BUS INDUSTRY CONFEDERATION
moving people

Driver Safety Screens

Guide

May 2025

Contents

Acknowledgments

This *guide* has been developed by the Bus Industry Confederation (BIC) in conjunction with Transport for Brisbane and input from the BIC members, including manufacturers, suppliers and bus operators. Special thanks to Engineering and Assets Management Branch at Transport for Brisbane for the extensive work and testing carried out from which the guideline is based.

Preface

Antisocial behaviour of public transport users is an ever-increasing issue for society. It is a difficult subject to tackle at multiple levels for government, transport regulators, bus operators, and suppliers. When vehicle regulations were written they were not meant to have to account for anti-social behaviour of passengers.

Additional measures are being sought or implemented by government, operators, and suppliers to better protect drivers from physical attack. As such:

This *guide* provides advice for manufacturers, modifiers, owners and operators of buses about the vehicle standards requirements when installing driver safety screens as part of any in-service modifications. These include (accessibility, field of vision, distortion, glazing and ventilation) to maintain safety, vision daily accessibility and accessibility in the event of an emergency.

This guide is configured to be used in conjunction with the National Heavy Vehicle Regulators Exemption notice: *National Heavy Vehicle Standards (Bus Driver Safety Screen) Exemption Notice 2025 (No.1)* and *Vehicle Standards Bulletin 6 (VSB6) V3.2: National Code of Practice Heavy Vehicle Modifications section K3*.

The Bus Industry Confederation

The Bus Industry Confederation (BIC) is the national peak body for the Australian Bus and Coach Industry. We represent bus and coach operators, body, chassis and complete bus manufacturers and suppliers, parts and service providers, professional services, and state bus associations on issues of national importance.
Our membership is becoming increasingly diverse as key energy and infrastructure partners join as we transition the fleet to low and zero emissions. The BIC advocates on behalf of our members to federal, state and territory governments and associated bodies, to ensure the safe and efficient carriage of passengers, along with safe and sustainable operations and supply chains that support the industry

Disclaimer

This guide has been developed to assist bus suppliers and operators regarding installation of driver safety screens. While every effort has been made to ensure the accuracy of the material in this guide, persons should seek their own independent legal and safety advice in relation to the topics covered based on their own individual circumstances. The Bus Industry Confederation shall not be liable for any matter contained herein or any loss suffered due to reliance on this information.

Installation types

This guide does not preclude one design type over another but serves as a method so that each in-service design meets a set of criteria to ensure vision and safety is maintained.

Australian Design Rules (ADRs)

The adaption of a bus model to include a driver safety screen can impact various ADRs. The purpose of this guide is to provide guidance so that the final design considers the influence of these ADRs including ensuring the intent of critical areas of the ADRs are maintained so that the driver's safety screen design and driver's compartment are no less safe for vehicle operation. They may apply where a driver safety screen is added into an ADR-compliant vehicle as per the National Heavy Vehicle Regulator (NHVR) vehicle modification requirements.

ADR requirements that are listed in this guide shall be met as described in the tables throughout, in order to provide a driver safety screen in accordance with this guide. In preparing a design, consideration should also be given to other ADRs not mentioned in this guide.

Reflections and Safety Screen Considerations

In-field testing has demonstrated reflections on the driver safety screen are best minimised by the driver's screen section and fixed glass section on different angles away from the driver, and towards the left A-pillar as much as practically possible.

Figure 1: Examples of different screen configurations.

Primary field of view

Primary field of view is the primary area (zone 1) from which the driver sees the road. This is referenced in ADR08/01, paragraph 7.5 and further in paragraph 9.2.5.2.3 . In some installation designs, the driver safety screen may encroach with the forward field of vision area that the driver sees through.

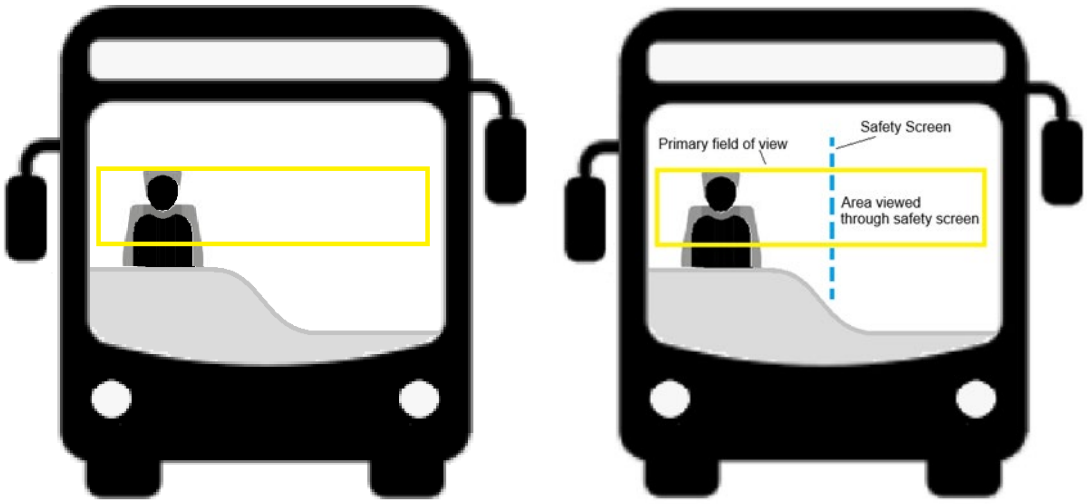

Figure 2: Example of primary field of view (left) and area viewed through driver safety screen (right).

Where a design does encroach, and in order to maintain vision integrity, it will be necessary to carry out testing to ensure that vision is maintained post safety screen installation.

Screen angle

Extensive testing and trials has demonstrated driver safety screens should be angled away from the driver as much as practically possible to minimise reflections. These angles are determined by the installation type, with governing factors to the design being still wheelchair accessible for the front passenger door (where applicable), following existing driver's door and dash curvatures and visibility.

Where a driver safety screen encroaches on the primary field of view, the forward (fixed) screen should be at an angle which minimises encroachment into the driver's view and reduces reflections as much as possible. At a minimum, this angle should be no less than 20° when compared to the driver's door safety screen section (See figure 3). This is to have less surface area on the same plane but also to further reduce reflections. This is not to preclude one design above another but is based on outcomes from extensive testing carried out.

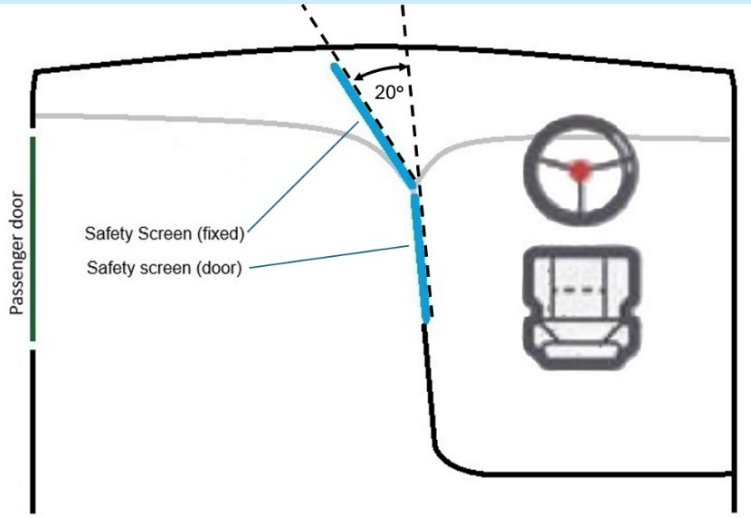

Figure 3: Minimum screen angle where primary field of view is encroached.

Disability Standards

Installations should not compromise Disability Standards for Accessible Public Transport 2002 (DDA standards) – https://www.legislation.gov.au/F2005B01059/latest/text. Particular attention should check compliance to section 2.6 Access paths — conveyances.

Vision

The following section provides guidance for the bus driver's compartment vision, specifically with regards to ADR 08/01 Safety Glazing Material, ADR 42/02 General Safety Requirements and ADR 58/00 Requirements for Omnibuses Designed for Hire and Reward.

Glazing also covered in ADR 08/01 is listed later in this guide and not part of this section.

This section is to ensure the driver's compartment has considered provisions for drivers' vision where *primary field of view is encroached*. This is respecting that the driver's compartment is a unique area different to a standard passenger cabin.

ADR Applicability

Where a driver safety screen is added into an ADR compliant vehicle, the vision requirement for the driver's compartment safety screen will only be deemed appropriate in this area providing the following requirements set out below are adhered to.

ADR 08/01

Section	ADR Text (requirement)	Additional comments
Primary Vision Area		
7.5.1	The primary vision area for windscreens shall be determined in accordance with 7.5.1.1, 7.5.1.2 or 7.5.1.3.	
7.5.1.1	For windscreens of passenger cars, "Test area B" as specified in Annex 18 of ECE R 43 paragraph 2.3, and referenced in Annex 3 paragraph 9.1.2.2 (see Appendix A). For windscreens of other than passenger cars, "Zone I " as specified in Annex 3 of ECE R 43 paragraph 9.2.5.2.3, and referenced in Annex 3 paragraph 9.1.2.2 (see Appendix A).	
7.5.1.2	The area of the windscreen between a plane tangential to the top of the '95th Percentile Eye Ellipses', inclined 10 degrees above the horizontal measured parallel to the longitudinal axis of the vehicle, to a plane tangential to the bottom of the '95th Percentile Eye Ellipses', which includes a horizontal line at ground level transverse to the longitudinal axis of the vehicle and 11 m from the rearmost eye position on the '95th Percentile Eye Ellipses', measured horizontally and parallel to the longitudinal axis of the vehicle and between a vertical plane tangential to the outboard of the '95th Percentile Eye Ellipses' and inclined 15 degrees to the right, to a vertical plane tangential to the inboard of the '95th Percentile Eye Ellipses' and inclined 56 degrees to the left.	

App'x A Section 8 Tests		
8.1	The following tests are prescribed in this Regulation	Specific requirements: For this section only the secondary image test is conducted.
8.1.4.3.	Secondary-image-separation test The purpose of this test is to verify that the angular separation of the secondary	Specific requirements: • Method: Testing is carried out in accordance with the methods in Appx A – Annex 3 section 9.3.1.1 Target test and;

	image from the primary image does not exceed a specified value.	• Test points: as per the Target (light box) test section described in this guide. • Driver Safety Screens installations shall be angled to minimise reflections as per this document.

ADR 42/04

Section	ADR Text (requirement)	Additional comments
External Mirror		
12.1	A motor vehicle must not be so constructed or equipped, nor must anything be affixed thereto in such a manner as to prevent the driver from having an adequate view of traffic on either side of the vehicle and in all directions in front of the vehicle to enable the vehicle to be driven with safety.	Reference Note: Compliance with this clause also continues to meet with ADR 93/00 forward field of view section 19.1.2 whereby it states: *"They may comply with this vehicle standard or continue to comply with the Australian Design Rule 42/04 – General Safety Requirements".*

ADR 58/00

Section	ADR Text (requirement)	Additional comments
External Mirror		
58.9	In the case of omnibus having access doors to the rear of the driver's seating position, a mirror of suitable dimensions shall be so located that the driver whilst retaining the normal driving position has an adequate view of such doors and their approaches.	Reference note: Some vehicles are fitted with an ADR compliant camera monitoring device with a screen to monitor the passenger doors.

Target (light box) test

In such cases where the primary field of vision is encroached by the driver's safety screen, a 'target test' (commonly referred to as a light box test) shall be carried out. The purpose of the test is to ensure that the forward vision area with safety screen in place passes the Secondary-image-separation test as described in ADR 08/01 paragraph 9.3.1.1 and sub paragraphs.

To establish a baseline, the test shall be carried out twice; pre and post driver's safety screen installation. Results shall be no worse than pre installation. I.e., pass or fail.

The tests shall be conducted in the areas where the driver safety screen encroaches the primary field of view and to the left of the driver. This is the point where the driver views the road through the safety screen and the windscreen. This will vary pending bus and driver's safety screen combination. All points are to be tested of the encroached area and they are illustrated as test points A, B and C (when viewed from the driver's ocular point)

in figures 4 and 5 below. Additionally required are test point 'D' for the left-side driver's mirror and test point 'E' for the front passenger door.

- *Test point A*: Covers the right most extremity of where the driver looks through both the windscreens primary field of view and driver safety screen.
- *Test Point B*: Covers the mid-point between either extremity of the encroached area.
- *Test Point C*: Covers the left most extremity of where the driver looks through both the windscreens primary field of view and driver safety screen.
- *Test point D*: Covers the ability for the driver's left side mirror to be seen. This applies to any ADR 14 class II and class IV indirect vision device (mirror or camera monitoring system) that is viewed through the driver safety screen. This is not required where camera monitor system has the viewing monitor placed in such a way as they are viewed directly without going through the safety screen.
- *Test Point E*: Covers the field of vision for the driver to centre of the passenger door. This test is conducted as a height of 1mt from the ground. This is to represent 1 m tall pedestrian (child) or bicycle rider on the road or footpath.

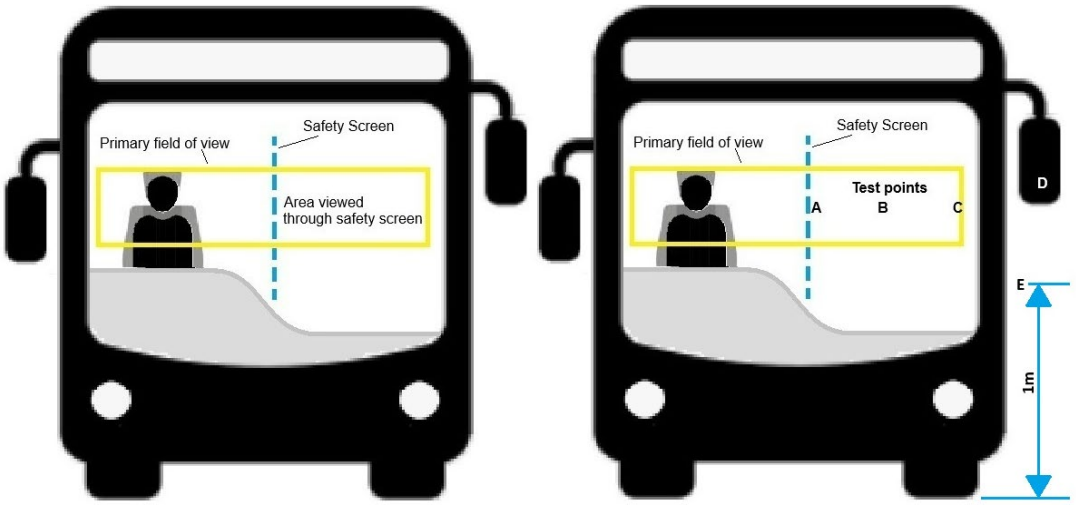

Figure 4: Example of primary field of view showing area viewed through safety screen and test points (front view).

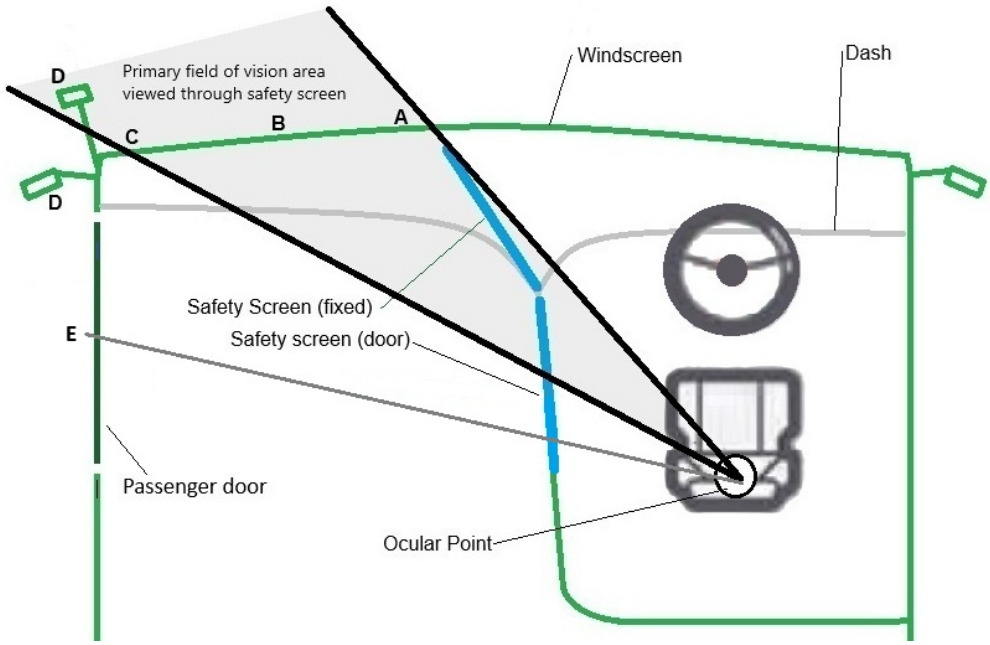

Figure 5: Example of primary field of view showing area viewed through safety screen and test points. Note: Two alternate positions of the driver's left side mirror are shown for reference.

The ocular point is the point is determined with the driver's seat is in the rear most position and then in accordance with ocular point definition in ADR 14/03, appx A, paragraph 12.1.

Figure 6: Example of test box apparatus (left) and example of distortion (right).

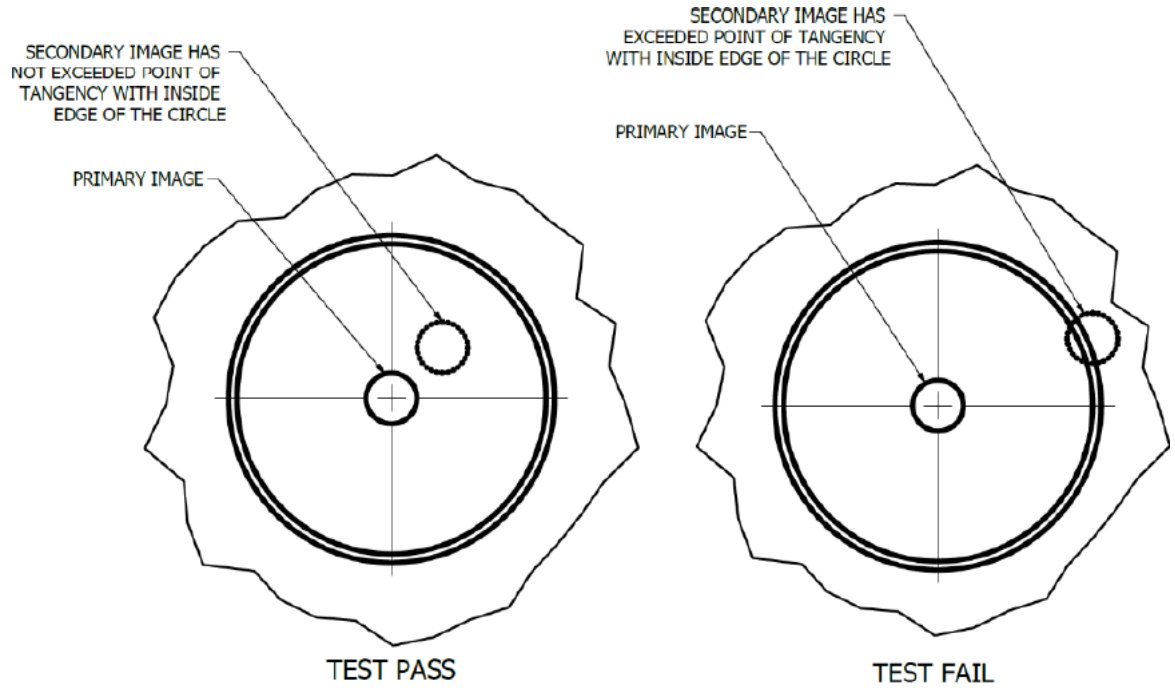

Figure 7: Test judgement criteria.

Glazing

The following section provides guidance for the bus driver's compartment glazing anti-shatter film, light transmittance, specifically with regards to ADR 08/01 Safety Glazing Material.

Primary vision area is also covered in ADR 08/01 listed earlier in this guide and not part of this section.

It is to ensure the driver's compartment has considered provisions for the selection and use of suitable glazing material, transparency and protection upon shattering, respecting that the driver's compartment is a unique area different to a standard passenger cabin.

ADR Applicability

Where a driver's safety screen is added into an ADR compliant design, the glazing requirements for the driver's compartment safety screen will only be deemed appropriate in this area providing the following requirements set out below are adhered to.

ADR 08/01

Section	ADR Text (requirement)	Additional comments
Markings		
7.4.1	All glass must carry the indelible mark or marks of the relevant standards, visible when the glass is fitted in the vehicle.	Reference Note: This shall apply to all glazing material types.

7.4.2	The mark or marks must identify the type of glass and the relevant standard to which the glass conforms.	Reference Note: This shall apply to all glazing material types.
Optical Transmission (visible light transmittance)		
7.5.2.1	There must be not less than 70 per cent optical transmission.	Specific requirements: a. When tested independently, this requirement shall apply to driver safety screens irrespective of primary vision area. *See notes on Visible Light Transmittance (VLT) further below.* b. VLT testing is carried out in accordance with Appx A – Annex 3 section 9/1 Light transmittance test. c. Glazing and film shall be tested as a combination.
Standards		
8	Meet one of the standards listed in section 8 sub-sections	
8.1	Australian and New Zealand Standard AS/NZS 2080:1995 "Safety Glass for Land Vehicles"	
8.2	Japanese Industrial Standard - JIS R 3211-1998 “Safety Glazing Materials for Road Vehicles”.	
8.3	American National Standard - ANSI Z26.1-1996 - “Safety Code for Safety Glazing Materials for Glazing Motor Vehicles Operating on Land Highways”.	
8.4	United Nations Economic Commission for Europe Regulation No. 43 “Uniform provisions concerning the approval of safety glazing materials and their installation on vehicles” incorporating from supplement 8 of the 00 series of amendments up to and including the 01 series of amendments.	

Anti-shatter film

Measures to protect the driver from glass fragmentation in the driver’s compartment shall ensure that emergency windows and driver safety screen glass are suitably protected. To attain this, Anti-shatter/glare film that complies with the requirements of AS 2208, ISO 12543 or equivalent recognised standard shall also be fitted to the driver’s compartment external window (driver side window).

Anti-shatter film shall be required on toughed glass but exempt on rigid plastic panes or flexible plastic as they are defined in ADR 08/01 Appx A: section 7.10 for rigid plastic panes, and section 7.11 for flexible plastic panes.

Visible Light Transmittance (VLT)

With the anti-shatter/glare film applied to the driver's safety screen glazing, and tested independently it shall need to meet the minimum visible light transmittance (VLT) of 70% in stated in ADR 08/01 paragraph 7.5.2.1.

Figure 8:
An example of glazing with anti-shatter/ glare film being tested for VLT.

Installation

Anti-shatter/glare film shall be installed as per manufacturer's instructions of the film but if not listed, it shall be placed on the driver's side of the driver safety screen installation.

The film shall be installed with a clear border around all glazing mounting surfaces. This ensures that, in the event of an emergency, the glass can be broken and pushed out without the film obstructing any structures.

Ventilation

The following section provides guidance for bus driver's compartments ventilation, specifically with regards to ADR 42/05 – Section 9, demisting of windscreens.

ADR Applicability

Where a driver's safety screen is added into an ADR compliant design, demisting requirements of this ADR shall continue to be met.

ADR 42/05

Section	ADR Text (requirement)	Additional comments
General requirements		
9.1.1	Every vehicle with a windscreen, and a roof or provision for a roof, must be fitted with a device capable of removing condensed moisture from the inside of the windscreen.	Specific requirements: Additional requirements regarding the requirements for HVAC and existing demisting vents listed below shall also be in place.

To provide adequate ventilation for the driver and to reduce the likelihood of glass in the driver's compartment from fogging up, protecting existing demisting and HVAC vents from being blocked or obstructed is important.

HVAC

To ensure that the driver's compartment is adequately ventilated, a Heating, Ventilation and air conditioning system (HVAC) shall be fitted to the bus with vents in the driver's compartment.

The HVAC system shall also have a demisting capability to dry the air either automatically or manually when required via driver activated switch.

Additional vents may be aimed at both sides of the safety screen to minimise the risk of the safety screen fogging up. Also consider the addition additional vents in the drivers compartment to provide an equivalent cooling/heating of the area prior to the installation of the driver's safety screen.

Existing demisting vents of windscreen

Where the driver safety screen is placed directly upon the windscreen surface (or less than a 50mm gap), the safety screen shall not obstruct an existing demisting vent that is already installed in the lower section of the windscreen area.

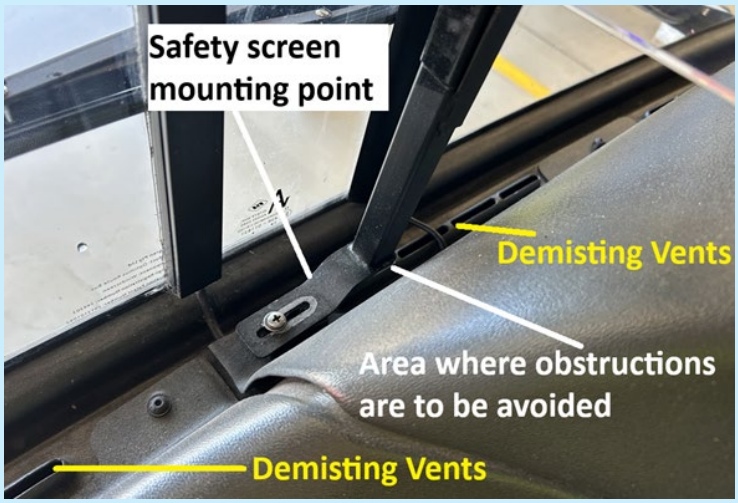

Figure 9: An example of area where safety screens should not obstruct the demisting vents.

Emergency Exits

The following section provides guidance for emergency exits for drivers' compartments in buses, specifically with regards to ADR 44/02 – Section 9 emergency exits for omnibuses and ADR 58/00 – Section 12 emergency exits.

It is to ensure the driver's compartment has considered provisions to allow for the safe exit of drivers and first responder access to the driver's compartment in the event of an

emergency. This includes emergency exit design and signage, respecting that the driver's compartment is a unique area different to a standard passenger cabin.

ADR Applicability

Where a driver's safety screen is added into an existing ADR compliant design, the emergency exit requirements for the driver's compartment shall be deemed appropriate in this area providing the following requirements set out below are adhered to.

ADR 44/02

Section	ADR Text (requirement)	Additional comments
General requirements		
44.9.1.4	If the driver's compartment is not accessible from the inside of vehicle it shall have two emergency exits, both of which shall not be in the same surface; where one of the exits is a window it shall comply with the requirements set out in clause 44.9.4.2 for emergency windows.	Specific Requirements: a. While the driver's compartment is accessible from inside the vehicle via the driver's door, as determination has been given that the driver's safety screen segregates the passenger, there is a need to meet this clause. b. An emergency exit window shall meet the abated requirements as listed further throughout this table. c. The driver's compartment door may also serve as an emergency door for the driver's compartment area only. d. Drivers' door glazing such as toughed glass may also serve as an emergency window.
44.9.0	Types of Emergency Exit: Emergency Door; Emergency Window; and Escape Hatch.	Reference Note: The exits may consist of a combination of either an emergency door, emergency window, or an emergency hatch.
44.9.2	The three types of emergency exit set out in clause 44.9.0 shall have the following minimum dimensions. Aperture of emergency door — Height: 1,250 mm; Width: 550 mm Aperture of emergency window — Area: 0.4 m2; Height: 500 mm; Width: 600 mm Aperture of escape hatch — Area: 0.4 m2; Width: 500 mm; Length: 600 mm	Reference Note: Minimum aperture requirements set for area and dimension.
Emergency doors		
44.9.4.1.1	Emergency doors shall be capable of being easily opened manually from	Reference Note: a. The *driver's compartment door* accessible from within may also

	inside and from outside. However, this requirement shall not be construed as precluding the possibility of locking the door from the outside for the purpose of securing the vehicle when unattended, provided that the door can always be opened from the inside using the normal opening mechanism.	serve as an *emergency door* for the driver's compartment area only. Specific Requirements: a. The door shall be openable from the driver's compartment at all times by a simple mechanism (mechanical or electrical) without the need for tools, keys or special equipment. *b.* Where an electrical catch is used, the catch power supply shall de-power (turn-off) when the vehicle's ignition switch is turned off.
44.9.4.1.7	If the emergency door is fitted with latches, they shall be of the two-stage type, i.e., they shall have a fully-latched and a secondary position.	Specific Requirements: If the drivers compartment door is used an emergency exit for the driver, it may be a single stage latch.
Emergency windows		
44.9.4.2.1	The window shall be capable of operation from inside and outside the vehicle.	
44.9.4.2.1.3	Be made of readily-breakable safety glass. In this case, a securely-attached means of breaking the glass shall be provided in close proximity to the emergency window on the inside of the vehicle.	Specific Requirements: a. The glass shall be covered with anti-shatter film as per the 'glazing' section of this guide. b. The break glass device does not need to be tethered to the vehicle as it's within the driver's compartment and not readily accessible by passengers. c. Where removable break glass devices are used (such as a hammer) it shall be connected to a buzzer that will sound when the hammer is removed.
44.9.4.2.2	Emergency windows which can be locked from the outside for the purpose of securing the vehicle when unattended shall be constructed in such a way that they can always be opened from the inside of the vehicle.	
44.9.4.2.5	Each emergency window with a bottom edge between 1,000 mm and 2,000 mm above the ground shall have a means to assist the occupants in descending to the ground, such as footrests, with no more than 500 mm between successive footrests and the bottom tread not more than 1000 mm above the ground. A footrest may be a vehicle component.	Specific Requirements: For vehicles built before 01/01/2027 (entered into the register of approved vehicles - RAV), steps below the driver's window may be unfeasible due to electrical components in that area. If steps cannot be fitted, provide photos of the area as evidence to justify an exemption from the requirement.
Escape hatches		
44.9.4.3.1	Escape hatches shall be of the sliding or erectable type. A sliding panel shall be acceptable provided that the force required to open it does not exceed 500 N. Hinged hatches allowed if hinged on the leading edge. Every escape hatch	Reference Note: A break glass escape hatch that has been accepted under a Vehicle Type Approval (VTA) is considered acceptable.

	shall operate so as not to obstruct clear access from inside and outside the vehicle.	
Marking of Emergency Exits		
44.9.5.1	Each emergency door (other than a *'Service Door')* and each emergency window shall be conspicuously marked in a colour which contrasts with the background by an inscription reading "EMERGENCY EXIT" inside the vehicle in letters at least 25 mm high and outside the vehicle in letters at least 50 mm high. The marking on the outside of the vehicle shall be on retroreflective material. Each escape hatch shall be likewise marked inside the vehicle	Specific Requirements: As it's for a driver's compartment only, and therefore for the driver, abated requirements are set out as below which still allows the intent of emergency exits being 'suitably marked' to be met. a. Signage viewed from the passenger compartment to the driver's compartment is not required. This is to: I. Reduce likelihood of misuse by unruly passengers, and II. Avoid confusion to passengers that it is a passenger emergency exit. b. Signage shall meet the requirements set in *'Marking of driver's Emergency exits'* in this guide further below.
Internal Signs		
44.9.5.2.1	include the word "EXIT" in letters at least 25 mm high;	Specific Requirements*:* Given the signs are dedicated for drivers and in in close proximity the height requirement is reduced to 12mm.
44.9.5.2.2	be red on a white background or vice versa; and	
44.9.5.2.3	be permanently illuminated whilst the vehicle is in operation. It shall be either illuminated or 'Self-illuminating' for at least 15 minutes after the vehicle ceases operation or 15 minutes after loss of battery power. (photoluminescent).	Specific Requirements*:* a. The requirement for the signs to be permanently illuminated by means of a light directly adjacent to the sign during vehicle operation is not required. This is it would be a distraction to the driver at night. b. Signs shall be photoluminescent.
Marking of Controls		
44.9.5.3	The emergency controls of *'Service Doors'* and of all emergency exits shall be marked in a colour which contrasts with the background and at least 10 mm in size on *'Self-illuminating'* material on the inside and on retroreflective material on the outside of the vehicle either by a representative symbol or by a clearly-worded inscription.	Specific Requirements*:* a. Marking of controls are exempt on the driver's compartment when viewed from the passenger area only. This helps: I. Prevent misuse by disruptive passengers. II. Avoid confusion that it's a passenger emergency exit. b. Signage shall meet the requirements set in 'Marking of driver's Emergency exits' in this guide further below.

Instructions for operation		
44.9.5.4	Clear instructions concerning the method of operation shall be placed on *'Self-illuminating'* material inside and on retroreflective material outside the vehicle, on or close to every control of an emergency exit.	Specific Requirements: a. 'Instructions for operation' are exempt on the driver's compartment when viewed from the passenger area only. This helps: I. Prevent misuse by disruptive passengers. II. Avoid confusion that it's a passenger emergency exit. b. Signage shall meet the requirements set in 'Marking of driver's Emergency exits' in this guide further below

Marking of driver's emergency exits

Where the driver's side window, emergency hatch, and driver's compartment door are utilised solely as driver emergency exits, these shall be uniquely marked as they are for use by the driver and therefore may be different to that in the main passenger cabin.

- Emergency Windows and doors in the driver's compartment shall be marked with a sign that states 'Driver Exit' as depicted in figure 10.

Figure 10: Driver exit sign sample.

- Immediately adjacent to any 'driver exit' sign (figure 10), additional information regarding method of operation of the emergency exit shall also be clearly indicated as depicted in three examples below in figure 11. The writing shall describe the 'basic action' required to exit the driver's compartment area.

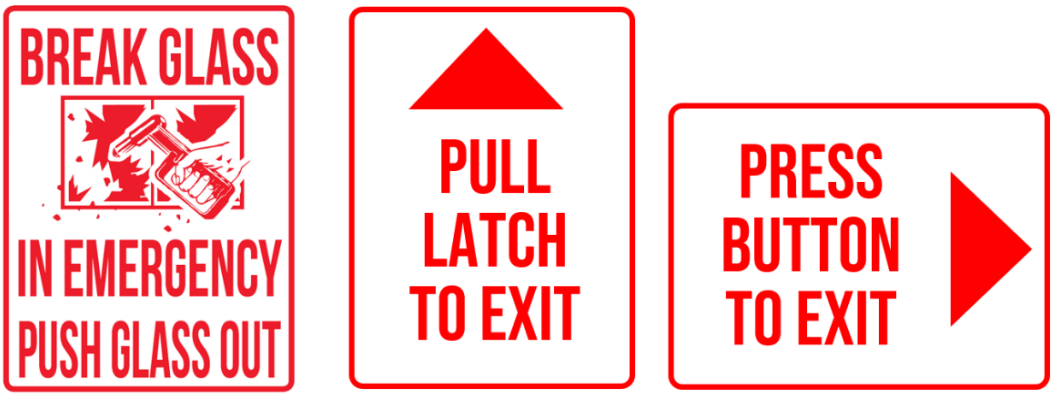

Figure 11: Examples of emergency window sign (left) and emergency door signs (centre and right) for the driver's compartment. They describe the basic action required.

- For all driver exit signs, the font size shall be no less than 12mm in height.
- Location of signage within the drivers compartment and any device required to break glass, or open a door shall be visible for the driver's seated position and in

close proximity to each other. Figure 12 is an example of a driver's window used as an emergency exit and the positioning of a device to break the glass.

Figure 12: Example location of hammer and signage.

- If the driver's door is used as an emergency exit, signage shall only be placed on the driver's compartment side of the door only. This is to avoid confusion that this is an emergency exit for passengers or invite a possible assailant to try and enter the driver's compartment.

Information for first responder access to the driver's compartment is contained in 'first responder access' section of this guide.

Daily Accessibility

In order to maintain accessibility for the driver's compartment from within and outside the vehicle in the event of an emergency, particular considerations need to be addressed covering day to day accessibility, accessibility in the event of an emergency, information to first responders, signage and training.

The driver shall be able to both enter and exit the driver's compartment without the need for special tools, keys or other equipment. For example, the driver should be able to access the driver's compartment by accessing the access a mechanical latch or electric switch (in the case of an electrical catch) driver from:

- Within the driver's compartment and
- Outside the driver's compartment within the passenger area.

Within the driver's compartment, signage shall be affixed immediately adject to the driver's compartment door mechanical latch or electric switch as per the requirements set out in the 'Emergency Exits' section.

Access to the latch or catch inside the driver's compartment may be provided via an *access hole* or *portal hole* (figure 13). The access hole or portal hole does not require labelling to avoid misuse by passengers.

Figure 13: Example of access hole or portal hole.

Electrical catches

In vehicles where an electrical catch is used, the catch power supply shall de-power (turn-off) when the vehicle's ignition switch main is turned off. It shall be able to remain energised at all other times to provide safety for the driver.

First Responder Access

To assist with first responders in attending to an emergency, or the need to attend to an incapacitated driver in the driver's compartment, it is important that suitable material is readily available.

The information shall provide first responders with:

1. **Internal cabin** access via mechanical latches or electrical catch switch of the driver's compartment. This includes depowering the switch via battery disconnection.
2. **External cabin** access via the prescribed driver's exit i.e., driver's window.

Information accessibility

The information shall be available via one or more of the following methods:

1. **ANCAP rescue APP**: Under the section ACCESS TO OCCUPANTS. The subtitle shall be ACCESSING THE DRIVER.
2. **QR Code**: Access to information via a QR code affixed to the external right side B pillar of the bus. The QR code should be no less than 50mm square and be titled emergency Response.
3. **Direct Distribution**: Provided directly to the First Responders in the area of that Jurisdiction.

The ANCAP Rescue App provides emergency response information according to ISO standard 17840-2.

Driver Training

Training material shall also be readily available for drivers that provides guidance on how to access and exit from the cabin in daily operations and exit in the event of an emergency. This may be included as part of a vehicle owner's manual or separately.

Certification Report

The certification report shall include the information listed below. This is to provide an approval based on the combination of vehicle type approval (VTA), body type and screen type used.

The report shall contain evidence that the specific requirements of each section are met such as ADRs listed. In addition, the report shall specially include, specifically including:

Vehicle and modifier details
For the model type assessed the following

- ☐ VTA number of bus model
- ☐ Vehicle Body model type
- ☐ Safety Barrier model type

Vision

- ☐ A test report providing evidence and results of tests carried out in accordance with this guide and the results the optical distortion test for the determined locations A, B, C, D & E.
- ☐ Contain a drawing or photo (on a vehicle) detailing the forward field of vision area which determines the test points.

Glazing

- ☐ Compliance certificates of the glazing.
- ☐ Results of VLT from the glazing and anti-shatter film used.

Ventilation

- ☐ Model of HVAC system fitted.
- ☐ Drawings and or photos demonstrating the safety screen does not obstruct existing demisting vents for the windscreen.

Emergency Exits

- ☐ Photos or drawings showing location of driver's compartment emergency exits. It shall include area and dimension measurements.
- ☐ Drawings or photos or the location of the break glass device, and driver's compartment emergency exits labels.
- ☐ Photos of components in area below driver's window (only where external steps cannot be installed for Buses manufactured prior to 01/01/2027 only)

Accessibility

- ☐ Drawings and or photos showing the location of driver compartment door latches and switches and how they are accessed without the need for special tools, keys or other equipment.

First responder access and Driver Training

- ☐ Copies of information for first responders in accordance with one of the three methods listed.
- ☐ Copies of the driver training material provided.

Chain of Responsibility

Under the NHVR Chain of Responsibility (CoR) laws, relevant parties in the transport supply chain have a duty to ensure the safety of their transport activities. Parties in the chain have an obligation to eliminate or minimise potential harm or loss (risk) by doing all that is reasonably practicable in their business to ensure safety. Implementing a system to ensure you are informed of changes to the vehicle safety standards and apply these to your business can support transport safety.

Definitions

Camera Monitoring Systems: Abbreviated as CMS, a "camera-monitor device for indirect vision" is defined as a device where the field of vision is obtained by means of a camera-monitor combination.

Driver's compartment: An area of the main cabin of the bus which is permanently accessible via a door that is greater than 1.2 metre in height, which can be open and closed without the need of any tools, keys, or other equipment.

Driver's emergency exit/driver's exit: A pathway from the driver's compartment to either the outside of the bus or to the passenger compartment by which you can then get to the outside of the bus.

Electrical catch: An electrical, electro-mechanical, electromagnetic device or similar used to latch or hold the driver's compartment door into position. It depowers with ignition off.

Front passenger door: Is the door at the front of the bus where passengers and drivers may enter and exit the vehicle from. It is generally forward of the front wheels on the left side and adjacent to the driver's compartment.

Forward field of view: Forward field of view is the primary area (zone 1) from which the driver sees the road. This is referenced in ADR08//01, paragraph 7.5 and further in paragraph 9.2.5.2.3.

Ocular point: Is the driver's viewpoint from the vehicle which is determined with the driver's seat is in the rear most position and then in accordance with ocular point definition in ADR 14/03, paragraph 12.1.

Plastic glazing: Is a glazing material that contains as an essential ingredient one or more organic polymeric substances of large molecular weight, is solid in its finished state and, at some stage in its manufacture of processing into finished articles, can be shaped by flow. These are defined in ADR 08/01 Appendix A: section 7.10 for rigid plastic panes, and section 7.11 for flexible plastic panes.

Safety screen: A protection device to reduce the risk of the driver being physically assaulted by passengers or general public. The device is fitted to the left-hand side of the driver's compartment area to both the door and between door and front of bus. It is not a windscreen to the outside of the bus.

Toughened-glass: Glazing consisting of a single layer of glass which has been subjected to special treatment to increase its mechanical strength and to condition its fragmentation after shattering.

Windscreen: The transparent area on the front of a vehicle that provides visibility for the driver and protection from external elements to the vehicle.

Issue Control

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