

Vehicle Standard (Australian Design Rule 38/05 – Trailer Brake Systems) 2018

Made under section 7 of the *Motor Vehicle Standards Act 1989*

Explanatory Statement

Issued by the authority of the Minister for Urban Infrastructure and Cities

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1. LEGISLATIVE CONTEXT

Vehicle Standard (Australian Design Rule 38/05 – Trailer Brake Systems) 2018 is made under the *Motor Vehicle Standards Act 1989* (the Act). The Act enables the Australian Government to establish nationally uniform standards that apply to new road vehicles when they are first supplied to the market in Australia. The Act applies to such vehicles whether they are manufactured in Australia or imported.

The making of the vehicle standards necessary for the Act's effective operation is provided for in section 7 which empowers the Minister to “determine vehicle standards for road vehicles or vehicle components”.

Vehicle Standard (Australian Design Rule 38/05 – Trailer Brake Systems) 2018 (ADR 38/05) is being made to replace Vehicle Standard (Australian Design Rule 38/04 – Trailer Brake Systems) 2013 (ADR 38/04), which was determined in 2013 to mandate Antilock Braking Systems (ABS) or Variable Proportioning Brake Systems for medium and heavy trailers. It is necessary to make a new standard rather than an amendment as the requirements for medium and heavy trailers have increased in stringency, and the text as last determined has been substantially altered.

2. CONTENT AND EFFECT OF ADR 38/05 – TRAILER BRAKE SYSTEMS

2.1. Overview of the ADR

The function of this standard is to specify requirements for braking of trailers under both normal and emergency conditions.

2.2. Effect of the ADR

This standard is being made to implement Phase II of the National Heavy Vehicle Braking Strategy (NHVBS) for heavy trailers. It introduces mandatory requirements for ABS to be fitted to trailers with a Gross Trailer Mass (GTM) exceeding 4.5 tonnes and for a Vehicle Stability Function incorporating at least rollover control (otherwise known as Roll Stability Control or RSC) to be fitted to trailers with a GTM exceeding 10 tonnes.

RSC for trailers automatically decelerates a vehicle combination when it detects, based on the measurement of trailer vertical tyre loads or at least lateral acceleration and wheel speeds, that the trailer is at risk of a rollover. This is achieved by automatically applying the brakes on at least one axle of the trailer. ABS is a driver assistance system designed to prevent wheels from locking when a vehicle is braked in an emergency situation.

Exemptions from mandatory fitment of both ABS and RSC are provided for converter dollies, as well as any trailer fitted with an axle group arrangement consisting of more than four tyres in a row of axles or more than four axles in an axle group (e.g. certain non-standard low-loaders).

The standard will apply to ADR category TA (very light trailers), TB (light trailers), TC (medium trailers) and TD (heavy trailers) vehicles. New models of medium and

heavy trailers will need to comply from 1 July 2019. All new medium and heavy trailers will need to comply from 1 November 2019.

2.3. Incorporated Documents

This standard incorporates references to a number of standards of a highly technical nature. These standards are typically accessed by vehicle manufacturers and test facilities as part of their professional library.

Clause 6.10 of this standard incorporates references to AS 4945-2000 (Commercial road vehicles - Interchangeable quick connect/release couplings for use with air-pressure braking systems) and ISO 1728:2006 (Road vehicles – Pneumatic braking connections between motor vehicles and towed vehicles – Interchangeability). These standards specify requirements for the design, dimensions and identification of couplings for air-pressure braking systems on towing vehicles, trailers and semitrailers.

Clause 6.18 of this standard incorporates a reference to ISO 3583:1984. This standard specifies characteristic for two types (A and B) of connections used for checking response times and pressure levels for compressed-air braking equipment on road vehicles, as well as the open space requirements that shall surround the pressure test connection and the protection against corrosion.

Clause 7.1.7.1, Clause 16.5.2, Appendix 1, Appendix 3 and Appendix 4 of this standard incorporate references to ISO 11992:2003, including ISO 11992-1:2003, and ISO 11992-2:2003 and its Amd.1:2007. These standards specify requirements for communication between towing vehicles and trailers with a maximum permissible laden mass greater than 3,500 kg, including specifications for the physical and data link layer of the electrical connections, and the parameters and messages for electronically controlled braking systems (i.e. ESC and Antilock systems) and running gear equipment (i.e. systems for steering, suspension and tyres).

Clause 16.5.2 and Appendix 4 of this standard incorporate references to ISO 7638-1:2003 and ISO 7638-2:2003. These standards specify dimensions, contact allocation and test requirements for electrical connectors used between towing vehicles and trailers. ISO 7638-1 connectors are used for brake and running gear systems with a 24 V nominal supply voltage, while ISO 7638-2 connectors are used for brake and running gear systems with a 12 V nominal supply voltage.

Clause 23 of this standard incorporates a reference to the UN Regulation No. 13 – UNIFORM PROVISIONS CONCERNING THE APPROVAL OF VEHICLES OF CATEGORIES M, N AND O WITH REGARD TO BRAKING (R 13). This is an international standard for road vehicle braking systems.

In accordance with subsections 14(1)(b) and 14(2) of the *Legislation Act 2003*, these standards are incorporated as in force at the commencement of the Determination.

The UN Regulations (including R 13) may be freely accessed online through the UN World Forum for the Harmonization of Vehicle Regulations (WP.29). The WP.29 website is www.unece.org/trans/main/welcwp29.html.

AS 4945-2000 is available for purchase only, through SAI Global. Vehicle manufacturers and test facilities access this standard as part of their professional

library and it has been referenced in the ADRs since ADR 35/02 was introduced in 2007.

ISO 1728:2006, ISO 11992:2003 (including ISO 11992-1:2003 and ISO 11992-2:2003 and its Amd.1:2007), ISO 3583:1984, ISO 7638-1:2003 and ISO 7638-2:2003 are all available for purchase only through the International Organization for Standardization (ISO) and various associated national standards bodies. These standards have been referenced in the ADRs, other national/regional vehicle standards and international vehicle standards for many years. Vehicle manufacturers and test facilities access these standards as part of their professional library.

3. BEST PRACTICE REGULATION

3.1. Benefits and Costs

There are costs associated with mandating ABS for trailers greater than 4.5 tonnes GTM and RSC for trailers greater than 10 tonnes GTM, but the related Regulation Impact Statement (RIS), which considers the changes for both trucks and buses under ADR 35 and trailers under ADR 38, shows that there will be positive net benefits. Overall, this standard will contribute towards an estimated reduction in road trauma of 126 lives and 1101 serious injuries (over a period of 35 years), for ADRs 35 and 38 combined. This includes around \$217 million in net benefits.

3.2. General Consultation Arrangements

It has been longstanding practice to consult widely on proposed new or amended vehicle standards. For many years there has been active collaboration between the Commonwealth and the state/territory governments, as well as consultation with industry and consumer groups. Much of the consultation takes place within institutional arrangements established for this purpose. The analysis and documentation prepared in a particular case, and the bodies consulted, depend on the degree of impact the new or amended standard is expected to have on industry or road users.

Depending on the nature of the proposed changes, consultation could involve the Technical Liaison Group (TLG) and the Australian Motor Vehicle Certification Board (AMVCB), the Strategic Vehicle Safety and Environment Group (SVSEG) and the Safe Vehicles Theme Group (SVTG), the Transport and Infrastructure Senior Officials' Committee (TISOC) and the Transport and Infrastructure Council (the Council).

- TLG consists of technical representatives of government (Australian and state/territory), the manufacturing and operational arms of the industry (including organisations such as the Federal Chamber of Automotive Industries and the Australian Trucking Association) and of representative organisations of consumers and road users (particularly through the Australian Automobile Association). AMVCB consists of the government members of TLG.

- SVSEG consists of senior representatives of government (Australian and state/territory), the manufacturing and operational arms of the industry and of representative organisations of consumers and road users (at a higher level within each organisation as represented in TLG). SVTG consists of the government members of SVSEG.
- TISOC consists of state and territory transport and/or infrastructure Chief Executive Officers (CEOs) (or equivalents), the CEO of the National Transport Commission, New Zealand and the Australian Local Government Association.
- The Council consists of the Australian, state/territory and New Zealand Ministers with responsibility for transport and infrastructure issues.

Editorial changes and changes to correct errors are processed by the Department of Infrastructure, Regional Development and Cities (the Department). This approach is only used where the amendments do not vary the intent of the vehicle standard.

Proposals that are regarded as significant need to be supported by a RIS meeting the requirements of the Office of Best Practice Regulation (OBPR) as published in *the Australian Government Guide to Regulation* and the Council of Australian Governments' *Best Practice Regulation: A Guide for Ministerial Councils and National Standard Setting Bodies*.

3.3. Specific Consultation Arrangements for this Vehicle Standard

The consultation process has been ongoing and detailed in nature. Following completion of Phase I of the NHVBS in 2013, an Industry Reference Group (IRG) was established by the Department to help with implementation, including any necessary follow-on amendments to ADRs 35 and 38, as well as to provide input and expertise towards implementation of Phase II. The IRG comprised representatives of heavy truck, trailer and bus manufacturers and operators as well as brake system suppliers and the National Heavy Vehicle Regulator (NHVR). This standard has been developed in close consultation with the IRG over the period 2015-18 and discussed a number of times at SVSEG, AMVCB and TLG meetings.

In accordance with OBPR requirements, a consultation RIS and draft ADR were released for a six-week public consultation period in December 2017. The RIS conforms to the requirements established by the OBPR in relation to regulatory proposals where the decision maker is the Australian Government's Cabinet, the Prime Minister, minister, statutory authority, board or other regulator. The OBPR reference number for the RIS is 23081.

4. STATEMENT OF COMPATIBILITY WITH HUMAN RIGHTS

The following Statement is prepared in accordance with Part 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*.

4.1. Overview of the Legislative Instrument

ADR 38/05 is being made to replace ADR 38/04. It introduces mandatory requirements for ABS to be fitted to trailers greater than 4.5 tonnes GTM and RSC to be fitted to trailers greater than 10 tonnes GTM.

4.2. Human Rights Implications

ADR 38/05 does not engage any of the human rights and freedoms recognised or declared in the international instruments listed in section 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*.

4.3. Conclusion

ADR 38/05 is compatible with human rights, as it does not raise any human rights issues.