



## **AUSTRALIAN DANGEROUS GOODS CODE COMPREHENSIVE REVIEW WP4: SAFETY EQUIPMENT FOR DANGEROUS GOODS TRANSPORT**

### **AUSTRALIAN TRUCKING ASSOCIATION SUBMISSION 25 JULY 2023**

#### **1. About the Australian Trucking Association**

The Australian Trucking Association (ATA) is a united voice for our members on trucking issues of national importance. Together, we represent the 59,000 businesses and 200,000 people who make up the Australian trucking industry.

#### **2. Introduction**

In 2020, it was agreed that a full review of the Australian Dangerous Goods Code (the Code) be conducted. The purpose of the review is to ensure the Code facilitates the safe and smooth movements of dangerous goods by land, and better aligns with UN Model Regulations.<sup>1</sup>

Working group paper 4 discusses the safety equipment required for dangerous goods vehicles. The paper considers if wheel chocks should be required to be carried on Australian dangerous goods (DG) vehicles. Based on preliminary information, it concludes that wheel chocks should not be included in the future code unless there is an identified benefit to requiring them.<sup>2</sup>

**The ATA supports the NTC's preliminary position.** This submission confirms there is no identified benefit to requiring wheel chocks on Australian DG vehicles.

#### **3. Wheel chocks are not required for Australian DG vehicles**

The ATA consulted with its members on this issue in mid-June 2023.

Our members stated that there were no circumstances in which they would rely on the use of chocks due to the introduction of spring brakes, discussed below.

The NTC's finding that wheel chocks are not required serves the best interests of all parties involved in the transport of dangerous goods, including the parties that

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<sup>1</sup> NTC, Australian Dangerous Goods Code Comprehensive Review, Working group paper #4, May 2023, 7.

<sup>2</sup> Ibid 22.

regulate, administer, and maintain requirements. The imposition of a requirement to carry and provide training for the use of chocks would be burdensome and would represent an unrecoverable cost for operators.

### **Current braking ADRs safeguard against unintentional rolling of heavy vehicles**

Australia's braking requirements safeguard against the unintentional rolling of heavy vehicles. The current standards are ADR 35<sup>3</sup> and ADR 38<sup>4</sup> which accept UN ECE R13 as an acceptable alternative standard. ADR 35 states that the parking brake system shall make it possible to hold the vehicle stationary on an up or down gradient even in the absence of the driver, the working parts being held in the locked position by a purely mechanical device.<sup>5</sup> Australian spring braking technology satisfies this.

Spring brake actuators have two chambers: one that applies the service brakes like a single brake chamber, and a second chamber that contains a powerful spring that applies the emergency brakes mechanically in case of brake system pressure loss. ADR 38 requires trailers with positive air pressure brake systems to be parked using the mechanical spring force of their foundation brake system's spring brakes.<sup>6</sup>

The spring brake also serves as a mechanical parking brake to prevent a trailer from rolling when parked on inclined surfaces.<sup>7</sup> When the park brake is applied, all wheels are effectively clamped by the springs in the brake chambers.

The introduction of a chock requirement would therefore be needlessly onerous.

### **There is a lack of evidence that chocks are required**

Our members confirm there is no evidence to support the use of chocks in the industry, as issues with parking brakes are rare, if not unheard of. Furthermore, a major mechanical failure would have to occur on several wheels concurrently for rollaway to be a possibility.

### **UN ECE R13 is no longer an acceptable alternative in Australia**

When in motion, the braking technology used in Europe and Australian trucks operate in the same manner. A difference occurs when the parking brake is engaged. UN ECE R13 came into force in February 2014, with no requirement that

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<sup>3</sup> Vehicle Standard (Australian Design Rule 35/07 – Commercial Vehicle Brake Systems) 2022.

<sup>4</sup> Vehicle Standard (Australian Design Rule 38/05 – Trailer Brake Systems) 2018.

<sup>5</sup> E/ECE/324/Rev 1/Add 12/Rev 8 5.1.2.3.

<sup>6</sup> Ibid 4, 9.2.

<sup>7</sup> NSW Government, A Guide to Work Health and Safety in the Road Freight Transport Industry, 14.

air must be emptied from the brakes.<sup>8</sup> Parking on air is unsafe because brakes would release if air leaked from the system. Also, if the lines that connect to the trailer are not disconnected in the right order, air slowly leaks from the brakes, and the vehicle may roll.<sup>9</sup> As the air is not emptied from the brakes, the mechanical springs which function as a failsafe do not engage. In this case, the policy position to harmonise was not appropriate for Australian application.

#### 4. Legislative development in this area

Under the 2005 rules<sup>10</sup>, vehicles were able to use UN ECE R13 to satisfy the requirements of 5.3.5.<sup>11</sup> The 2007-2013 rules<sup>12</sup> all allow the following for vehicles using UN ECE R13 as an alternative standard, 'On vehicles to which the coupling of a trailer is authorised, the parking brake system of the towing vehicle need not be capable of holding the combination of vehicles stationary on a 12 per cent up or down-gradient, provided that the requirements of clause 4.3.5 are met'.<sup>13</sup> This meant 4.3.5<sup>14</sup> need not be satisfied if the parking brake system alone could hold the Gross Combination Mass on a 12 per cent up or down gradient.

ADR 35/06<sup>15</sup> and 35/07<sup>16</sup> reverted back to the use of UN ECE R13 to satisfy clause 5.3.5. This has created an issue for road train combinations, as holding the entire load stationary on a 12 per cent gradient is not necessarily feasible. The proposal is to require compliance with 5.3.5 but exempt vehicles from the 12 per cent gradient requirement<sup>17</sup> as the operation of a compliant truck park brake system will apply the spring brakes on the truck and all trailers in combination, which would hold the combination stationary on such a gradient.

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<sup>8</sup> Ibid 4, 3; E/ECE/324/Rev 1/Add 12/Rev 8 makes no mention of the requirement to empty spring brakes of air pressure when the vehicle is parked.

<sup>9</sup> Ibid 3.

<sup>10</sup> Vehicle Standard (Australian Design Rule 35/01 – Commercial Vehicle Brake Systems) 2005.

<sup>11</sup> Ibid 5.3.5 – 'On every motor vehicle equipped to tow a trailer which uses air at positive pressure the operation of the '*Parking Brake System 35/...*' must cause the pressure in the '*Supply Line 35/...*' to drop below 35 kPa'.

<sup>12</sup> Vehicle Standard (Australian Design Rule 35/02 – Commercial Vehicle Brake Systems) 2007; Vehicle Standard (Australian Design Rule 35/03 – Commercial Vehicle Brake Systems) 2009; Vehicle Standard (Australian Design Rule 35/04 – Commercial Vehicle Brake Systems) 2013; Vehicle Standard (Australian Design Rule 35/05 – Commercial Vehicle Brake Systems) 2013.

<sup>13</sup> Ibid 8.1.1.

<sup>14</sup> Or the equivalent clause in Vehicle Standard (Australian Design Rule 35/07 – Commercial Vehicle Brake Systems) 2022, 5.3.5; Vehicle Standard (Australian Design Rule 35/06 – Commercial Vehicle Brake Systems) 2018, 5.3.5; Vehicle Standard (Australian Design Rule 35/01 – Commercial Vehicle Brake Systems) 2005, 5.3.5.

<sup>15</sup> Vehicle Standard (Australian Design Rule 35/06 – Commercial Vehicle Brake Systems) 2018.

<sup>16</sup> Vehicle Standard (Australian Design Rule 35/07 – Commercial Vehicle Brake Systems) 2022.

<sup>17</sup> E/ECE/324/Rev 1/Add 12/Rev 8, 2.3.2.