



17 February 2016

Ministry of Transport
VDAM Rule Review
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Dear Sir/Madam

Review of the Vehicle Dimensions & Mass Rule

Introduction

The New Zealand Automobile Association (NZAA) welcomes the opportunity to provide comment on the Review of the Vehicle Dimensions & Mass (VDAM) Rule discussion document.

The NZAA is an incorporated society with 1.5 million Members. It represents the interests of road users who collectively pay over \$2 billion in taxes each year through fuel excise, road user charges, registration fees, ACC levies, and GST. The NZAA's advocacy and policy work mainly focuses on protecting the freedom of choice and rights of motorists, keeping the cost of motoring fair and reasonable, and enhancing the safety of all road users.

Comments on the relevant proposals for which we have feedback are provided below:

Axle mass and gross mass

Proposal 2: Revise Schedule 2 limits

The NZAA supports this proposal as no anticipated disadvantages have been identified.

Proposal 3: Increase general access gross mass limit from 44,000kg to 45,000kg

The NZAA conditionally supports this proposal in conjunction with *Proposal 7: Reduce weighing tolerance from 1,500kg to 500kg* and the requirement that the 45,000kg has to be carried over 8 axles. We recognise there may be some safety and productivity benefits as well as accommodating changes in vehicle design and technology such as tare weight increases imposed by emissions equipment.

However, it is disappointing to see that the level of compliance with the current weight limit is just 82 percent for truck and trailer combinations. Such a change will need to be monitored to ensure there is a higher level of compliance at 45,000kg.

While it is suggested that such a change will encourage the uptake of safer, more pavement-friendly 8-axle combinations, it is no guarantee that all the trucks and trailers will be fitted with the optimum safety features.

Therefore, the NZAA would encourage the MoT to undertake a cost:benefit analysis of a requirement for new truck and trailer combinations operating at 45,000kg to be fitted as standard with:

- Electronic Stability Control (ESC)
- Electronic Brake Distribution (EBD)
- Automatic Emergency Braking (AEB)

We note that the discussion document suggests that the increased weight limit will improve productivity. Therefore these efficiency gains could offset the increased cost of the safety equipment, thereby ensuring that other road users will also indirectly benefit from these axle and gross mass limit increases.

Proposal 4: Remove the permitting requirement from the operation of 50MAX

The NZAA does not support this proposal at this time as the discussion document does not explain why the formal permit process is somehow acting as a hindrance to the uptake of 50MAX vehicles. The NZAA is supportive of the current 50MAX regime, and if 50MAX vehicles are providing clear efficiency benefits then it seems doubtful that truck operators will not explore these opportunities for the sake of the relatively minor inconvenience of a formal, well-managed auditable permit process. In our view, the loss of the compliance benefits of a formal permitting regime will not be outweighed by the suggested gains which we think are exaggerated as those gains already exist under the current regime.

Proposal 5: Increase axle mass limits for specific categories of vehicles

The NZAA supports investigating increasing axle mass limits for certain classes of vehicles, in particular buses, to improve productivity and align more closely with international limits to improve vehicle choice and adapt to changes to vehicle design and technology (e.g. hybridisation).

However, our support for any such changes would be conditional upon further analysis and cost:benefit analysis. We also see merit in introducing higher class-based axle limits via a permitting regime including route assessment.

In the case of buses, for example, improving passenger capacity will increase productivity in the sector. However, while in theory the increase axle limits may impose additional impacts on some of the road network, in reality buses will spend only a small portion of their total travel time fully laden.

Nevertheless, we understand that some RCA's are concerned about the increased road repair costs that may be incurred by increasing axle mass limits, increasing the gross limit in Proposal 3 above, and from the 50MAX and HPMV regimes. It seems unclear whether the additional RUC payments from heavier vehicles are being proportionately hypothecated to RCAs to compensate for the cost of any accelerated road wear, and this may in turn make them reluctant to support such changes. The NZAA encourages MoT to investigate these concerns further and if necessary review the RUC remittance model to ensure RCAs are being appropriately compensated for real road repair cost increases incurred by VDAM changes.

Width

The NZAA sees merit in preferred *Option 2 – extending the maximum width to 2.55m*, and in standardising width between vehicles with enclosed and open loads. In particular, we recognise that in overseas jurisdictions, bus and coach designs have been standardised at 2.55m, and that to maintain the current width of 2.5m may restrict new and used-import vehicle choice, thereby potentially compromising public transport efficiency.

However, as with any such Rule change, the NZAA submits that providing these concessions should go hand in hand with requiring minimum safety requirements, not only to mitigate possible risks as outlined in the discussion paper, but also to ensure the uptake of “the latest vehicles with better technologies” as also implied. While it is true that newer trucks and buses built to a 2.55m width are more likely to be fitted with the latest safety and emissions technology, it is no guarantee that they will all be fitted with all the optimum safety equipment.

Therefore, to maximise the safety of the heavy fleet and to mitigate risks to other road users and vulnerable road users in particular, the NZAA supports suggestions to require the following safety features for vehicles built to a 2.55m width:

- side and rear under-run barriers (for trucks and trailers)
- collision detection systems
- lane departure warning systems
- blind spot monitoring systems

Furthermore, consideration should be given to the requiring the fitment of reversing cameras for buses and coaches, subject to a cost:benefit analysis.

While some of these features will add to the cost of manufacture, in some vehicles they will already be fitted as standard anyway. Where they are not standard equipment, the NZAA contends that the additional cost will be offset by the productivity gains made by the operator.

The NZAA supports the recommendations made by the Cycling Safety Panel to consider requiring under-run protection. We agree that under-run barriers are beneficial not only for cyclists, but motorcyclists and pedestrians too. In addition however, side and rear under-run barriers are also beneficial for light motor vehicles. Ultimately, under-run barriers help prevent light vehicles and vulnerable road users from going underneath a truck or trailer. However, in the case of cars, the under-run barrier is also essential to ensure that the vehicle airbags activate in the event of a car colliding head-on with the side or rear of a truck/trailer. In order for frontal airbags to activate, the front of a car must impact with an object. In the absence of under-run barriers, the height of truck rear bumpers, or body sides, may be above the bonnet height of a typical car. Therefore the front of car is likely to slide under a truck, meaning the airbags may not activate until the first point of impact which is likely to be the vehicle cabin, with disastrous consequences for the occupants. With side and rear under-run barriers, not only is a car unlikely to slide under the truck/trailer, but the airbags will also activate. This will significantly improve the outcome for vehicle occupants.

An initial assessment of CAS data of just 100 of the 241 fatal crashes involving trucks in the five years from 2010-2014 indicates there were 9 side under-run fatalities; that is, the person died after going under the side of a truck and subsequently being run over. All but one of the fatalities involved vulnerable road users (a mix of pedestrians, cyclists and motorcyclists). While further detailed analysis of each crash is needed, the perfunctory details suggest that side under-run barriers were absent. In addition, we identified another 17 fatal crashes (17%) involving side or rear-impact in which absence of barriers may have contributed to the crash outcome, however the crash details were insufficiently clear and would require further detailed analysis.

This analysis excludes serious crashes involving other vehicles running into the side or rear of trucks, in which the severity may have been reduced by the presence of under-run barriers (e.g. through frontal airbag activation).

From the NZAA's cursory analysis, it would suggest that perhaps 9% of fatalities involving trucks resulted from a road user going under a truck, and possibly the number is even higher. Further detailed analysis of these fatal crashes (and in addition, serious crashes) would be required to determine whether any of the trucks did in fact have under-run barriers, and if not, whether (if they could be fitted) they would likely have resulted in a better outcome.

Therefore, the NZAA encourages the MoT to undertake a more detailed analysis of truck under-run accidents and the number of serious or fatal crashes that may be prevented or minimised through the mandatory fitment of side and rear under-run barriers, and the relative cost:benefit of such a mandate.

As an initial step, the NZAA would like to see under-run barriers required for all new trucks and trailers built to a 2.55m width (with possible exemptions for certain truck classes if deemed appropriate e.g. logging trucks). Ideally however, we would also support under-run barriers being retrospectively imposed for applicable trucks under a certain age, subject to further research and benefit:cost analysis.

We note that under-run barriers are mandatory in Europe for all vehicles over 3,500kg and trailers over 1,020kg.

The NZAA also supports the suggestion in the discussion document that any Rule change:

- specify that box body hinges are required to be flush with the body walls;
- address the issue of the importation of wider European motorhomes with doors on the right-hand side.

Height

While the NZAA can see merit in extending the height limit to standardise the rules between fully enclosed vehicles and vehicles with external load restraints, and to adapt to changes to vehicle design and technology, we do not support the preferred *Option 3: Increase height limit to 4.30m* at this time.

The NZAA is concerned that not enough analysis has been undertaken of the number and location of overhead bridges across the network that have clearances between the current and proposed height. Given the number of rail overhead bridge hits reported by KiwiRail, and evidence of clearance strikes elsewhere and occasional reports in the media – with the current 4.25m height limit – it can only be expected that clearance strikes will increase, especially if the number of overhead bridges with clearances below 4.30m is apparently unknown.

In order for such a proposal to be supported, a height assessment of all overhead bridges across the network needs to be undertaken and published (ideally via GPS maps), and the freight industry will need to demonstrate a reduction in strike incidences as a result of improved route planning and awareness of height and width restrictions along the chosen route.

The NZAA may conditionally support *Option 2: Extend height limit to 4.275m* on the basis that it will align height limits for fully enclosed vehicles and those with external load restraints. Even so, we suggest more needs to be done to improve route planning within the freight industry to minimise clearance strikes as outlined above.

Management of overdimension loads

We refer you to the submission the NZAA made on the 2012 [Agricultural Transport Legislation discussion document](#).

In particular, we reiterate the following points made in that submission:

- we also suggest in a future review of the VDAM Rule, some consideration is given to reviewing the piloting requirements, including the lighting requirements of pilot vehicles, and whether pilot vehicles must also be required at the rear of the over-dimension vehicle (if travelling under 40km/h during daytime), where the risk of collision is greater;
- we also propose that amber beacons, or side outline-markers, be fitted mid-flank [to agricultural machines wider than 3.1m], to give motorists better guidance to the extremities of the vehicle along its length when passing (especially at night), and ditto oncoming traffic when the vehicle is cornering (tracking out of lane);
- the NZAA proposes that all agricultural machines and trailers, regardless of dimensions, adopt mandatory flashing daytime warning lights or beacons to increase their visibility at all times. At the very least, LEDs or beacons should be mandatory on *all* agricultural machines and trailers used at night. Where possible, these lights should be affixed to the far extremities of vehicles, and if bodywork does not extend that far, operators should be encouraged to mount optional lightweight panels, beams or mudflaps on which portable LEDs can be attached (or on the hazard panels of over-dimensional vehicles), which can be swapped between vehicles for use on the road.

In summary, the NZAA supports:

- Proposal 2: using (portable battery) LED warning lights to mark the edges of overdimension loads during both daytime and night-time, as an alternative to flags or warning panels;
- Proposal 3: using LED warning lights to signify the width of tractors between 2.5m and 3.10m wide;
- Proposal 4: permitting pilot vehicles to sound warnings to oncoming vehicles, although we are unsure of the practical safety benefits of this proposal.

The NZAA supports reviewing the management of overdimension loads further and we would welcome the opportunity to review and discuss any additional proposals with the MoT once they have been developed. In principle however, we see merit in speed restrictions for wide loads, and reviewing the current hours of travel.

Yours sincerely



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