Accreditation No. 593

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ROVER TFA-020058

23rd January 2025

ADR Harmonisation Review 2024-2025

Dear Dr Mundy,

APV Engineering and Testing Services Pty Ltd (APV-T) is an internationally recognised test laboratory accredited by NATA to ISO 17025. We specialise in survivability testing of occupants within vehicles with a particular focus on seats and safety restraints, including bus seats and seat anchorages in vehicles.

As an independent third party APV-T is able to test without influence a range of vehicle safety systems and are NATA certified for ADR 3, 4, 68, 69, 72, 73 and 85 testing. Our capabilities extend beyond these certifications, and we feel that we are uniquely qualified to comment on regulations that may impact upon vehicle and occupant safety.

We are pleased to be able to make a submission to the ADR Harmonisation Review 2024-2025 and would like to draw your attention to our comments below focusing on two examples.

Example 1:

ADR 68/01 is a perfect example of why the Commonwealth of Australia should not harmonise their ADR regulations with similar UN Regulations.

The UN Regulation 80 for bus seat testing does not have the same load requirements as ADR 68/01 during dynamic seat anchorage testing. The Anthropomorphic Test Device (ATD or Crash Test Dummy) configuration is different and the impact speed is at a much lower velocity (30km/h vs 50km/h).

What this means is that when seats tested to UN Regulations are then sold into Australia, those seats usually do not meet the ADR 68 requirements. In some ADR 68 dynamic tests that we have conducted on European seats, the seat anchorages have failed putting the occupants at higher risk of injury than if the ADR 68 requirement was met.

Conclusion:

The problem created is that first we argue for greater safety and insist that everyone should wear seat belts in buses. But if we harmonise the regulations and accept the UN Regulations for bus seats then we accept that the bus equipment is not suitable for our safety expectations.

APV-T finds this position to be unacceptable.

Example 2:

ADR 72 - Dynamic Side Impact Occupant Protection, is currently under review. As pointed out in a submission to that review by the Australasian College of Road Safety (ACRS), if ADR 72 was harmonised to the equivalent UN Regulation 95, then we would continue performing this test with an ATD that has been superseded. We refer you to an extract of their submission (to which APV-T contributed) to the review of the ADR 72/01 Draft below.

ACRS is broadly supportive of the proposed changes, however, recognises that if Australia is to be a world leader in vehicle safety, we need to lead in some areas, rather than just following global standards. There are some areas in the proposed Standard which could be made more specific.

• Paragraph 5.3.3.1 – There should be a maximum force requirement to open the doors post-test, to ensure people can exit the vehicle. For example, 500N or 750N, rather than simply 'without the use of tools'.

• Paragraph 5.3.3.2 – There should be a maximum force requirement to release the seat belt buckle.

• Annex 5, 1.2 – A 950kg trolley travelling at 50 km/hr represents a low amount of energy in today's driving environment. Both the mass and trolley velocity should be increased to make the test more relevant and to stretch manufacturers to provide better protection in side impacts.

• Annex 6 – The dummy used in this test should be a WorldSID rather than the old ES2. The ES2 technology is now over 40 years old having been developed in the 1980s. The WorldSID is able to deliver far more relevant and meaningful injury criteria and should be the reference test dummy for modern vehicles[1]. With the increase in sales of SUVs in Australia[2], the barrier profile must be considered, particularly for side impact crashes of an SUV into a sedan.

> *[1] Kim T, Shaw G, Lessley D, Park G, Crandall J, Svendsen A, et al. Biofidelity evaluation of WorldSID and ES-2re under side impact conditions with and without airbag. Accident Analysis & Prevention. 2016;90:140-51.*
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> *[2]Martin P. Where did the cars go? How heavier, costlier SUVs and utes took over Australia's roads. The Conversation. 2023 17 October 2023. https://theconversation.com/where-did-the-cars-go-how-heavier-costlier-suvs-and-utes-tookover-australias-roads-215774*

Conclusion:

By harmonising the ADRs with the UN Regulations, the Commonwealth of Australia is accepting that Australia will no longer be a leader in road safety legislation initiatives, but rather

simply a follower of the UN Regulations that may not be suitable for our unique conditions and vehicle fleet in Australia.

While acknowledging that there are resource challenges with maintaining an ADR system in a country with some unique requirements, we submit that we should not be compromising the high safety standards that contribute to saving lives in Australia by harmonising, or adopting, existing UN Regulations that do not adequately meet Australian vehicle fleet requirements and road conditions, or safety expectations.

As an alternative to vehicle level crash testing ADRs (69, 72, 73 and 85) and harmonisation of these with UN Regulations, we would propose that the vehicle level testing be harmonised with the ANCAP requirements, thus setting a minimum requirement which most new vehicles try to meet already and driving higher levels of safety into our transportation system.

APV-T would be pleased to discuss this topic further with Dr Mundy if given the opportunity.

Sincerely,

[redacted]

Carl Liersch
General Manager

Date 23/01/2025

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