Vehicle Standards Guide 36 (VSG-36) Vehicle Width

This guide provides information about the regulation of vehicle width, including how it is measured.

Why do we regulate vehicle width

How wide a vehicle is allowed to be is regulated to ensure that vehicles fit on roads. Limiting the width means:

- they can operate within a lane of traffic when driving
- they fit within loading bays and parking bays and
- we know how much room they need when turning, so roads can be designed safely.

What are the width limits

The width limit for all heavy vehicles is 2.50 metres.

The only exception to this is 'Safer Freight Vehicles' which can be up to 2.55m wide, provided they are fitted with prescribed additional safety features.

Note: For more information about Safer Freight Vehicles, please refer to Vehicle Standards Guide 35 – Implementation of Safer Freight Vehicles.

How is width measured

When measuring the width of a vehicle, the measurement is taken at the widest point of the vehicle.

Everything that is affixed to or carried on the vehicle is included, but there are a number of items that are excluded.

The items that are excluded when measuring width are:

1. ADR Indirect vision devices (ADR IVDs)

The ADRs allow for certain devices, such as rear-view mirrors (excluding cross-view mirrors), cameras and sensors, to be fitted to a vehicle to help the driver see the area around the vehicle. To work properly and see or sense the areas around the vehicle, they have to stick out past the body.

These devices have been designed with safety in mind, are installed fairly high off the ground, are required to have rounded edges and many also have passed impact tests.

As such, ADR indirect vision devices are not included in width. The ADR requirements for each device will set the maximum allowable protrusion.

Image 1: ADR in-direct vision camera

Note: The Australian Design Rules (ADRs) limit how far past the body of a vehicle an IVD can protrude.

2. Cross-view mirrors

A cross-view mirror is a mirror fitted to the front of a bonneted truck that allows the driver to see the area directly in front of the vehicle. So that they can show the driver as much of the area across the front of the vehicle, they may be fitted and adjusted to protrude out from the side profile of the vehicle.

As such, a cross-view mirror, including the arm/s that connect it to the body of the vehicle, are not included in width provided they do not increase the width of the vehicle by more than 100mm.

Note: The ADRs limit the overall width impacts that a group of components can cause. See *Grouped limits on width impacts* in this VSG for more information.

3. Non-ADR indirect vision devices (Non-ADR IVDs)

The heavy vehicle industry is often very progressive when it comes to taking up technology that can help improve safety, and this includes taking up optional devices to help improve driver vision.

Like all indirect vision devices, to work properly and see or sense the areas around the vehicle, they have to stick out past the body. However, these systems are not as standardised as regulated (ADR) devices and therefore, there is an overall limit of 100mm on these systems. That is, the devices cannot increase the overall width of the vehicle by more than 100mm.

Note: The ADRs limit the overall width impacts that a group of components can cause. See *Grouped limits on width impacts* in this VSG for more information.

4. Blind spot information systems

Blind spot information systems (BSIS) are a specific type of indirect vision device that senses along the passenger side of a heavy vehicle. While focused on detecting cyclists, the system may also warn about other road users close to the vehicle as well.

The external sensor/s for a BSIS protrude from the heavy vehicle's body to allow it to sense along the vehicle, so they increase the width of the vehicle. BSIS sensors are not included when measuring the width of a vehicle, provided they do not make the overall vehicle width more than 2.60m.

5. Signalling devices, side marker lights and reflectors

Lights and reflectors are required on vehicles because they either illuminate the vehicle's surroundings for the driver

(headlights), allow the driver to communicate changes in vehicle speed and direction (brake lights and direction indicators), or indicate the presence and size of the vehicle (parking lights, side marker lights, etc.)

To achieve this, the lights and/or reflectors need to be mounted so they protrude past the edge of the body – this includes indicator lights, side marker lights, and side marker reflectors. Therefore, we do not include these minor protrusions when measuring width.

The ADR requirements for each device will set the maximum allowable protrusion

6. Removable load restraint

To make sure that the loads carried on vehicles are secure and do not shift or fall off, heavy vehicle operators often use restraining devices such as ratchet straps that are removed from the vehicle when the vehicle is not loaded.

Often, these restraint devices run over the edge of the vehicle and attach to anchor points on the side of the vehicle or under the tray. Properly restraining loads is key to safety, so these removable restraint devices are not included when measuring width, provided they do not make the overall vehicle width more than 2.55m.

7. Load induced tyre bulge

With all vehicles, the tyres are responsible for transmitting the mass of the vehicle onto the road. Where the tyre contacts the road, the loading can cause the tyre to bulge out slightly and this is called load-induced tyre bulge.

As this is a normal feature of operating a heavy vehicle, this bulge in the tyre is not to be included when measuring width.

8. Automated driving system devices

Vehicle manufacturers have started to develop vehicles that have increasing levels of automation. While fully automated vehicles may still be some way off, initial features that include automation will start to become more common.

Automated vehicles need to be fitted with a range of cameras and sensors to allow them to function correctly and these sensors need to protrude from the vehicle so they can see and sense everything around the vehicle. To ensure this can happen, the sensors and cameras used as part of an automated vehicle system are not included when measuring width, provided they do not increase the overall width by more than 100mm.

Note: The ADRs limit the overall width impacts that a group of components can cause. See *Grouped limits on width impacts* in this VSG for more information.

9. Permanently affixed webbing assembly-type devices

Curtainside bodies on trailers and rigid trucks are quite common, and feature buckles along the sides that tension the curtains when travelling on roads. These buckles are known as webbing assembly-type devices.

Often these buckles slightly protrude from the curtains so they can function properly and have therefore been excluded from being included when measuring vehicle width. These side buckles are only excluded if the overall width across the vehicle, including the buckles on both sides is not more than 2.55m.

Image 2: A permanently affixed webbing assembly-type device.

Note: The ADRs limit the overall width impacts that a group of components can cause. See *Grouped limits on width impacts* in this VSG for more information.

10. Tyre pressure gauges

Tyre pressure gauges are essential components in heavy vehicles for safe driving and also to assist with fuel efficiency and tyre longevity.

For vehicles manufactured before 1 October 2023, the gauge is to be disregarded when measuring width. However, for vehicles manufactured from 1 October 2023, there is an overall limit of 100mm for gauges. That is, they cannot increase the overall width of the vehicle by more than 100mm.

Note: The ADRs limit the overall width impacts that a group of components can cause. See *Grouped limits on width impacts* in this VSG for more information.

11. Central tyre inflation systems

Central tyre inflation (CTI) systems are fitted to heavy vehicles to allow direct control of tyre pressure, enhance safety, and improve overall vehicle performance.

For vehicles manufactured before 1 October 2023, CTI components are to be disregarded when measuring width. For vehicles manufactured from 1 October 2023, there is a limit of 100mm on each side of the vehicle.

12. Wheel-mounted anti-skid devices

In some operational situations it is necessary to attach additional devices to the tyres of a vehicle to stop it from slipping and skidding. The most common is in alpine environments when snow chains need to be used.

For vehicles manufactured before 1 October 2023, the devices are to be disregarded when measuring width. For vehicles manufactured from 1 October 2023, there is an overall limit of 100mm for these devices. That is they cannot increase the overall width of the vehicle by more than 100mm.

Note: The ADRs limit the overall width impacts that a group of components can cause. See *Grouped limits on width impacts* in this VSG for more information.

Grouped limits on width impacts

The ADRs sets out an additional limit on how much a number of components can impact on width. That is considering all of the components in the group they are only excluded if the overall impact including all of those components is not more than 100mm.

Components included in this group are:

- Cross-view mirrors
- Non-ADR IVDs
- Automated driving system devices
- Permanently affixed webbing assembly-type devices
- Tyre pressure gauges; and
- Wheel-mounted anti-skid devices.

Example 1: Compliant grouped components

A prime mover is fitted with a cross-view mirror that extends past the edge of the vehicle on the left-hand side by 50mm and has tyre pressure gauges fitted to each steer wheel that extend 25mm past the edge of the vehicle on each side. Both of these components are included in the group limit so the impact on width has to be considered together.

When checking the width impact of each individual component:

- the cross-view mirror protrusion (50mm) is less than the 100mm limit for that component; and
- the tyre pressure gauge protrusions (25mm on each side – total 50mm) is less than the 100mm limit for that component.

This means by themselves, each of these components meets the individual width impact requirements.

When checking the grouped width impact for these components, we must consider the maximum impact on the left-hand side and right-hand side and add them together.

In this example:

- On the left-hand side there are two items that protrude – the cross-view mirror that protrudes 50mm and the tyre pressure gauge that protrudes 25mm.
- On the right-hand side there is only the tyre gauge that protrudes 25mm.

This means when taking the maximum protrusions, 50mm and 25mm, the impact on width of the grouped components in 75mm. This is less than the 100mm limit, so these components are compliant and not included in width.

Example 2: Non-compliant grouped components

A rigid truck is fitted with a cross-view mirror that extends past the edge of the vehicle on the left-hand side by 75mm and has tyre pressure gauges fitted to each steer wheel that extend 30mm past the edge of the vehicle on each side. Both of these components are included in the group limit so the impact on width has to be considered together.

When checking the width impact of each individual component:

- the cross-view mirror protrusion (75mm) is less than the 100mm limit for that component; and
- the tyre pressure gauge protrusions (30mm on each side – total 60mm) is less than the 100mm limit for that component.

This means by themselves, each of these components meets the individual width impact requirements.

When checking the grouped width impact for these components, we must consider the maximum impact on the left-hand side and right-hand side and add them together.

In this example:

- On the left-hand side there are two items that protrude – the cross-view mirror that protrudes 75mm and the tyre pressure gauge that protrudes 30mm.
- On the right-hand side there is only the tyre gauge that protrudes 30mm.

This means when taking the maximum protrusions, 75mm and 30mm, the impact on width of the grouped components in 105mm. This is more than the 100mm limit, so these components are non-compliant and the vehicle would be considered to be too wide.

For more information:
Visit: www.nhvr.gov.au/vehiclestandards
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Summary of items excluded from width

Item	Limit (Component)	Limit (Grouped)
ADR IVD (i.e. rear vision mirror, rear vision camera, Class V mirror)	ADRs set limit for each component	N/A
Blind Spot Information System	Max width across vehicle inc. sensors - 2.60m.	N/A
Signalling devices, side marker lights and reflectors	ADRs set limit for each component	N/A
Removable load restraint	Max width across vehicle inc. device - 2.55m.	N/A
Load induced tyre bulge	Nil.	N/A
Central tyre inflation systems[#]	100mm	N/A
Non-ADR IVS (i.e. 360° cameras)	100m	Any combination of devices fitted in this group cannot increase the overall width of the vehicle by more than 100m
Cross-view mirror	100mm	
Automated driving system devices	100mm	
Permanently affixed webbing assembly-type devices	Max width across vehicle inc. devices - 2.55m.	
Tyre pressure gauges	100mm[#]	
Wheel-mounted anti-skid devices	100mm[#]	

[#] No limit for vehicles built prior to 1 October 2023.