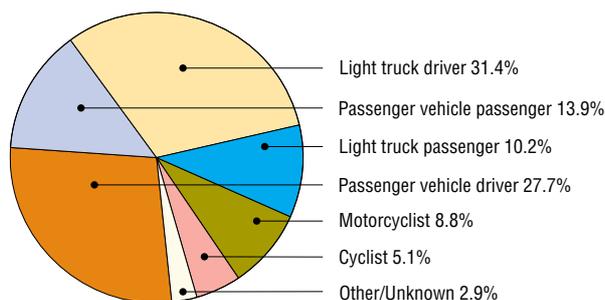
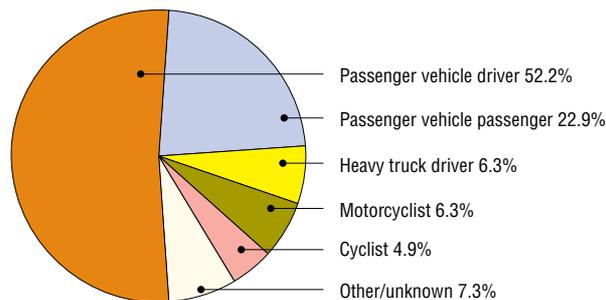


Figure 4b: People fatally injured in multiple vehicle crashes involving heavy trucks, 1996 and 1997



Fatalities, 1996 and 1997

There were 137 people fatally injured in multiple vehicle crashes involving at least one light truck. Light truck drivers accounted for 31 per cent of the fatalities and passenger vehicle occupants accounted for 42 per cent of the fatalities (28 per cent of drivers, 14 per cent of passengers) (see figure 4a). By comparison, in multiple vehicle crashes involving heavy trucks, 410 people were fatally injured and heavy truck drivers accounted for 6 per cent of the fatalities, and passenger vehicle occupants accounted for 75 per cent of the fatalities (52 per cent of drivers, 23 per cent of passengers) (see figure 4b).

Light truck drivers, 1996 and 1997

Driver characteristics

Most light truck drivers involved in fatal crashes were male (86 per cent). This proportion of male light truck drivers involved in fatal crashes exceeded the proportion of male passenger vehicle drivers involved in fatal crashes (70 per cent), but was lower than male heavy truck drivers (95 per cent) involved in fatal crashes.

Where age was recorded, the highest proportion of light truck drivers involved in fatal crashes were aged 17-24 years (16 per cent) and the smallest proportion were over 60 years old (10 per cent) (see figure 5).

Figure 5: Age of drivers involved in fatal crashes by vehicle type, 1996 and 1997

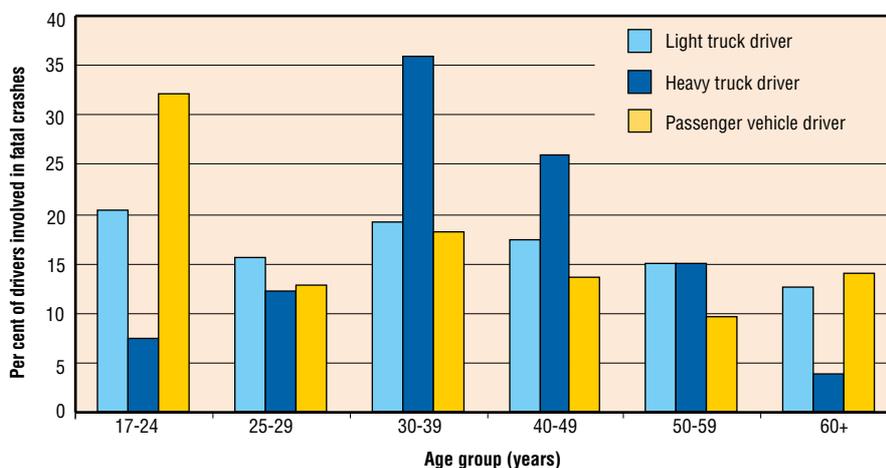


Table 1: Blood alcohol concentration of drivers involved in fatal crashes by vehicle type, 1996 and 1997

Driver BAC	Vehicle type		
	Light Truck	Heavy Truck	Passenger Vehicle
≤0.05	112	311	1662
>0.05	20	8	527
Not tested or unknown ^a	71	188	973
Total	203	507	3162

^a Excluded when calculating the proportion of cases with illegal BAC.

Alcohol

Where tested/known, 15 per cent of light truck drivers involved in fatal crashes were found to have a blood alcohol content (BAC) greater than 0.05g/100ml. By comparison three per cent of heavy truck drivers and 24 per cent of passenger vehicle drivers had a BAC greater than 0.05g/100ml (see table 1).

Definitions

LIGHT TRUCKS are rigid trucks with a single body, not detachable at the cabin. They are two-wheel drive and weigh 4.5 tonnes gross vehicle mass or less. Light trucks include forward control vans, light commercial trucks, single or twin cab utilities and urban milk trucks.

HEAVY TRUCKS are either rigid trucks of greater than 4.5 tonne gross vehicle mass, or articulated trucks.

PASSENGER VEHICLES are cars or car derivatives including four wheel drive vehicles.

A LIGHT TRUCK CRASH involves at least one light truck.

A HEAVY TRUCK CRASH involves at least one heavy truck and no light trucks.

A PASSENGER VEHICLE CRASH involves at least one passenger vehicle and no light or heavy trucks.