24 September 2026

ADR 80/04 (Euro VI) emissions mass limits increase - Information sheet

Purpose

This information sheet provides detailed information on increases in mass limits for heavy vehicles complying with the ADR 80/04 (Euro VI) emissions standard.

Background

The Australian Design Rule (ADR) 80/04, which aligns with the European Euro VI standard, has resulted in heavier ADR 80/04 heavy vehicles than equivalent ADR 80/03 (Euro V) and earlier models. The increased mass is due to the required additional advanced emission systems.

In response, the Heavy Vehicle National Law (HVNL) Heavy Vehicle (Mass, Dimension and Loading) Regulation (MDL) has been amended to increase mass limits for ADR 80/04 heavy vehicles.

This information sheet describes:

1. How the mass limit increases apply.
2. How they apply to heavy vehicles operating under various HVNL notices, permits and mass limits such as concessional and higher mass limits.

Eligible vehicles

Table 1 summarises eligibility criteria for heavy vehicles to operate at the ADR 80/04 increased mass limits. Only the motor vehicle (hauling unit, prime mover) is considered. Prime movers and rigid trucks are both potentially eligible. There are three vehicle types:

- Single steer axle vehicles that:
  - Are complying steer axle vehicles
  - Are not complying steer axle vehicles
- Twinsteer axle vehicles.

Table 1. Steer axle and twinsteer masses with eligibility criteria

Configuration	Mass Limit (t)	Eligibility Criteria
Standard steer axle	**6.0**	Default mass limit for a steer axle on a heavy motor vehicle where no higher allowance applies.
Complying steer axle vehicle	**6.5**	Vehicle must have: ADR 80/01 (or later) emissions-compliant engine, front underrun protection (UN ECE R93 or ADR 84), cab complying with UN ECE R29, tyres/axle/suspension rated for 6.5 t, and a GVM of at least 15 t.
Road train steer axle	**6.5**	Prime mover operating in a road train and fitted with steer tyres at least 295 mm section width.
Road train steer axle	**7.1**	Prime mover operating in a road train and fitted with steer tyres at least 375 mm section width.
Euro VI complying steer axle	**6.5**	Meets all Complying Steer Axle Vehicle requirements and has a Euro VI engine (ADR 80/04 or later). Steer tyres must be 295 mm to less than 315 mm section width.
Euro VI complying steer axle	**7.0**	Meets all Complying Steer Axle Vehicle requirements and has a Euro VI engine (ADR 80/04 or later). Steer tyres must be at least 315 mm section width.
Euro VI single steer axle vehicle	**6.5**	Heavy motor vehicle with a single steer axle, fitted with an ADR 80/04 (or later) engine and manufacturer-rated tyres, axle and suspension. Front underrun protection and ECE R29 cab compliance are not required.

ADR 80/04 mass limits are new and additional

The MDL retains steer axle mass limits for pre-ADR 80/04 heavy vehicles. The ADR 80/04 mass limits in Table 1 are new and additional.

For example, a complying steer axle (on a heavy vehicle complying with the older ADR 80/01 emissions standard) has been subject to a 6.5 tonnes mass limit since 2006. A complying steer axle fitted to a modern heavy vehicle equipped with an ADR 80/04 emissions system would receive an additional 0.5 tonnes – i.e. the 7.0 tonnes steer axle mass limit shown in Table 1.

Note	Eligible vehicles exclude: • Buses.

Mass transfer allowance

The ADR 80/04 mass limits allow for up to 0.5t of the single or twinsteer axle mass limit to be transferred onto the vehicle's drive axle group.

For example, where Table 1 specifies a single steer (complying steer axle vehicle) mass limit of 7.0t, the mass transfer allowance permits up to 0.5t to be 'transferred' onto the drive axle group mass limit.

This transfer is made by reducing the steer axle mass limit by the same amount as the drive axle group mass limit is increased – by up to 0.5t.

Table 2. Examples of how the mass transfer allowance may be applied.

Mass amount transferred to drive axle group (t)	Axle (group) mass limit (t)		Total vehicle mass limit (t)
	Single steer (complying steer axle vehicle)	Tandem drive axle group mass limit	
0	7.0	17.0	24
0.25	6.75	17.25	24
0.5	6.5	17.5	24

In the examples from Table 2, the mass transfer causes the default tandem axle group mass limit of 17.0t to be increased. (i.e. to 17.25t and 17.5t)

In all cases, the total vehicle mass limit (24t for this example) remains unchanged.

There is no mass transfer allowance for heavy vehicles not subject to ADR 80/04 mass limits. (i.e. older heavy vehicles)

The same type of mass transfer described above for 7.0t ADR 80/04 vehicle single steer axles can also be made to 11.5t ADR 80/04 vehicle twinsteer axles.

In that case, up to 0.5t may be transferred from the twinsteer axle group and applied as an increase of the same amount to the drive axle group mass limit.

The 0.5t mass transfer is available to heavy vehicles fitted with steer axles (or axle groups) subject to an ADR 80/04 (Euro VI) mass limit.

Access to the road network for ADR 80/04 vehicles

Once an operator has determined that their heavy vehicle is eligible for the ADR 80/04 mass limits increase, they must then establish how it is authorised to operate on the roads. There are three broad access categories:

- Under regulation (general access)
- Under a mass and dimension authority:
  - notice
  - permit.

General access under regulation

The ADR 80/04 mass limit increase applies under the MDL Regulation. Heavy vehicles that comply with MDL mass and dimension requirements, and which do not require an authority (notice or permit) – may operate with general access.

Operating under a notice and permit

Some heavy vehicles operate under mass and dimension notices or permits. Heavy vehicles eligible for the ADR 80/04 mass limit increase may operate at those greater masses if they comply with the applicable notice or permit conditions.

Where a notice or permit specifies a mass limit (e.g. 50.0t total combination mass) – that mass condition applies as written. It cannot be increased by adding the ADR 80/04 mass limits increase – unless the notice or permit specifically states that.

Performance Based Standards (PBS) vehicles

PBS vehicles must be subject to a Vehicle Approval (VA) that authorises them to operate at the increased ADR 80/04 mass limits.

Higher Mass Limits

Higher Mass Limits (HML) grant increased mass limits under the MDL Regulation to non-steer axle mass limits. The ADR 80/04 mass limit increases may be combined with HML.

Mass limits axle spacing

The MDL Regulation makes requirements for mass limits as determined by axle spacings. These are described on the NHVR website under General Mass Limits (GML).

The mass limits are specified in Schedule 1 (General mass limits), Part 2 (Axle Tables) of the MDL. The mass limits are increased for ADR 80/04 heavy vehicles.

The simplest way to assess compliance with mass limits axle spacing requirements is as if the vehicle is loaded to non-ADR 80/04 General Mass Limits. (GML)

Case studies

Appendix 1 and Appendix 2 demonstrate how the ADR 80/04 mass limits increase can be used with GML and HML

These case studies show how these mass limits and transfers may be combined with each other, using a B-double as an example. The same principles of how the mass limits are transferred would apply to other vehicle types.

Mass transfers for twinsteer heavy vehicles would apply in the same way as for single steer vehicles.

As described above in this information sheet, compliance with the mass limits axle spacing requirements are most simply assessed by using the masses in the first row of the case studies in Appendix 1 and Appendix 2 (i.e. at GML and a steer axle mass of 6.0t)

If the heavy vehicle complies at those 'baseline' GML values, it is deemed to comply with the mass limits axle spacing requirements once the various mass increases and transfers described here are applied.

Definitions

Australian Design Rule (ADR)	New vehicle standards for vehicles supplied in Australia.
Complying steer axle (vehicle)	A heavy vehicle with a single steer axle if the vehicle has all of the following— a) an engine complying with the emission control requirements contained in— i. ADR 80/01 or a later version of ADR 80; or ii. if a version of ADR 80 later than ADR 80/01 applied to the vehicle at the vehicle's date of manufacture—the version of ADR 80 that applied to the vehicle at the vehicle's date of manufacture or a later version of ADR 80; b) a front underrun protection device that complies with UN ECE Regulation No. 93 or ADR 84; c) a cabin that complies with UN ECE Regulation No. 29; d) appropriately rated tyres, axle and suspension to permit 6.5t on the steer axle; e) a GVM of 15t or more.
Euro VI vehicle (complying steer axle)	A heavy motor vehicle with a single steer axle that— i. i. has an engine complying with the requirements about emission control contained in ADR 80/04 or a later version of ADR 80; and ii. has a front underrun protection device that complies with ADR 84, unless ADR 84 provides otherwise; and iii. has a cabin that complies with UN ECE Regulation No. 29; and iv. has appropriately rated tyres, axle and suspension for the mass limit on the steer axle as stated by the vehicle's manufacturer; and v. has a GVM of 15t or more; but b) does not include a bus.
Euro VI vehicle (single steer axle)	A heavy motor vehicle with a single steer axle, other than a complying steer axle vehicle, that— i. i. has an engine complying with the requirements about emission control contained in ADR 80/04 or a later version of ADR 80; and ii. ii. has appropriately rated tyres, axle and suspension for the mass limit on the steer axle as stated by the vehicle's manufacturer; but b) does not include a bus.
Euro VI vehicle (twinsteer)	a) means a heavy motor vehicle with a twinsteer axle group that— i. has an engine complying with the requirements about emission control contained in ADR 80/04 or a later version of ADR 80; and ii. has a load-sharing suspension system for the axle group; and iii. has appropriately rated tyres, axles and suspension for the mass limit on the axle group as stated by the vehicle's manufacturer; but b) does not include a bus.
Gross Vehicle Mass (GVM)	Gross vehicle mass – the vehicle supplier's maximum rated, loaded mass for the vehicle.
Load-Sharing Suspension System	Suspension designed to share load between its axles – as defined in the MDL
UN ECE Regulation	United Nations Economic Commissions for Europe Regulations for heavy vehicle standards – the European equivalent of Australian Design Rules.

For more information:
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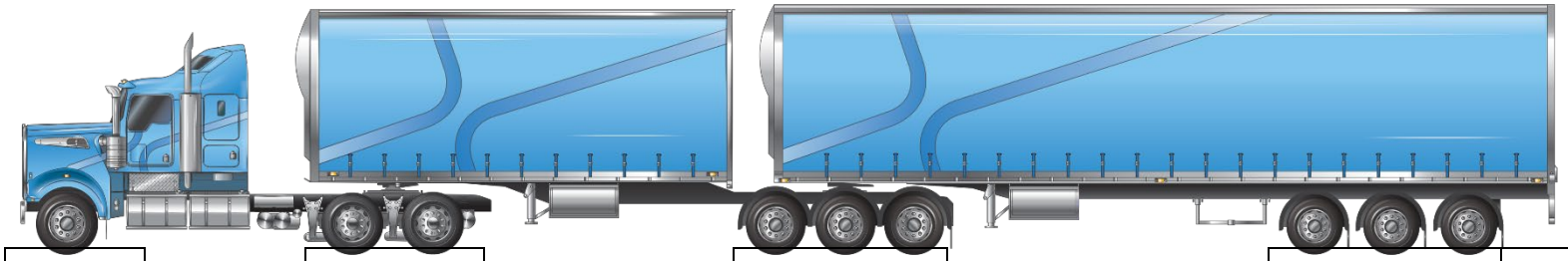
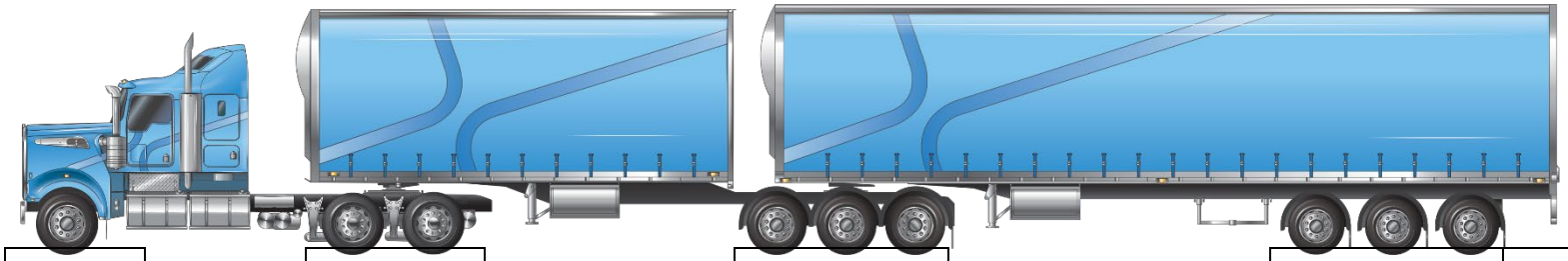
Appendix 1 – GML case studies



	Steer axle	Drive axle	Tri-axle	Tri-axle	Total combination mass
New GML baseline	6.0t	17.0t	21.0t	21.0t	64.5t
Euro VI complying steer axle(> 315mm)	+1.0t				
GML	7.0t	17.0t	21.0t	21.0t	65.5t
Euro VI mass transfer of 0.5t from steer to drive	-0.5t	+0.5t			
GML +0.5t Euro VI mass transfer	6.5t	17.5t	21.0t	21.0t	

Appendix 2 – HML case studies



	Steer axle	Drive axle	Tri-axle	Tri-axle	Total combination mass
HML	7.0t	17.0t	22.5t	22.5t	69.0t
Euro VI mass transfer of 0.5t	-0.5t	+0.5t			
HML +0.5t Euro VI mass transfer from steer to drive axle group	6.5t	17.5t	22.5t	22.5t	