

Head-on crashes with heavy vehicles: Relevance of safety barriers

The issue

Safety barriers are typically not tested with heavy vehicles. In many crash circumstances (large collision angle, high speed), a standard safety barrier would be unlikely to stop a heavy vehicle from crossing the centreline.

Yet a substantial proportion of head-on crashes involve heavy vehicles, and those that involve heavy vehicles are more serious on average (See Austroads 2010: *Road safety engineering risk assessment part 8: rural head-on crashes.*)

In head-on crashes that involve a heavy vehicle, it is not always the heavy vehicle that crosses into the path of another vehicle. In those cases where it was a light vehicle that crossed, the barrier's ability to stop heavy vehicles is irrelevant. If the barrier could stop a light vehicle from crossing, it would prevent the head-on collision.

The purpose of this study is to quantify the proportion of high speed fatal head-on crashes:

- that involved a heavy vehicle
- where the heavy vehicle crossed into the path of an oncoming vehicle.

High speed fatal heavy vehicle head-on crashes

In NSW in the years 2006 to 2010, there were 246 fatal head-on crashes where the speed limit was 90 km/h or higher.

Of these 246 crashes, 96 (39%) involved a heavy vehicle.

Proportion of crashes where the heavy vehicle crosses

Police reports of the 96 heavy vehicle crashes were examined. In only 13 crashes, according to the reports, the heavy vehicle crossed into the path of another vehicle or vehicles. The 13 crashes are 5% of the 246 high speed fatal head-on crashes.

Conclusion

Only 5% of high speed fatal head-on crashes involved a heavy vehicle crossing into the path of another vehicle. Therefore, although standard safety barriers have limited ability to stop heavy vehicles, their potential to prevent head-on crashes remains.

Transport for New South Wales

www.rms.nsw.gov.au | safer_roads@rta.nsw.gov.au