



TRUCK INDUSTRY COUNCIL
— TODAY'S TRUCKS —
SAFER GREENER ESSENTIAL

Code of Practice to ensure an adequate field and clarity of view



TODAY'S TRUCKS



SAFER



GREENER



ESSENTIAL

© July 2019 Truck Industry Council Ltd

This document is available at www.truck-industry-council.org.

Please refer to this website for the latest version.

For further information please contact

Truck Industry Council Limited (ABN 37 097 387 954)

GPO Box 5350, Kingston ACT 2603 or email admin@truck-industry-council.org

Operators, suppliers and enforcement agencies must comply with the Australian Design Rules (ADRs), the Australian Vehicle Standards Regulations, the Roadworthiness Guidelines and any specific information and instructions provided by manufacturers in relation to vehicle's systems and components.

DISCLAIMER

The Truck Industry Council (TIC) has made reasonable efforts to ensure that the information within this document is as accurate as possible. The information is provided for general information purposes only and is offered in good faith and without any expressed or implied warranty. No responsibility can be accepted by TIC or its officers, employees, contractors, or agents, for loss occasioned to any person doing anything or refraining from doing anything, or otherwise relying upon its contents in any way, as a result of anything contained in this document. Any opinion expressed in this document is not necessarily that of TIC. Reliance or use upon the information or recommendations is voluntary and the user accepts all risks and responsibility for any such reliance or use and to the maximum extent permitted by law the TIC excludes all liability to any person arising directly or indirectly out of any such reliance or use.

Code of Practice development process

This Code of Practice was originally developed by the Truck Industry Council at the request of the Victorian Police Service and a number of State and Tertiary Road Agencies to ensure that the field of view to the side and front of a truck is not degraded. The Code, has been prepared under the direction of the Truck Industry Council (TIC) Board with input from the chief technical officers of each TIC member, reviewed by them and endorsed by TIC Board.

Document version control

Edition	Date	Nature of change / comments	Editors
First	August 2010	Initial development	Simon Humphries, TIC, Chief Technical Officer.
Second	April 2012	Updated as required	Simon Humphries, TIC, Chief Technical Officer.
Third	May 2015	Updated as required	Mark Hammond, TIC, Chief Technical Officer.
Fourth	July 2019	Expanded and reformatted	Mark Hammond, TIC, Chief Technical Officer.

Table of Contents

	Disclaimer.....	2
1)	Introduction.....	4
2)	Unacceptable modifications.....	4
3)	Optional technologies	5
4)	Window Tinting	5
5)	Drivers field of view requirements.....	6
6)	Exceptions to the driver's field of view	8
7)	European classes for additional mirrors.....	9
8)	Action to be taken by TIC members	10
9)	Glossary of terms and references	10
10)	List of TIC members	11

1) Introduction

Truck manufacturers are required to meet a number of safety requirements contained in Australian Design Rules (ADRs). With respect to “field of view”, and visibility to the sides and front of the truck, there are two ADRs that are relevant; **ADR 8/01 Safety Glazing Material**, and **ADR 42/04, /05 General Safety Requirements**. These ADRs require a truck manufacturer to certify that the driver has an “ADEQUATE” field of view when seated in the vehicle with the seat belt fastened. It is essential that modifications are not made to the vehicle that results in the vehicle no longer meeting the requirements of the relevant ADRs. With respect to this Code, that means reducing the luminous transmittance of the windscreen and side windows, and the “field of view”.

Prior to development of this Code, there has been an increasing tendency to modify vehicles, by fitting a range of aftermarket components, that in many instances may cause the vehicle to no longer comply with the relevant ADRs. This can result in the driver having a reduced level of visibility and field of view, which could lead to an unsafe situation.

The driver of the vehicle should have an unhidden view of the road and traffic ahead and to each side of the vehicle. This Code has been designed to assist in maintaining and ensuring ongoing compliance for field of view.

2) Unacceptable modifications

The following modifications are deemed to be unacceptable, in that such modifications are likely to have a negative impact on the safe operation of the vehicle:



Fitting of chrome or other opaque bug deflectors, name plates, etc, that reduce the drivers forward field of view, and conceal close in vehicles or pedestrians.



Any external sunvisors that protrude below the tinted band across the top of the windscreen or below the swept path of the wipers.



Non-original equipment manufacturer internal sunvisors that reduce field of view



Attaching lettering, decals, etc, to any part of the windscreen that is swept by the windscreen wipers.



Tinting of the windscreen or side windows that reduces the light transmittance level required by ADR 8/01.



Any other item mounted inside the cab that obscures the driver’s field of view, such as a visual display unit or mobile phone

3) Optional technologies

The following is a list of new and/or existing items, systems and technologies that may be available for fitment to some trucks. The employment of one or more of these indirect vision devices could improve the driver's visibility or awareness around the truck:



Fitting of LHS in-door window.



Fitting of additional LHS proximity mirrors, as detailed in Section 7.



Fitting of additional LHS blind spot mirrors, as detailed in Section 7.



Fitting of ultrasonic or radar proximity sensors.



Fitting of electronic visual aid systems using camera and screen technologies.

These and others not necessarily noted indirect vision devices can be used to assist in meeting this Code's field of view requirements.

4) Window Tinting

Driving safely requires the driver to have the best possible vision of the road and other road users. Any reduction in the driver's vision, particularly in poor light conditions, such as twilight or wet weather conditions, will lead to a reduction in safety. Tinted windows can significantly reduce driver vision.

All vehicles must maintain compliance to the ADRs. Window tinting is covered under **ADR 8 Safety Glazing Material**. Typically, the OEM will tint the windscreen and side windows to the maximum allowable under the ADR and therefore can't have any further tint applied.

The reflectance of any window fitted within the driver's field of view, with tinting film must not be more than 10%, which effectively is the same as untreated glass.

A vehicle fitted with a tinted windscreen or window which does not comply to the ADR as detailed in this Code is unroadworthy and may be defected by the Road Authorities.

Windscreen

Vehicles must comply with **ADR 8/01 Safety Glazing Material** requires at least 70% of visible light transmitted through the windscreen. However, only windscreens tinted during the manufacturing process are acceptable.

It is permissible for windscreens to have tinted bands of less than 70% light transmittance above the primary vision area. As guide, where this band is more than 65mm deep and extends into the wiper swept path or beyond the top 10% of the windscreen height, evidence may be required to show that the tint does not extend into the primary vision area as defined in **ADR 8/01 Safety Glazing Material**.

Windows to the left and right of the driver

The light transmittance of windows to the left and right of the driver is not reduced below 70%.

A lower left-hand door window, with or without an fresnel lens but should have light transmission of not less than 70%. Note a fresnel lens may result in a distorted view.

Windows – above and behind the driver

Windows above or behind the driver's seating position are typically not in the driver's field of view and need not comply with the above light transmittance requirement.

5) Drivers field of view requirements

Trucks sold in Australia comply with ADR 8/01 Safety Glazing Material and ADR 42/04, /05 General Safety Requirements, or the alternative standard UN ECE R43 - uniform provisions concerning the approval of safety glazing materials and their installation on vehicles.

The driver's visibility should be unobstructed through to the structure of the truck via the OEM aperture past the instrument panel, internal OEM sunvisors and bonnet, if fitted.

It is essential that no item or feature is added within the driver's critical field of view, as outlined in figure 1, unless exempt (refer to section 6), otherwise the driver's ability to see road users may be detrimentally impacted due to the reduced the driver's field of view.

It is essential that no addition or modification is made to the vehicle that results in a reduction in the driver's field or clarity of view within the shaded areas highlighted in figure 1 or it may be deemed to be non-compliant to the ADR with the Road Authority potentially issuing an infringement notice.

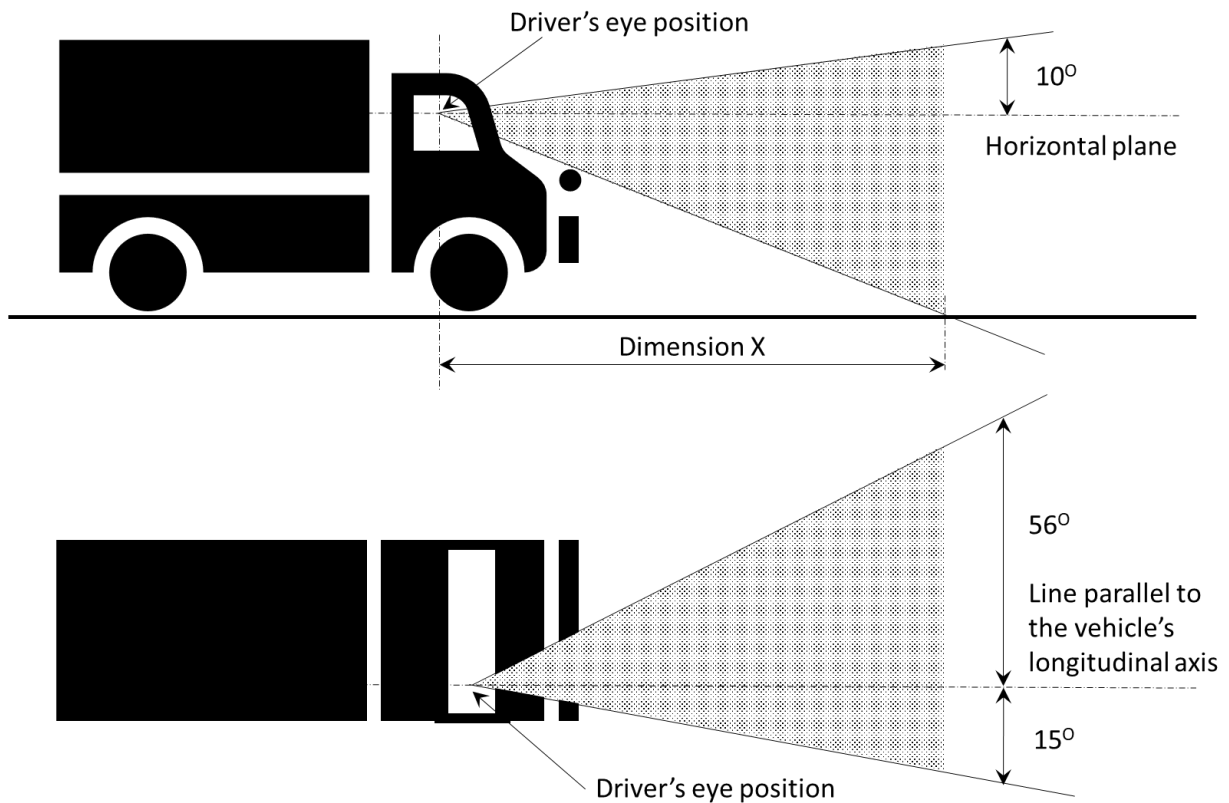


Figure 1: The driver's critical field of view in which the fitment of accessories shall be assessed for compliance to this Code.

The Dimension X, is the point at which it is possible for the driver to see the surface of the road:

- 11 metres in front of the driver's eye position; or
- the point on the road that is visible past the OEM body shape.

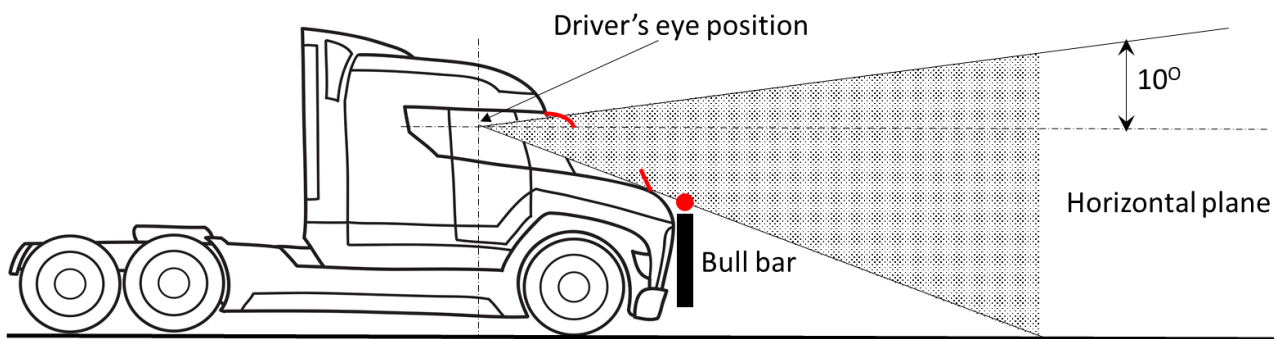


Figure 2: Non-compliant accessories are the top of bull bar plus non-clear sunvisors and bug deflectors.

As a guide, the driver's critical field of view shown, either directly or with the assistance of in-direct vision devices, is measured from the driver's eye position or a point 760 mm above the driver's seating position measured vertically from the centre of the rear most point of the seat cushion with the seat located in the centre of its travel.

6) Exceptions to the driver's field of view

All items need to be taken into account, if they impact on a driver's field of view.

Aerials and roof rack supports mounted forward of the A (windscreen) pillar:

- It should be mount on the left-hand side.
- Free of sharp edges and protrusions.
- Be less than 30 mm in diameter in the driver's field of view.
- It should be non-reflective, preferably matt black in colour.
- Not obscure the function or performance of lights.

These requirements do not apply to specially constructed vehicles over 12 tonnes GVM such as car carriers and garbage collection vehicles. These types of vehicles should apply a risk management approach to assess the driver's field of view restrictions and action as needed.

Bug deflectors

Any part of the bug deflector that extends into the driver's field of view or their primary vision area requires at least 70% of visible light transmission. Outside this area, it is permissible to have less than 70% light transmittance.

Windscreen stone guards

Their mesh must have at least a 75% opening area and support structure that is less than 25 mm wide within the driver's field of view.

7) European classes for additional mirrors

ECE Regulation number 46 - For the uniform provisions concerning the approval of devices for indirect vision and of motor vehicles with regard to the installation of these devices.

Mirrors shown below are not mandate by ADR's but could be optionally fitted, if required, to assist with the driver's field of view.

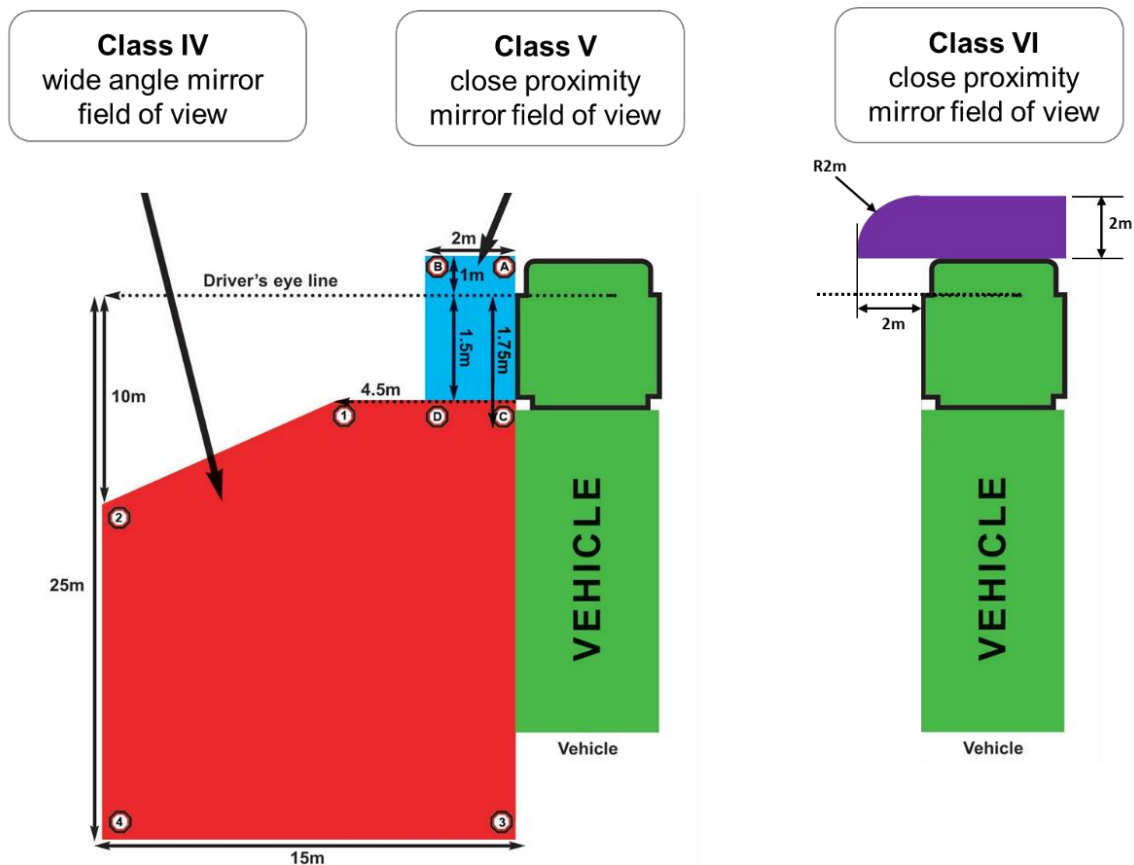


Figure 3: European guidance for additional close proximity mirror field of view. These mirrors were required on trucks first registered from 1 January 2000 in the UK.

Source: UN ECE Regulation number 46 Uniform provisions concerning the approval of devices for indirect vision and of motor vehicles with regard to the installation of these devices.

8) Action to be taken by TIC members

The following action will be taken by members of the TIC:



Advise all members of the company's authorised sales outlets that they are required to comply with this Code that precludes fitting or providing attaching any of the "unacceptable modifications" listed in Section 2 and that other items, systems and technologies may exist to improve the drivers' visibility or awareness, as listed in "optional technologies" listed in Section 5 above.



Ensure members of the companies authorised sales and service outlets advise all their customers of the requirements of this Code, and that:

- Attaching or fitting any of the "unacceptable modifications" may well have a negative impact on the safe operation of the vehicle, and could result in the vehicle being defected, or grounded by law enforcement authorities.
- There are new technologies, indirect vision devices and features that may be available that could improve the drivers' visibility or awareness and that where available these should be discussed with the customer.

9) Glossary of terms and references

The following references apply to this code of practice.

ADR Australia Design Rule

Australian Design Rule (ADR) 8/01: Safety Glazing Material.

The function of this Australian Design Rule is to specify the performance requirements of material used for external or internal glazing in motor vehicles that will ensure adequate visibility under normal operating conditions.

Australian Design Rule (ADR) 42/04, /05: General Safety Requirements.

The function of this Australian Design Rule is to specify design and construction requirements to ensure the safe operation of vehicles.

ECE Economic Commission for Europe.

GVM Gross Vehicle Mass, total mass of the truck.

OEM Original Equipment Manufacturer.

10) List of TIC members

- Allison Transmissions Australia Pty Ltd
- Cummins South Pacific Pty Ltd
- Daimler Truck and Bus Australia Pty Ltd (Fuso, Mercedes-Benz & Freightliner Trucks)
- Eaton Pty Ltd
- Hino Motor Sales Australia Pty Ltd (Hino Trucks)
- Isuzu Australia Ltd (Isuzu Trucks)
- Iveco Trucks Australia Ltd (Iveco Trucks, Iveco Vans & International Trucks)
- Navistar AusPac Pty Ltd
- PACCAR Australia Pty Ltd (Kenworth & DAF Trucks)
- Penske Commercial Vehicles Australia Pty Ltd (Western Star, MAN & Dennis Eagle Trucks)
- Penske Power Systems Ltd
- Scania Australia Pty Ltd (Scania Trucks)
- Volvo Group Australia Pty Ltd (Volvo, Mack & UD Trucks)

The current member listing can be found on the TIC's website –

www.truck-industry-council.org