

**Submission
No 3**

INQUIRY INTO HEAVY VEHICLE SAFETY AND USE OF TECHNOLOGY TO IMPROVE ROAD SAFETY

Organisation: Natroad
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**Staysafe Committee Inquiry into heavy vehicle safety and
use of technology to improve road safety**

1 February 2018

Introduction

1. The National Road Transport Association (NatRoad) is pleased to make a submission to the NSW Staysafe Committee inquiry on heavy vehicle safety and how technology can be used to improve road safety.
2. We note the Committee's inquiry has been expanded to examine the significant increase in the NSW road toll between December 2017 and January 2018. Our submission also addresses this issue.
3. NatRoad is Australia's largest national representative road freight transport operators' association. NatRoad represents road freight operators, from owner-drivers to large fleet operators, general freight, road trains, livestock, tippers, express car carriers, as well as tankers and refrigerated freight operators.
4. NatRoad has a deep commitment to improving road safety. Reducing heavy vehicle fatalities and serious injuries is one of NatRoad's core objectives.
5. As a general principle, designing our roads and vehicles to be safer is more effective than relying on driver behaviour. Priority should be given to how we can 'design out' inherent hazards or minimise human error using technology and engineering solutions.
6. A key barrier to adopting new and safer technologies in the road transport industry is cost. The industry is dominated by small to medium sized businesses who operate on low margins which limits their capacity to implement new technology.
7. Adoption of safety technologies in the heavy vehicle sector could be improved if operators are informed of the safety benefits, if drivers find them useful and usable, if they are confident that the systems are reliable, cost-effective and that their privacy will be protected.
8. Voluntary adoption is preferred. Industry must be consulted before any decision is made to mandate vehicle safety technologies. This decision must be supported with a regulation impact assessment demonstrating that the benefits outweigh the costs for transport operators.
9. Although in-vehicle technologies and mobile apps can make the driving task safer, they also have the potential to increase driver distraction. These risks must be considered in the design of in-vehicle technologies.

Fleet modernisation

10. NatRoad supports manufacturers incorporating safety features into the design of their heavy vehicles. New trucks offer active safety technologies such as autonomous emergency braking systems, lane departure warnings, electronic stability control (ESC) and blind spot monitoring.
11. Research suggests that autonomous emergency braking systems fitted to heavy vehicles may prevent around 25% of fatal heavy vehicle crashes.¹
12. The fitting of ESC has increased to around 25% and 40% of new trucks and trailers respectively in the general fleet, particularly in vehicles transporting dangerous goods in

¹ Safety Technologies for Heavy Vehicles and Combinations, Transport for NSW, June 2017

NSW and logging vehicles in Victoria.² NatRoad is separately responding to the Australian Government's Consultation Regulation Impact Statement on mandating ESC and Roll Stability Control.³

13. However, the Truck Industry Council (TIC) reports that the average age of the truck fleet is 13.84 years.⁴ The TIC also found that 'vehicle safety features' ranks sixth in a list of factors influencing a decision to purchase a new truck. Whole of life costs, including repair and maintenance, and fuel consumption benefits were cited as more important factors.
14. Heavy vehicle operators are unlikely to upgrade their fleets or adopt new technology if they cannot see a clear financial benefit. In NatRoad's submission to the Department of Infrastructure and Regional Development (DIRD) on the proposed closure of the Federal Interstate Registration Scheme (FIRS), we reported feedback from our members that a key benefit of the stamp duty exemption under FIRS is that it enables them to modernise their fleet with new trucks and take advantage of safety features.
15. Our members also report that trucks in Australia are more expensive when comparing the same model in other parts of the world due to the taxes and levies applied by government.
16. The National Road Safety Strategy 2011-2020 Implementation Status Report notes that no specific action has been undertaken to reduce the average age of vehicles generally, beyond the promotion of safer vehicles.⁵
17. With Australia having one of the oldest truck fleets in the world, we recommend that governments offer subsidies or other incentives to encourage investment in modern, safer vehicles.
18. At NatRoad's 2017 Annual Conference, our members requested that NatRoad encourage truck and trailer manufacturers to install onboard weighing systems as standard equipment on new heavy vehicles.
19. On board weighing systems assist the driver operate the vehicle safely, as they let the driver know exactly how much mass is being carried by each axle. This assists with correct load placement and in the event of a load shift, provides an alert to the driver to adjust the load.

Automated vehicles

20. While automated heavy vehicles have the potential to deliver improvements in safety, we have doubts about the ability of Australia's current infrastructure to support high levels of automation. For example, Lane Keeping Assist systems have the greatest potential for preventing deaths and serious injury but are unlikely to function on roads without highly visible lane markings (poorly maintained or unsealed roads).⁶
21. There are also still many unanswered questions about how automated systems will cope with various road freight tasks and who will be held liable in the event of an accident.

² National Road Safety Strategy 2011-2020 Implementation Status Report, November 2017, p.12

³ infrastructure.gov.au/departments/ips/consultations.aspx

⁴ Truck Industry Council Fleet Report 2015

⁵ National Road Safety Strategy 2011-2020 Implementation Status Report, November 2017, p.12

⁶ Safety Benefits of Cooperative ITS and Automated Driving in Australia and New Zealand, Austroads Research Report, 2017

22. Until vehicles become fully automated and no longer require any human input, even in the event of a system failure, the driver must be prepared to reclaim manual control of the vehicle. A range of factors including loss of skill, loss of situation awareness and overreliance may cause difficulties with drivers taking over the dynamic driving task.
23. The National Transport Commission (NTC) is working on a number of reforms to prepare Australia for automated vehicles. NatRoad is providing input into this process through our submissions to the NTC discussion papers and industry consultation forums.

Fatigue

24. The Heavy Vehicle National Law (HVNL) includes provisions which prohibit any person entering into a contract or asking, directing or requiring a driver of a heavy vehicle or a party in the chain of responsibility to do or not do something that would cause the driver to exceed a speed limit or breach fatigue requirements.
25. However, fatigue remains an issue of concern in the road transport industry. The National Truck Accident Research Centre found that fatigue was the principal contributing factor in 12.2 per cent of crashes.⁷
26. The regulations under the HVNL rely on restricting hours of work and on-road enforcement using logbooks to manage fatigue. These regulations are extremely prescriptive, complex and difficult to comply with. They do not reflect real-world sleeping patterns, driver drowsiness and driver performance. If a driver retires for rest and does not experience quality sleep, even a short period of driving can be affected by fatigue.
27. Our members frequently report a pedantic approach to enforcing administrative requirements which have no impact on the fatigue risk, for example a failure to sign a work diary on a particular day. Minor errors in a work diary can attract infringement penalties of \$648 per offence. This means that operators and drivers are primarily focussed on compliance with these rules rather than managing the causes of driver fatigue. It also fuels a perception that the fines are issued for “revenue raising” rather than safety objectives.
28. It is our view that the current reliance on prescriptive work and rest hours is not as effective as astute driver management in relation to fitness for duty, fatigue training, the use of alertness monitoring devices and regular driver health monitoring, including sleep disorders.
29. NatRoad recommends a review of the heavy vehicle fatigue regulations as a priority. We note the NTC is currently awaiting the outcomes of a research project collecting real-life operational data to better inform future fatigue policy.⁸

Electronic Work Diaries

30. The National Heavy Vehicle Regulator (NHVR) is developing a policy framework and standards to encourage the voluntary adoption of electronic work diaries (EWDs). It is estimated that only about 7% of heavy vehicles have some type of electronic monitoring device installed and in use.⁹

⁷ [2017 Major Accident Investigation Report](#), National Transport Insurance, p.7

⁸ <http://www.ntc.gov.au/current-projects/heavy-vehicle-driver-fatigue-data/?modelId=1065&topicId=1080>

⁹ [Notice of proposed rule-making: EWD Policy Framework and Standards](#), NHVR

31. The NHVR believes that widespread adoption of EWDs will improve safety and significantly reduce the administrative burden for the heavy vehicle industry.
32. However, NatRoad submits that the implementation of EWDs is not going to fix the fundamental problems with the highly prescriptive and complex fatigue regulations.
33. Most of our members remain sceptical about the benefits of EWDs. Specifically, they are concerned about the cost, connectivity problems in regional and remote areas, security of information and enforcement approaches.
34. We acknowledge that the NHVR has recognised the barriers to industry uptake (costs, perception of “big-brother” surveillance and enforcement inequity) and has addressed some of the transport industry’s concerns in the EWD Policy Framework and Standards, including:
 - Interoperability between EWDs of different technology providers so that drivers can swap between written and electronic work diaries, between solo and two-up driving, and between employers using different approved EWDs.
 - Operators can use a single monitoring device for multiple purposes.
35. It is essential that EWDs provide practical operational benefits for drivers such as simpler and faster recording of work and rest information, data accuracy, compliance warnings and other assistance to avoid administrative non-compliance with fatigue rules.
36. Regardless, driver fatigue monitoring technology and the use of telematics are rapidly evolving and may be a more effective way of addressing fatigue risks than the current system.

Speed

37. The HVNL includes provisions which prohibit any person entering into a contract or asking, directing or requiring a driver of a heavy vehicle or a party in the chain of responsibility to do or not do something that would cause the driver to exceed a speed limit.
38. The HVNL also requires vehicles with a GVM over 12 tonnes to be fitted with speed limiters and makes it an offence to tamper with speed limiters fitted to a heavy vehicle.
39. Despite these laws, the National Truck Accident Research Centre found that inappropriate speed for the conditions (without necessarily breaking the speed limit) is still the major cause of severe truck crashes, accounting for 21.4% of insurance claims registered.¹⁰
40. Crash avoidance technologies such as autonomous emergency braking (AEB) to control vehicles in a range of circumstances and adapt driving to suit the conditions may assist in reducing these incidents.

NSW road toll

41. NatRoad is particularly concerned about the recent spike in serious truck accidents in NSW. We have not seen this spike in other states that are subject to the same heavy vehicle

¹⁰ [2017 Major Accident Investigation Report](#), National Transport Insurance, using data based on insurance claims of \$50,000 or more.

safety standards and fatigue management rules, so we are curious about whether there is a problem unique to NSW.

42. With every one of these incidents we need to know what happened and why. To date, the main focus of truck crash investigations and data collection has been on the immediate causes relating to unsafe driver behaviours such as inappropriate speed, fatigue and drug use. This is a flawed approach because truck crashes can be an outcome of multiple, interacting factors within the broader transport and supply chain system.
43. Authorities and the media are always quick to assume that the truck driver is to blame, when statistics show that the driver of the car or light vehicle was responsible in 93% of multi-vehicle fatal accidents where a heavy vehicle was involved.¹¹
44. The recently announced 'Operation Rolling Thunder' is a typical example of another knee-jerk reaction to a problem that cannot be solved by only targeting truck drivers. As part of the media commentary on this issue Assistant Commissioner Michael Corboy of the NSW Police Traffic & Highway Patrol Command said: "We simply cannot stand by and accept that dangerous trucks are on our roads and are causing people to die."
45. This statement was made without any information on the root causes behind the recent spike in heavy vehicle incidents and without contextualising it against the total road toll in NSW. A comprehensive and objective investigation of these incidents is essential.
46. NatRoad recommends that a dedicated, independent authority such as the Australian Transport Safety Bureau (ATSB) be tasked with investigating all serious truck accidents. The findings and recommendations should be reported publicly so that actions by industry and the government to reduce the road toll are not misdirected.
47. A more consistent approach to data collection across the jurisdictions on the underlying risk factors that lead to serious incidents will support the development of evidence-based policies. It will also help regulators target education and enforcement resources to areas of most risk.
48. Light and heavy vehicle interaction needs a renewed focus by road safety authorities. Driver education programs for new and existing licence holders must include training on how to drive safely around trucks.
49. The end of the year is a very busy time for the transport industry and we need to ensure that heavy vehicle drivers are not pressured to speed or breach fatigue rules. The HVNL already includes chain of responsibility duties to prevent this and stronger requirements for parties in the chain will be introduced in mid-2018.
50. However, regulation is only as valuable as its enforcement and the accountability of all parties. The experiences of our members indicate that a significant proportion of enforcement is focussed on minor technical issues that are not critical to ensuring safety.
51. Under the new chain of responsibility provisions, the onus of proving that a party in the chain did not do all that was 'reasonably practicable' in the circumstances will now lie with the prosecutor. We support this change, but it may make investigations more challenging for inspectors accustomed to the strict liability offences under the current HVNL.

¹¹ [2017 Major Accident Investigation Report](#), National Transport Insurance

52. Parties in the chain of responsibility must believe that enforcement is likely and therefore regulators must allocate sufficient resources to this element of the law. Truck drivers should also be able to report breaches of regulations which impact on their safety without adverse consequences.

Conclusion

53. Reducing the road toll will necessarily involve a range of factors that require action by governments, industries in the supply chain and all road users. Our key recommendations outlined in this submission for improving road safety are to:
- a) As a priority, extend the functions of the ATSB to include the investigation of serious heavy vehicle incidents and adopt a systems approach to identifying the full range of factors contributing to crashes.
 - b) Create incentives to encourage the purchase of safer vehicles and use of safety technologies.
 - c) Increase public awareness about interacting with heavy vehicles.
 - d) Review and improve the heavy vehicle fatigue regulations.
 - e) Improve training and assessment standards for heavy vehicle driver licensing.
 - f) Ensure enforcement is appropriately targeted to areas of highest risk.