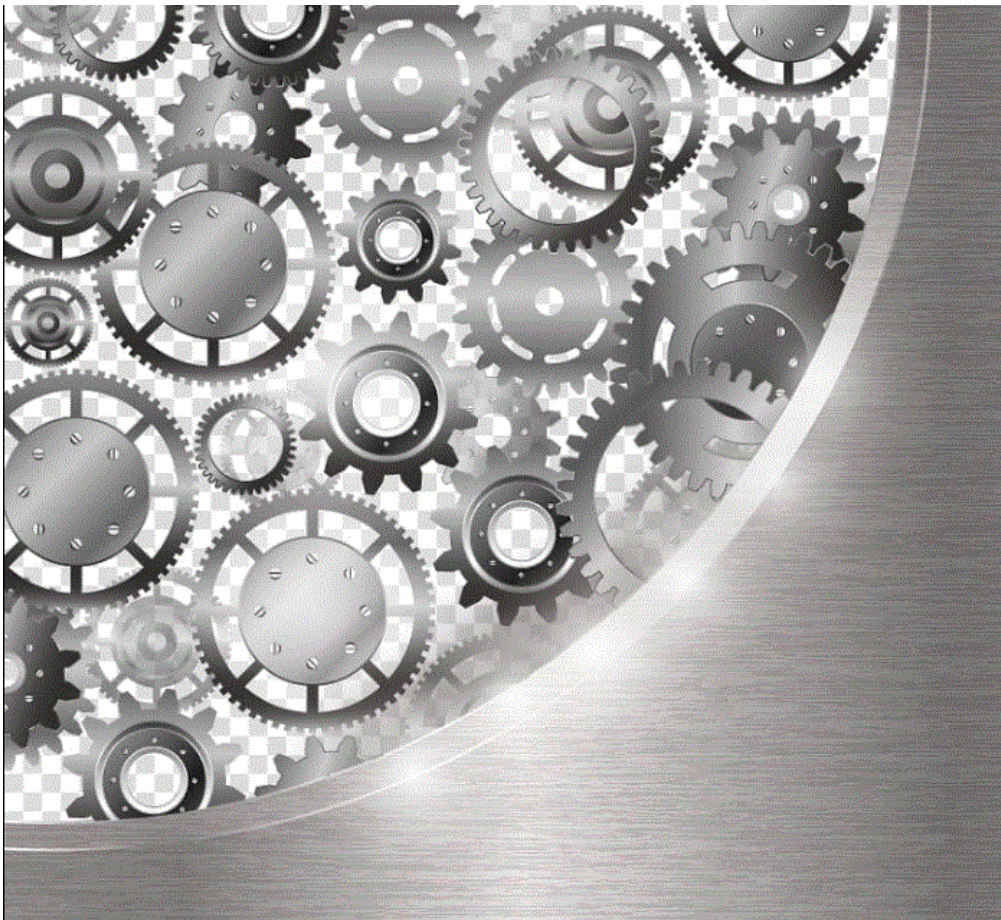


Submission to the National Transport Commission Issues Paper: *Vehicle standards and safety*



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Providing authoritative analysis, commentary and solutions on current and emerging trends in the safety, assurance, compliance, quality and management arena, with a focus on regulatory practise (or mal-practise). One of Australia's foremost progressive safety thinkers with a wealth of experience and knowledge in the assurance space.

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1. Introduction

1. I welcome the opportunity to comment on the Issues Paper *Vehicle standards and safety* released by the National Transport Commission (NTC) July 2019.
2. This submission responds to the questions posed in the paper, after responding to the problems put forward by the NTC with vehicle standards in the HVNL. I hope this will inform later Issues Papers and provides the impetus for the NTC to revisit its work to address significant shortfalls in the analysis presented in the current document.
3. The complexity of the Heavy Vehicle Standards policy and compliance and enforcement task cannot be underestimated. Ongoing compliance (with Australian Design Rules [ADR]) is related to the year of a vehicle's entry to the market, roadside and even scheduled inspection/ registration enforcement can become problematic as a result. Given the diversity and age range of the fleet it is inevitable that errors will be made in issuing defects. Added to this is general duties police officers involved in roadside enforcement.
4. Moving to a performance-based approach (outcomes) to Heavy Vehicle Standards rather than the prescriptive approach in the HVNL is preferred. It will however need to be supplemented by appropriate guidance for industry on what would be deemed a minimum (mandatory) standard of performance. This is very much aligned to the approach in the ADR. Bringing consistency and alignment to the vehicle standards regulatory framework.
5. The HVNL in no way prevents or limits the uptake of safety technology in heavy vehicles.
6. Jurisdictions continue to implement variations in the application of Heavy Vehicle Standards through a variety of alternative legislation. This creates uncertainty within the market and difficulty in applying a consistent compliance regime and complexity for operators conducting journey's across multiple jurisdictions.
7. The application of first principles (risk-based) approach to Heavy Vehicle Standards is highly recommended but it must be accompanied by an evidence-based approach. As technology and innovation in vehicle design and construction changes so will the risks associated not only with their operation, but their maintenance and the assurance regime associated with managing these vehicles.
8. There must be evidence that a component or system is associated with a high-risk of failure as well as high-consequence. This does not mean that low-risk failure components with high-consequence should not be a focus but for roadside enforcement it is unlikely these items would be a focus.
9. As alternative powered heavy vehicles (hydrogen/ electric), autonomous and connected vehicles integrate into the fleet the HVNL, the assurance and the compliance and enforcement approaches must be flexible enough to quickly adapt to these changes to continue to ensure the safe operation of vehicles and the fleet.
10. There is an imperative for regulators and industry to address to enable them to move forward with an effective review and subsequent update of the HVNL. Across the life cycle of a heavy vehicle a quick review reveals more than 30 Acts and Regulations impact a heavy vehicle – from vehicle design to disposal. The NTC must map these touchpoints across the heavy vehicle life



cycle to ensure that a revised HVNL does not duplicate or conflict with an existing Act or Regulation, where it might it should be resolved. Refer to Appendix 1 for an analysis of the Life Cycle of a Heavy Vehicle.

2. Detailed response to paper

Registration and fleet entry

11. It is difficult for the NHVR to develop an effective safety management and assurance system for the heavy vehicle industry when it does not have effective control of all aspects of the heavy vehicle regulatory framework. The principles discussed in the following sections are applicable to both heavy vehicles standards and mass and dimension requirements in the HVNL.
12. There remain variations in registration requirements across jurisdictions and their impacts have not been discussed in the paper. The effect of inconsistent application of registration requirements and in some instances the classification of heavy vehicles adds to the complexity of effective enforcement. In particular, the use of alternative Acts and Regulations to impose vehicle standards to heavy vehicles.

Maintenance and inspection

13. A more problematic issue is that there is no common agreement on what defines a heavy vehicle as roadworthy. At its most extreme it can be argued that a single non-conformity with the Heavy Vehicle Standards indicates a vehicle is unroadworthy, irrespective of the category – minor or major or how the subsequent compliance action undertaken.
14. The difficulty with such a perspective is that it fails to acknowledge that the heavy vehicle may not represent a safety risk – a broken direction indicator light may not be functioning, there may be several other lights on the same side of the vehicle still operating effectively. Would two broken lights constitute the vehicle being unroadworthy, three, four or five?
15. A defect notice should be used to manage untreated risk and consequence arising from a non-conformity to the Heavy Vehicle Standards. They must ensure that the conditions of use and application of a risk rating to treat the non-conformity through addressing the consequence and likelihood of the untreated risk rating, identified when the defect was detected.
16. What constitutes ‘roadworthy’ must be addressed as to the safety risk (and likely consequence) that a defect(s) poses to the safe operation of the heavy vehicle. The complexity here is that this requires a high level of skill, knowledge, discretion and judgement on behalf of an individual examining the vehicle. A defect notice records a non-conformity to the Heavy Vehicle Standards. Defect notices manage risk arising from non-conformity to the Heavy Vehicle Standards.
17. There are various conditions that affect the impact of a defect and the severity it poses to safety. A broken windscreen wiper poses very little risk during a bright day. However, at night when it is raining the risk is much more imminent. The only thing that changes in this scenario is the treatment measures to mitigate the risk. The defect is minor, but the conditions of operation might restrict the driver from operating the vehicle at night or in the rain until the defect is rectified. Defect notice conditions of use must address untreated risk.
18. What needs to be clearly articulated is what types of defects pose a safety risk. These risks can then be categorised according to their severity and assessed to determine the steps required to mitigate the untreated risk when these types of defects are detected. This would also need to



extend to what combination of defects might also pose a safety risk. Defect notice classification (minor or major) must reflect treated risk. That is, how does the defect mitigate the likelihood and consequence of the defect resulting in an incident.

19. The National Heavy Vehicle Inspection Manual (NHVIM) is a pass/ fail criterion to guide the inspection of heavy vehicles it has not introduced a national approach to inspecting vehicles for roadworthiness nationally.
20. The methods, techniques, tools and focus for inspecting heavy vehicles remain at the discretion of jurisdiction inspection authorities. This approach continues to be a concern to industry in delivering consistency to the inspection of vehicles.
21. A further complication to this is the approach taken by police agencies which is not transparent, and it is not clear if the NHVIM is utilised to guide the inspection of heavy vehicles. Recipients of defect notices must receive natural justice.
22. Defective notices should not be punitive.
23. Issuing a defect notice is not mandatory. There are many alternatives that can be just as effective as issuing a defect notice. This is relevant where the non-conformity is minor and has occurred in the course of the journey – it is not a progressive non-conformity like a bald tyre for example. The driver/ operator may also have identified the defect and have actioned the rectification as soon as is reasonably practical.
24. Defect notice clearance requirements must provide confidence that the non-conformity to the Heavy Vehicle Standards has been resolved. The clearance of defects and the method specified must be related to several elements of the non-conformity. The elements that make up a non-conformity include:
 - a. reason for rejection (NHVIM) – what component(s) were rejected
 - b. location on the vehicle – could an inspection have revealed the non-conformity or if equipment required to discover it
 - c. prevalence of the non-conformity – is a non-conformity that is well known
 - d. development of the non-conformity – in the course of the journey or a progressive failure
 - e. untreated risk rating – untreated consequence and likelihood of the non-conformity.
25. Based on these elements a decision can be made on what controls need to be in place to manage the risk(s) and consequence(s) of the non-conformity. In addition, a decision as to how to treat the clearance method might consider issues including:
 - a. the elements that made up the non-conformity
 - b. previous history related to Heavy Vehicle Standards non-conformity of the:
 - i. vehicle/ combination
 - ii. driver/ operator
 - c. previous defect clearance history.
26. A risk and evidence-based inspection regime must be predicated on addressing imminent and serious risk. There are many defects which pose no risk to safety but are a non-conformity to the Heavy Vehicle Standards. An inspection framework must identify components and vehicles that



present a risk to safety. The NHVR undertook a world first survey to assess the heavy vehicle condition (roadworthiness) of the national fleet.

27. The data gathered from this research provides the basis to understand the non-conformity in the national fleet. The piece of work that is missing is to understand the link between non-conformity and the propensity for harm from non-conformities. Which non-conformity(s) is most prevalent and likely to cause harm should the component fail?
28. An inspection regime should then be focused on those items that present the highest risk of harm. This includes scheduled/ programmed inspections and during roadside enforcement. Roadside enforcement should only occur where there is clear evidence a heavy vehicle presents an imminent and serious risk to safety, is known to fall into a category of vehicles that has a known propensity for non-conformance or has been identified as an operator/ vehicle of interest.
29. Enforcement of non-conformity must be scaled to reflect the propensity for harm. This could be described as an A, B, C or D level of inspection. A level A inspection being the most basic and focused on known high risk components. A level B inspection being a far more detailed inspection and a C level inspection being a full inspection of the vehicle. A level D clearance being self-clearing.
30. Where a heavy vehicle or operator is identified as high risk the enforcement response can be scaled accordingly. This might mean undertaken a more detailed inspection. Likewise, where an inspection identifies a major non-conformity the enforcement response might be scaled up to provide assurance that the vehicle/ operator does not represent an imminent and serious risk to safety.
31. Should you require more information on the approach discussed here please contact the author.

Damage, defects and repairs

32. An important element to the treatment of a defect is the attributes that made up the events that led to the non-conformity. There are many non-conformities (bald steer tyres) which can pose a significant safety risk. This is a progressive failure on behalf of the driver/ operator to address the non-conformity. It goes directly to the HVNL that the driver/ operator ought to reasonably have known of the defect's presence.
33. There are several attributes that can be considered to inform the response to the non-conformity. The attributes provide guidance as to who ought to have been able to detect the non-conformity, the degree to which checking for the non-conformity should have been prioritised and the opportunity to detect the non-conformity.
34. Once a non-conformity is detected there are several elements that need to be considered in how to classify the defect and determine the conditions of use of the heavy vehicle. The continued operation of the vehicle should only be permitted where it does not create an imminent and serious risk.
35. Bald tyres create an imminent and serious risk and conditions of use should be applied to prohibit the use of the heavy vehicle. The outcome is that the defect is major, and the mitigation is to ground the vehicle.



36. There is no need for technical expertise or equipment to detect bald tyres. There may need to be some consideration of the defect clearance requirements. There should be sufficient confidence that the operator acknowledges the severity of the defect and that if it was a progressive defect that it should have been discovered and addressed. This needs to be balanced against a defect notice not being punitive but a full vehicle inspection might be considered to clear the defect.
37. Should you require more information on the approach discussed here please contact the author.

3. Response to Questions

Question 1

38. It is paramount that the non-participating jurisdictions become part of the NHVR reform to deliver on the intended reform benefits. It is not unreasonable for non-participating jurisdictions to continue to be concerned about the benefits that the reform is delivering. However, in the absence of evidence or data that they are more efficient, effective, producing enhanced productivity and are safer there is little reasoning as to why they continue to not participate. There is a requirement for there to be a strategy to onboard non-participating jurisdictions.
39. At the commencement of the NHVR participating jurisdictions did not enact or relinquish authority for the registration of heavy vehicles. To enable the regulator to develop an effective assurance framework and to deliver efficient compliance and enforcement systems and processes having full control over the registration function is essential.
40. National consistency in assurance outcomes can only be achieved when the NHVR is able to set and administer standards and measure the effectiveness of enforcement and compliance activity nationally across all authorities/ agencies that interact with heavy vehicles.

Question 2

41. The requirement to undertake a regulatory impact statement to adopt international standards is an anathema. Many of the technologies that these standards support have been in use for years in international markets with proven productivity and safety benefits. The process to adopt these technologies in Australia needs to be accelerated. This does not need to be reflected in the HVNL.

Question 3

42. The integration of particular types of PBS vehicles (e.g. truck and dog combinations) into the HVNL needs to be accelerated. The productivity and safety benefits are proven, and it is essential to dealing with the doubling of the transport task by 2030.

Question 4

43. The HVNL currently has adequate provisions to remove heavy vehicles that pose an imminent and serious risk to safety from the road. What is required is a full suite of regulatory controls to develop policy and tools to enable the NHVR to analysis and identify these vehicles and operators so that it might move to a more pro-active assurance model than the current re-active one.
44. Four key elements to having this full suite of regulatory functions is; national participation and ceding of all functions – access decision-making, driver licensing and vehicle registration. An



effective assurance framework is predicated on being able to design and develop policy and administrative levers to shape industry culture and create behaviour change industry wide.

Question 5

45. The NTC has not defined what an unreasonable impost on operators means. Applying a risk and evidence-based regulatory approach may in fact increase the impost not reduce it as assumed in the NTC work. Where there is no definition provided to assess what imminent or serious-risk is leaves a broad scope of potential for classification of offences. Getting agreement of what constitutes imminent, serious and high-risk is the first hurdle. The second is how they are to be treated when an offence is identified.

Question 6

46. The Written Off Vehicle Register provisions of the HVNL should be enacted. There has been no evidence or data put forward in this paper that indicates a regulatory response to replacement parts is warranted.

47. There is abundant legislation regarding the control and licensing of the mechanical and repair industry. The HVNL wading into this domain is unnecessary as it is unclear as to extent of risk that it will mitigate by doing so. The quality and standard of the mechanical and repair industry should be left to the market. Operators should be undertaking their own due diligence and where the standards of these organisations are not meeting their expectations seek out organisations that do.

48. The completion of the NHVR's Risked Based Inspection Framework needs to be accelerated. This should identify and create a clear delineation between imminent and serious safety risks and minor non-conformity to the Heavy Vehicle Standards. Enforcement action will be dealt with in accordance with the level of the untreated risk and consequence.

Question 7

49. Refer to the above responses.



Appendix 1 – Life Cycle of a Heavy Vehicle

This is not a comprehensive analysis of the Life Cycle of a Heavy Vehicle. It is a starting point to inform the conversation about the need to address the impact of multiple Acts and Regulations on the operation of heavy vehicles. The impact on efficiency, effectiveness and productivity spans not only the heavy vehicle industry and the supply chain but regulatory authorities and agencies that administer and regulate the industry.

Regulatory area	Regulatory instruments
Vehicle design and performance	<ul style="list-style-type: none"> • Australian Design Rules (based on international UN Regulations) • Other international standards (e.g. ISO, IEC and SAE standards) • Radiocommunications licensing (e.g. Australian Communications and Media Authority (ACMA) for auto radar sensors, lidar, data communications and global satellite navigation systems (GNSS) • Consumer laws and product liability (e.g. Competition and Consumer Act 2010 (Cwlth))
Vehicle compliance	<ul style="list-style-type: none"> • Import approval (In-principle support NHVR) • Second stage of manufacture • Registered Automotive Workshop Scheme (RAWS) • In-service vehicle standards (e.g. Heavy Vehicle (Vehicle Standards) National Regulation (HV(VS) NR)) • Individual approval, type approval and self-certification (e.g. international standards for testing) • Performance based standards
Sale of the vehicle	<ul style="list-style-type: none"> • Consumer laws and product liability • In-service vehicle standards (e.g. HV(VS)NR)
Registration of the vehicle	<ul style="list-style-type: none"> • Requirements for registration and processes (e.g. Heavy Vehicle National Law (HVNL)) • Unregistered vehicles (e.g. agricultural machinery and special purpose vehicles) • Compulsory third-party insurance • Written-off vehicle register
Licensing of vehicle users	<ul style="list-style-type: none"> • Requirements for driver licenses and licensing processes
Modification of vehicle	<ul style="list-style-type: none"> • Vehicle Standards Bulletin 6 • In-service vehicle standards (e.g. HV(VS)NR) • Consumer laws and product liability



Regulatory area	Regulatory instruments
Use of the vehicle	<ul style="list-style-type: none"> • Traffic laws (e.g. speed) • Drink and drug driving laws • Liability (e.g. liability for road managers in the Civil Liability Act 2002 (NSW)) • Fitness to drive • Compliance and enforcement • Mass, dimension and loading (e.g. HVNL) • Written-off vehicle register • Exemptions (e.g. permits and notices)
Operation of the vehicle	<ul style="list-style-type: none"> • Security requirements • Infrastructure requirements, including the protection of vulnerable road users • Regulation of the operating system (e.g. Chain of responsibility) • Accreditation (e.g. HVNL) • Workplace health and safety
Systems monitoring and data access related to vehicles and users	<ul style="list-style-type: none"> • Privacy laws (e.g. Privacy Act 1988 (Cwlth)) • Compliance with surveillance device laws • Access to and control of data
Maintenance of vehicles	<ul style="list-style-type: none"> • In-service standards (e.g. HV(VS)NR) • Right to repair (e.g. statutory and repairable write-off)
Recalls for components and/or systems	<ul style="list-style-type: none"> • Consumer laws and product liability
Disposal of the vehicle	<ul style="list-style-type: none"> • Written-off vehicle register