

TRUCK ROLLOVER

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ARRB combines forces with the Victorian Department of Transport to promote the next evolution in Heavy Vehicle Rollover Safety Education



By: Tia Gaffney, Anthony Germanchev and Farhana Naznin

ARRB is holding a workshop endorsed by the Victorian Department of Transport (with support from TrafficWorks and Road Solutions) in March 2021 to promote heavy vehicle rollover safety in the transport, construction and logistics industry. Initiating the social responsibility for reducing workplace-related road trauma, ARRB encourages attendance from heavy vehicle drivers, operators and other key stakeholders to promote the importance of rollover risk awareness, the benefits of an improved safety culture and practical and implementable risk mitigation measures.

[Click below to view the DoT Truck Rollover Workshop](#)

[CLICK HERE >](#)



IDENTIFYING THE HEAVY VEHICLE ROLLOVER PROBLEM IN VICTORIA

In Victoria in 2019, there were approximately 800 crashes involving a heavy vehicle¹. Approximately 100 of these crashes (12.5%) involved a rollover event. Half of these rollover crashes were single vehicle crashes and half were multi-vehicle crashes. Approximately one-third of the rollover crashes occurred in Metropolitan Melbourne while an alarming two-thirds occurred in rural Victoria. Over half of the rollover crashes (51 or 60%) occurred in speed zones of 100 km/h or greater.

We are currently unable to provide a current National picture of the heavy vehicle rollover problem. The annual reports about heavy truck crashes do not reveal any information about the prevalence, cause and location of rollover crashes which plague Australia annually. We do not currently have the data nor the mechanism to understand key heavy vehicle crash types and particularly the effects of rollovers on road trauma and related cost. ARRB continues to promote the necessity for a National crash investigation body in Australia who systematically investigates heavy vehicle crashes - engaging with industry is a key part of this advocacy role.

¹ The term 'Heavy vehicle' includes: Prime mover (with or without trailers), Bus/coach, B-double, B-triple and Heavy Rigid.

HEAVY TRUCK ROLLOVERS ARE HAZARDOUS FOR TRUCK OCCUPANTS AND CARGO

Despite the number of rollover crashes involving heavy trucks, there is currently no mandated design criteria which mandates rollover crashworthiness for heavy trucks (Australian Design Rule). While most of us driving around in a passenger car will be afforded the protection of advanced side and rollover impact airbags and seatbelt pre-tensioners (belts which deploy a pyrotechnic device to remove seatbelt slack and the maintenance of cabin structural integrity), heavy truck occupants are often provided with minimal crash protection.

In 2012, the United States Congress directed the improvement of commercial vehicle safety ([link](#) to the MAP 21 Act ([link](#)) and in 2015 the National Highway Traffic Safety Administration (NHTSA) reported to Congress that heavy vehicle crashworthiness should be improved (the 2015 report which backstops these findings can be found [here](#)).

While there is considerable evidence of the benefits of improved heavy vehicle occupant rollover protection, research efforts have not been translated into adequate rollover safety standards in the USA or in Australia. This lack of a robust standard is borne disproportionately by the heavy truck driver when a crash occurs. The 2015 NHTSA study found that approximately 36% of heavy vehicle rollover crashes are fatal to the truck driver and approximately 41% of rollover crashes result in incapacitating injury²

A rollover is not only damaging to heavy vehicle occupants, but also perilous for the valuable cargo being carried... and we all pay the price. Nationally, despite heavy trucks making up only 3.13% of registered vehicles and 7.2% of vehicle kilometres travelled, 22% of the \$9.38 billion in property damage costs per year (BITRE, 2016 data), 22% are borne by heavy trucks.

ROAD SAFETY IS A CHEAP AND EFFECTIVE INSURANCE POLICY



The benefits of a road safety culture in an organisation are well established³. Zurich Insurance has estimated that each dollar (USD) invested in road safety returns \$15 dollars on average – that's a 1500% return on your money.

The best way to prevent rollover injuries is to ensure that heavy vehicle rollovers don't occur in the first place. Rollover risk can be minimised by following simple principles, promoting safe vehicle procurement and performance-based standards, loading techniques, speed management, route selection, and health and safety awareness along the chain of responsibility.

Approximately 500 heavy truck occupants are hospitalised from road crashes each year. Of these, approximately 30 per cent are categorised with High-threat-to-life injuries.

TRUCK ROLLOVER

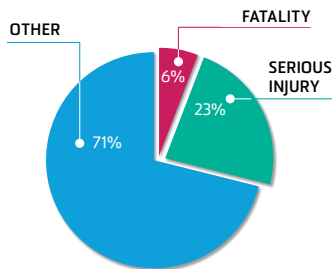
² An incapacitating injury is one that prevents an injured person from walking, driving, or continuing with the normal activities of which the person was capable before the injury. Severe lacerations, broken limbs, skull fractures, or extended unconsciousness all count as incapacitating.

³ <https://cdn-s3-nrspp-2020.s3.ap-southeast-1.amazonaws.com/wp-content/uploads/sites/4/2020/03/26162838/Total-cost-of-road-risk.jpg>

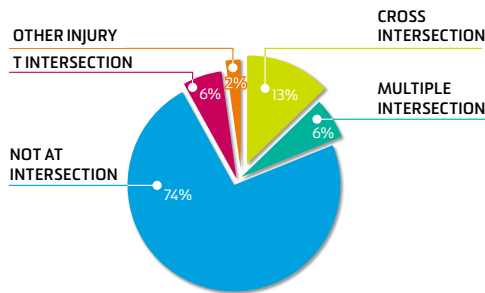


HEAVY VEHICLE (HV) ROLLOVER CRASH STATISTICS

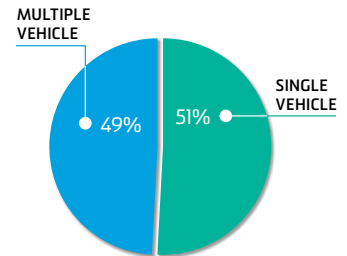
INJURIES IN HV ROLLOVER CRASH



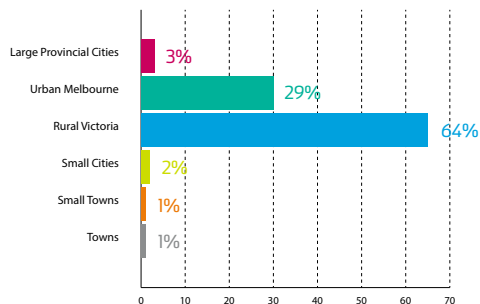
ROAD GEOMETRY OF HV ROLLOVER CRASH



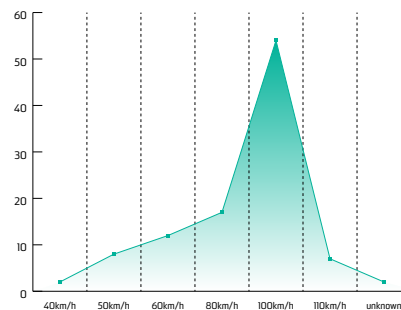
INVOLVEMENT IN HV ROLLOVER CRASH



ROLLOVER CRASH LOCATION



SPEED ZONES



TRUCK ROLLOVER

a Drivers and passengers

b Due to a break in the hospitalised injury series in 2012, data from 2012-13 onwards is not directly comparable with previous years. Victoria changed case inclusion criteria to exclude cases cared for solely in Emergency Departments from 1 July 2012. NISU estimates that this decreased admitted case in Australia by 2000 cases (-5.6 per cent) in 2012-13 compared to 2011-12, with the reduction likely to differ by road user group.

Sources AIHW and BITRE 2019

WHAT CAN DRIVERS, OPERATORS AND INDUSTRY DO TO REDUCE HEAVY VEHICLE ROLLOVERS?

The Heavy Truck Rollover Course (endorsed by the Victorian Department of Transport) provides practical education for people and companies on the impact of truck rollover crashes, identification of root causes and effects and outlines practical mitigation measures for future prevention. This program includes a review of relevant Codes of Practice and Occupational Health and Safety applications in the heavy vehicle on-road environment. The training is customised to each attendee in order to ensure maximum safety benefit in reducing truck rollovers, crash risk and associated crash-related costs.

CONTACT

Please contact us via email at info@arrb.com.au or visit the website arrb.com.au.

About ARRB

Australian Road Research Board (ARRB) provides research, consulting and information services to the road and transport industry. ARRB is the source of independent expert transport knowledge, advising key decision makers on our nation's most important challenges.

VIC | 80a Turner St, Port Melbourne, VIC 3207 P: +61 3 9881 1555

NSW | 36-42 Chippen Street, Chippendale, NSW 2008 P: +61 2 9282 4444

QLD | 21 McLachlan St, Fortitude Valley, QLD 4006 P: +61 7 3260 3500

SA | Level 1, Featherstone Place, Adelaide, SA 5000 P: +61 8 8235 3300

WA | Suite 4B, Level 2, 1 Hood St, Subiaco, WA 6008 P: +61 8 9227 3000

arrb.com.au | ABN 68 004 620 651