

STATISTICAL REPORT NOTIFIED FATALITIES

JULY 2006 TO JUNE 2007



Australian Government
Australian Safety and Compensation Council

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SUMMARY

This report provides an analysis of data on work-related fatalities between 1 July 2006 and 30 June 2007 that were notified to OHS jurisdictions under their OHS legislation.

During 2006–07:

- > There were 162 notified work-related fatalities — 146 workers and 16 bystanders (Table 1).
- > For workers, the number of fatalities was 16% higher than in 2003–04 (126 fatalities), the first year of data collection: despite a 42% decrease over that period in fatalities at Agriculture, forestry and fishing workplaces (Table 3).
- > Most fatalities were of men — 146 in total. There were 14 fatalities of women (including 3 bystanders) and gender was unknown for 2 other fatalities.
- > Nearly one-quarter (24%) of all notified fatalities of known age were of workers aged 55 years or older, although workers in this age group comprised 15% of employed Australians.
- > The occupation group Intermediate production and transport workers contributed 31% of all notified work-related fatalities (50 fatalities).
- > Five industries accounted for seven out of every ten notified work-related fatalities — 17% of fatalities occurred at a workplace primarily engaged in Construction; 17% in Agriculture, forestry and fishing; 17% in Transport and storage; 11% in Manufacturing and 9% in Mining (Table 2).
- > The most common causes of fatalities were *Vehicle accidents* (30 fatalities), *Being hit by moving objects* (29 fatalities), *Being hit by falling objects* (29 fatalities), *Falls from a height* (28 fatalities), *Electrocution* (13 fatalities), and *Being trapped by moving machinery* (11 fatalities) — see Table 4.
- > Among *Vehicle accidents*, 14 fatalities occurred on public roads and 16 occurred elsewhere, including 4 fatalities during air travel (see Table 1). Since work-related road traffic fatalities are not notified to some OHS jurisdictions, the counts presented in this report are likely to under-report their occurrence.

Table 1 Notified fatalities in Australia by place of fatality, July 2006 to June 2007

Place of fatality	Worker	Bystander	Total
At worksite	124	8	132
Vehicle accident ^(a) on public road	7	7	14
Vehicle accident ^(a) elsewhere	15	1	16
Total	146	16	162

(a) Includes rollover of mobile mechanical equipment such as tractors, forklifts and construction vehicles.

BACKGROUND INFORMATION

OHS legislation in each Australian state and territory requires work-related deaths to be notified to the state or territory OHS authority. The Australian Safety and Compensation Council (ASCC, formerly NOHSC) began compiling details of these notifications from each OHS authority on 1 July 2003. Notifications cover workers (both employees and self-employed) and bystanders who suffered a fatal injury at work or as the result of work activity. Fatalities that occurred while commuting to or from work, and those resulting from suicide or natural causes (i.e. stroke or heart attack) are not included in this report.

The compilation of notifications at the national level is complicated by differences across jurisdictions in the definition of a work-related death and the coverage of some incidents. In particular:

- > Several jurisdictions do not include work-related deaths caused by vehicle accidents on public roads in their notification systems. These fatalities are instead notified to and investigated by the police.
- > Aircraft crash fatalities are not notified to all OHS jurisdictions. These fatalities are instead notified to the relevant transport authority.

Table 2 Number of notified fatalities by industry, July 2006 to June 2007

Industry	Industry of workplace			Industry of employer ^(a)	
	Worker	Bystander	Total	Worker	Incidence rate ^(b)
Construction	28	0	28	33	3.5
Agriculture, forestry and fishing	25	2	27	23	6.4
Transport and storage	22	5	27	25	5.3
Manufacturing	17	1	18	15	1.4
Mining	14	0	14	12	8.8
Cultural and recreational services	7	1	8	6	2.1
Personal and other services	6	1	7	9	2.3
Accommodation, cafes and restaurants	4	1	5	1	0.2
Retail trade	3	1	4	3	0.2
Wholesale trade	3	0	3	2	0.4
Government administration and defence	2	0	2	8	1.6
Communication services	0	2	2	0	0.0
Education	1	1	2	1	0.1
Property and business services	1	0	1	4	0.3
Electricity, gas and water supply	1	0	1	1	1.2
Health and community services	0	1	1	0	0.0
Finance and insurance	0	0	0	0	0.0
Industry unknown or not applicable	7 ^(c)	0	7	3	na
Private residence	5	0	5	na	na
Total	146	16	162	146	1.4

na denotes 'Not applicable'.

(a) Industry of employer is not applicable for bystanders.

(b) Fatalities per 100 000 workers. Calculated using annual averages of quarterly data (ABS 6291.0.55.003 *Labour Force, Australia, Detailed – Electronic Delivery. Table 05. Employed persons by state and Industry*).

(c) Includes 4 fatalities that occurred overseas.

INDUSTRY

Table 2 shows the number of notified work-related fatalities during 2006–07 according to the industry of the workplace and the industry of the worker's employer. The industry of workplace identifies the primary work activity conducted at the site where the incident leading to the fatality occurred.

Workplaces primarily engaged in the Construction industry accounted for the largest number of notified fatalities (28 fatalities). Other high ranking industries were Agriculture, forestry and fishing (27 fatalities), Transport and storage (27 fatalities), Manufacturing (18 fatalities), and Mining (14 fatalities).

Table 2 also shows the fatality incidence rate for workers (the number of worker notified fatalities per 100 000 workers) by the industry of employment.

In 2006–07, the highest fatality incidence rate occurred among workers employed in the Mining industry — 8.8 notified work-related fatalities per 100 000 workers. Other high rates occurred among workers in Agriculture, forestry and fishing (6.4 fatalities per 100 000 workers), Transport and storage (5.3 fatalities per 100 000 workers) and Construction (3.5 fatalities per 100 000 workers). All of these incidence rates were well above the national incidence rate of 1.4 notified work-related fatalities per 100 000 workers.

Cross-comparison (not tabulated in this report) indicates a number of differences between the workplace at which the work-related fatality occurred and the industry of the worker's employer. In particular:

- > Of the 27 workers and bystanders fatally injured at a workplace primarily related to Agriculture, forestry and fishing, 21 were workers in that industry.
- > Of the 27 workers and bystanders fatally injured at a workplace primarily related to Transport and storage, 18 were workers in that industry.

- > Of the 33 fatalities of workers employed in the Construction industry, 23 resulted from injuries at workplaces primarily related to that industry.

TIME SERIES

Table 3 shows the annual number of notified fatalities of workers according to the industry of the workplace at which the fatal injury occurred for each of the four financial years from 2003–04. Bystander fatalities have been excluded from this analysis.

Table 3 Number of notified fatalities of workers^(a) by industry of workplace, 2003–04 to 2006–2007

Industry	Year			
	2003–04	2004–05	2005–06	2006–07
Construction	26	18	27	28
Agriculture, forestry and fishing	43	39	35	25
Transport and storage	9	21	18	22
Manufacturing	7	6	21	17
Mining	11	8	11	14
Cultural and recreational services	1	5	0	7
Personal and other services	8	4	5	6
Accommodation, cafes and restaurants	1	2	3	4
Retail trade	3	2	7	3
Wholesale trade	1	1	1	3
Government administration and defence	2	8	6	2
Education	2	1	3	1
Property and business services	0	4	1	1
Electricity, gas and water supply	3	4	3	1
Communication services	2	0	1	0
Health and community services	1	1	1	0
Finance and insurance	0	0	0	0
Industry unknown or not applicable	2	2	2	7 ^(b)
Private residence	4	1	3	5
Total	126	127	148	146

(a) Excludes bystanders.

(b) Includes 4 fatalities that occurred overseas.

Total annual fatalities of workers increased by 16% over this period (from 126 in 2003–04 to 146 in 2006–07). Much of this change is attributable to an increase in fatalities at workplaces involved in Transport and storage (from 9 in 2003–04 to 22 in 2006–07) and Manufacturing (from 7 in 2003–04 to 17 in 2006–07).

In contrast, annual fatalities decreased by 42% at workplaces involved in Agriculture, forestry and fishing (from 43 in 2003–04 to 25 in 2006–07).

Care should be exercised in interpreting changes in the number of fatalities over time. Because the police generally investigate vehicle accidents on public roads, many work-related fatalities involving vehicles are not notified to state or territory OHS jurisdictions. However, several national road transport companies have recently moved from state or territory OHS jurisdictions to self-insurance under the Commonwealth OHS jurisdiction, which includes these incidents in its notifications. This change impacts both recent and future reporting of fatalities for workers and bystanders.

OCCUPATION

Figure 1 shows the number of notified work-related fatalities during 2006–07 according to the worker's occupation at the time the fatal injury was sustained. The occupation group Intermediate production and transport workers contributed 31% of all notified work-related fatalities (50 fatalities). This occupation group includes road transport

drivers, operators of moving and stationary plant, and machine operators.

Other occupation groups that incurred many fatalities were Tradespersons and related workers (37 fatalities) and Labourers and related workers (26 fatalities). There were also 16 fatalities of Managers and administrators: 12 of these were farmers, mainly farmers aged 55 years and over (9 of the 12 fatalities).

AGE

Figure 2 shows the number of notified work-related fatalities during 2006–07 according to the age of the worker or bystander. The fatalities were concentrated within the main working ages — most commonly the 35–44 years age group (37 worker fatalities) — with fewer fatalities in the youngest and oldest age groups.

The number of fatalities taken in isolation is insufficient to provide a complete understanding of the age profile of work-related fatalities. For example, the 10 fatalities of workers aged 65 years and over compared with the 37 fatalities of workers aged 35–44 years may seem to indicate that older workers had a lower risk of fatality. However, since there are relatively few people working when they are aged 65 years and over, the 10 fatalities actually represented a higher risk of work-related fatality.

To compare differences in the risk of fatality between workers in each age group, the number of notified fatalities in each age group can be expressed as a rate against the number of workers

Figure 1 Number of notified fatalities by occupation, July 2006 to June 2007

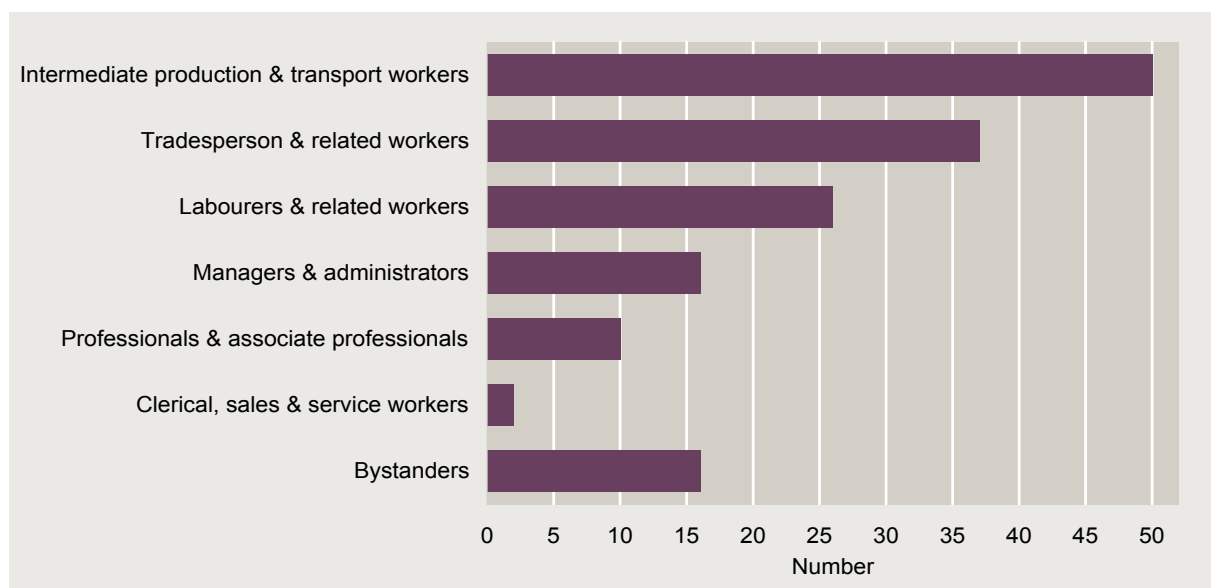
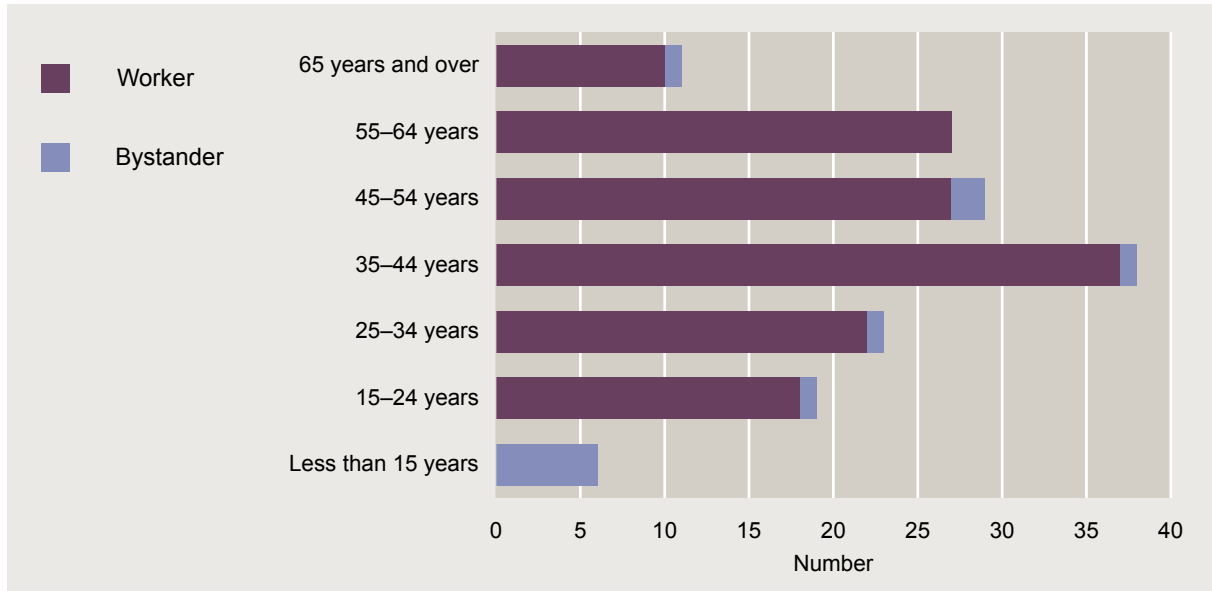


Figure 2 Number of notified fatalities by age, July 2006 to June 2007

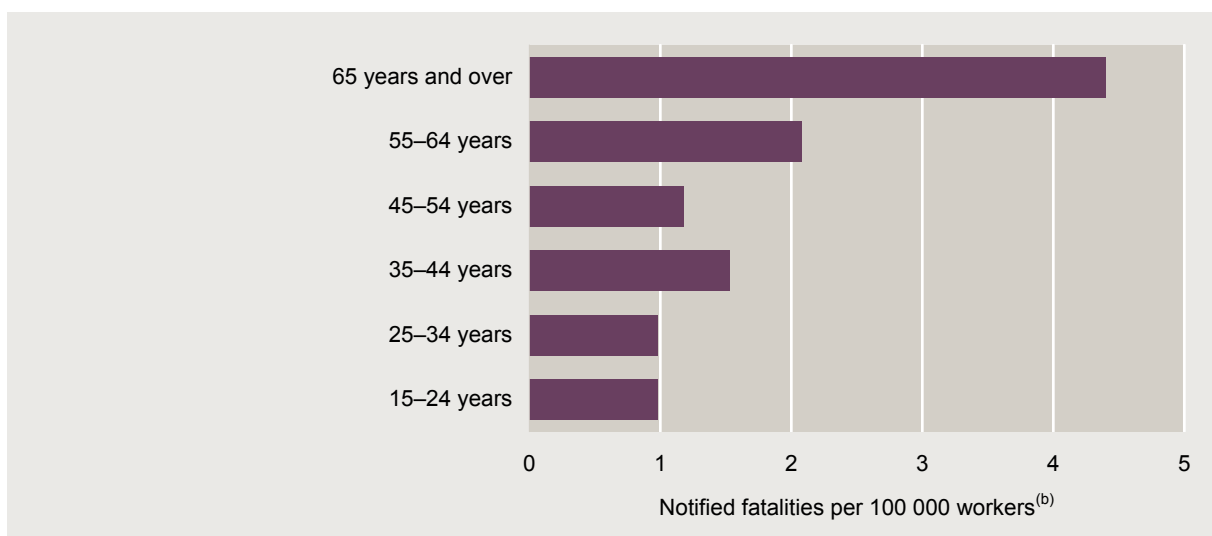


in that age group (see Figure 3). These rates show that work-related fatalities were more likely to occur among older workers. The rates for workers aged 55–64 years and 65 years and over were 2.1 and 4.4 respectively per 100 000 workers, compared with a rate of 1.0 fatality per 100 000 workers for workers aged 15 to 24 years and 25 to 34 years.

The high fatality rates observed among the oldest age groups were strongly influenced by the

age profile of fatalities at workplaces related to Agriculture, forestry and fishing. Fatalities at these workplaces were skewed towards the older age groups, with 41% (11 fatalities out of 27) involving workers aged 55 years and over. This pattern corresponds with the relatively older age profile of people employed in Agriculture, forestry and fishing: in 2006 the median age of workers in the industry was 46 years compared with 39 years for all workers.

Figure 3 Incidence rate of worker^(a) notified fatalities by age, July 2006 to June 2007



(a) Excludes bystanders.

(b) The number of workers used in calculating incidence rates are annual averages of monthly figures (ABS 6291.0.55.001 Labour Force, Australia, Detailed – Electronic Delivery. Table 01. Labour force status by social marital status, age and sex).

BYSTANDERS

A total of 16 bystander fatalities occurred in 2006–07. These fatalities are defined as deaths of members of the public, such as passers-by or visitors to workplaces—including children—who die as a consequence of another person’s work activity.

Table 2 indicates that in 2006–07 bystander fatalities most commonly occurred at workplaces that were primarily engaged in Transport and storage (5 fatalities); Agriculture, forestry and fishing (2 fatalities); and Communication services (2 fatalities).

Notably, the bystander fatalities for 2006–07 included 6 children under 15 years of age (see Figure 2). This figure emphasises the dangers of allowing children on to worksites and around work equipment.

Of those 6 child fatalities, 3 occurred in swimming pools and 3 involved the child being hit by a vehicle travelling at low speed—2 of these fatalities involved vehicles being used during agricultural operations and the other involved a truck.

Two of the 6 child fatalities occurred at workplaces involved in Agriculture, forestry and fishing, and 1 fatality each occurred at workplaces involved in Retail trade; Accommodation, cafes and restaurants; Education; and Cultural and recreational services.

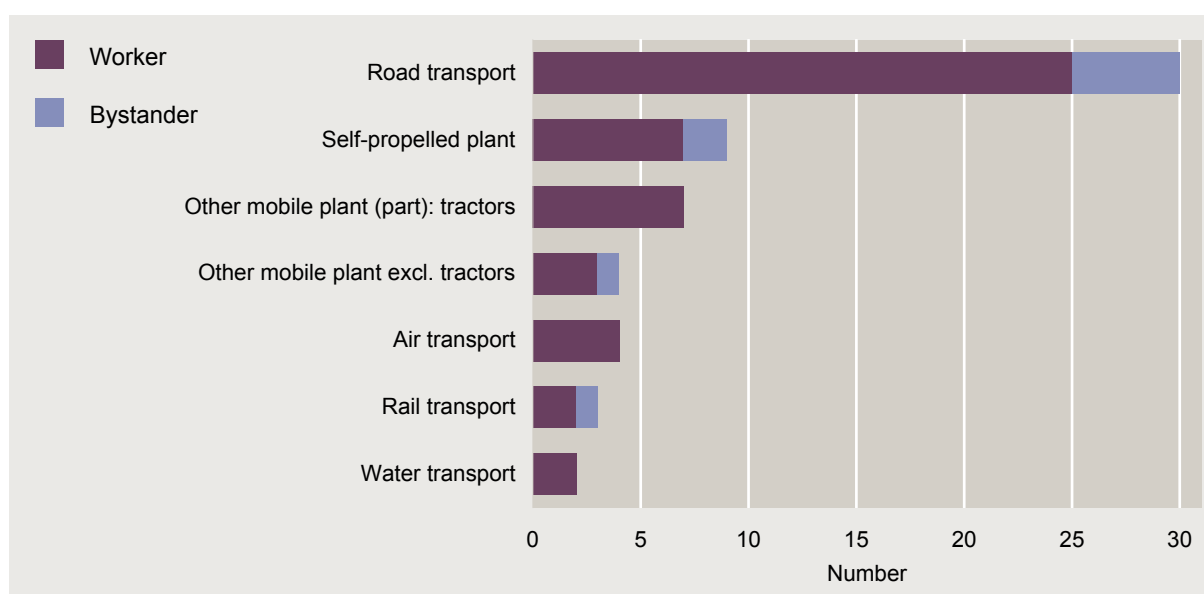
CAUSE OF FATALITY

Detailed information about how the fatal injury was sustained is used to assign various descriptive codes. The Mechanism code identifies the overall action, exposure or event that best describes the circumstances that resulted in the fatality; and the Breakdown agency code identifies the object, substance or circumstance that was principally involved in, or most closely associated with, the point at which things started to go wrong and which ultimately led to the fatality. Mechanism and Breakdown agency are presented together in Table 4.

Table 4 shows that the most common mechanism of fatality was *Vehicle accidents*, responsible for 30 fatalities. Other common mechanisms were *Being hit by moving objects* (29 fatalities), *Being hit by falling objects* (29 fatalities), *Falls from a height* (28 fatalities) and *Contact with electricity* (13 fatalities).

Table 4 also shows that the most common breakdown agency was *Mobile plant and transport*, being involved in 59 of the 162 fatalities. Figure 4 provides more specific information about the sub-categories of breakdown agency involved in these 59 fatalities. Notably, *Road transport* was involved in more than half of the cases (30 fatalities, including 5 bystanders)—of these, 18 involved trucks. In 15% of cases (9 fatalities) the fatalities involved *Self-propelled plant*: these included 5 deaths involving front-end loaders, bobcats,

Figure 4 Notified fatalities for the breakdown agency Mobile plant and transport, July 2006 to June 2007



excavators or backhoes and 3 deaths involving self-propelled mining plant. A further 12% of cases (7 fatalities) involved tractors and 7% of cases (4 fatalities) involved other categories of the sub-agency *Other mobile plant* (i.e. excluding tractors).

Table 4 shows that the second most common breakdown agency was *Machinery and fixed plant*. This agency was involved in 32 fatalities, of which 14 involved *Conveyors and lifting plant* and 7 involved *Electrical installation*.

The third most common breakdown agency, *Non-powered hand tools, appliances and equipment* was involved in 26 fatalities, including 9 that involved *Ladders, mobile ramps and stairways, and scaffolding* and 9 that involved *Other non-powered equipment* (mainly vehicle wheels and tyres).

Environmental agencies were involved in 19 fatalities. These fatalities mainly involved *Outdoor environment* (including 5 that involved buildings or other structures, 3 that involved swimming pools and 2 that involved a cyclone).

Common associations between the mechanism and breakdown agency of fatalities are apparent in Table 4.

There were 25 fatalities where the mechanism *Vehicle accidents* was associated with the breakdown agency *Mobile plant and transport*. There were also 20 fatalities — predominantly of pedestrians — where the mechanism *Being hit by moving objects* was associated with *Mobile plant and transport*.

There were 13 fatalities where the mechanism *Falls from a height* was associated with the breakdown agency *Non-powered handtools, appliances and equipment*. In 9 of these cases the sub-agency was *Ladders, mobile ramps and stairways, and scaffolding*.

There were 8 fatalities where *Being trapped by moving machinery* was associated with *Machinery and fixed plant*. In 4 of these cases the sub-agency was *Crushing, pressing, rolling machinery* and in 2 cases it was *Conveyors and lifting plant*.

Table 4 Number of notified fatalities by mechanism and breakdown agency, July 2006 to June 2007

Mechanism of fatality	Breakdown agency of fatality						
	Mobile plant and transport	Machinery and fixed plant	Non-powered equipment	Environmental agencies	Materials and substances	Other agency or agency not stated	All agencies
Vehicle accidents ^(a)	25	2	3	0	0	0	30
Being hit by moving objects	20	3	2	0	0	4	29
Being hit by falling objects	5	5	5	7	6	1	29
Falls from a height	2	1	13	8	0	4	28
Contact with electricity	1	10	0	0	2	0	13
Being trapped by moving machinery	1	8	2	0	0	0	11
Drowning/immersion	2	0	0	3	0	2	7
Other mechanism of fatality	3	3	1	1	1	6	15
All mechanisms	59	32	26	19	9	17	162

(a) Includes rollovers of mobile mechanical equipment such as tractors, forklifts and construction vehicles.

SUMMARY OF NOTIFICATION NARRATIVES

Vehicle accidents

Although the notified fatalities collection is known to understate fatalities from work-related vehicle accidents, the 30 deaths that were reported nevertheless contributed more work-related fatalities during 2006–07 than any other type of incident (19% of all fatalities notified during 2006–07). They included:

- > 10 deaths (6 workers and 4 bystanders) from accidents involving heavy trucks, mainly associated with the Transport and storage industry. Of these 10 fatalities, 7 occurred in road traffic accidents (including 2 deaths from collisions with trains), 2 occurred at mines and 1 occurred at a construction site
- > 5 deaths (including 3 bystanders) from road traffic accidents involving vehicles other than trucks
- > 5 deaths (including 1 bystander) from vehicle accidents on farms (2 involving tractor rollovers, 1 involving a quad bike rollover and 2 involving other farm vehicles)
- > 4 deaths in aircraft crashes, and
- > 2 deaths from accidents involving specialised mining vehicles.

Pedestrians struck by vehicles

There were 21 deaths of pedestrian workers and bystanders struck by vehicles. These included:

- > 7 deaths (6 workers and 1 bystander) in non-traffic, low-speed incidents involving trucks
- > 4 deaths involving other types of road vehicles (2 in road traffic accidents and 2 elsewhere)
- > 4 deaths (including 1 bystander) involving tractors on farms, and
- > 3 deaths (including 1 bystander) in incidents involving trains and rolling stock.

Workers struck by other moving objects

There were 8 fatalities involving workers struck by other types of moving objects. Of these:

- > 4 deaths (2 in the Manufacturing industry and 2 in the Mining industry) involved workers being struck by moving machinery or detached machinery parts, and
- > 2 deaths involved workers fatally injured during the repair of heavy vehicle tyres.

Workers struck by falling objects

There were 29 fatalities (28 workers and 1 bystander) caused by falling objects. These fatalities entailed a wide variety of circumstances including:

- > 6 deaths that resulted from incidents while using lifting equipment
- > 5 deaths that occurred during the loading or unloading of materials carried on trucks
- > 4 deaths of workers struck by a falling tree or branch during tree-felling operations (down from 7 fatalities in 2005–06), and
- > 2 deaths due to vehicles falling off jacks or hoists.

Falls from a height

There were 28 fatalities due to falls from a height. Almost half of these cases (13 deaths) involved workers in the Construction industry. These were:

- > 6 deaths due to falls from ladders, tressels or scaffolding
- > 4 deaths due to falls through or from roofs, and
- > 3 deaths due to falls from other locations at building sites.

The deaths from falls not involving construction workers (15 deaths) entailed a wide variety of circumstances, but they included:

- > 3 deaths due to falls from horses
- > 3 deaths due to falls from trucks during truck loading or unloading operations, and
- > 2 deaths due to falls through roof voids during window cleaning activities.

Electrocution

The hazard posed by power lines and electrical apparatus is apparent from the fact that 13 work-related fatalities were caused by electrocution during 2006–07. These deaths comprised:

- > 6 deaths in the Construction industry resulting from contact with live power circuits during work on electrical circuits and electrical switch boards
- > 5 deaths resulting from contact with overhead power lines — 4 of these stemming from three separate incidents involving relocation of metal irrigation equipment on rural properties, and
- > 2 deaths in the Construction industry that occurred during repairs to electrical equipment.

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