

Vision

- 5-1 Glazing
- 5-2 Sun visors
- 5-3 Windscreen wipe and wash
- 5-4 Rear-view mirrors
- 5-5 PSV driver's vision
- 5-6 PSV demisters

Vision

5-1 Glazing

Summary of legislation

Applicable legislation

- Land Transport Rule: Glazing, Windscreen Wipe and Wash, and Mirrors 1999

Mandatory equipment

Glazing markings

- Windscreens and other glazing must be permanently and indelibly marked as complying with an approved trade name or approved vehicle standard as shown in **Table 5-1-1** unless excluded as below:
 - glazing marked by a vendor or installer, and fitted in a vehicle before 1 January 1997, may be marked by means of a self-adhesive label
 - plastic glazing behind the driver's seat in a soft-top convertible need not be marked
 - hard plastic material behind the driver's seat in a vehicle manufactured before 1 January 1991 need not be marked.
- Glazing marked by the vendor or installer must contain wording, characters or symbols that indicate the approved vehicle standard, and the:
 - type of glazing, and
 - thickness of the glazing in millimetres or, in the case of laminated glass only, the thickness of the intervening layer of plastic, and
 - identity of the vendor or installer of the glazing.

Reasons for rejection

Mandatory equipment

Glazing markings - visual inspection

- A glazing marking is not permanent, except for:
 - glazing marked by a vendor or installer, and fitted in a vehicle before 1 January 1997, which may be marked by means of a self-adhesive label.
- A glazing marking required in **Table 5-1-1** or **Table 5-1-2** is missing, except for:
 - plastic glazing behind the driver's seat in a soft-top convertible, or
 - hard plastic material behind the driver's seat in a vehicle manufactured before 1 January 1991, or
 - wire glass fitted to a window behind the driver's seat of a dangerous goods vehicle.
- The glazing has an incorrect marking for the location in which it is fitted.
- Glazing that is marked by a vendor or installer does not contain (**Table 5-1-3**):
 - wording, characters or symbols that indicate the approved vehicle standard, and
 - the type of glazing, and
 - the thickness of the glazing in millimetres, or, in the case of laminated glass only, the thickness of the intervening layer of plastic, and
 - the identity of the vendor or installer of the glazing.

Vision 5-1 Glazing

Table 5-1-1. Required markings for windscreens (Note 1)

Vehicle class	Date of manufacture				
	before 1/1/60	1/1/60-1/7/86	1/7/86-1/1/91	1/1/91-1/7/97	from 1/7/97
MA, MB, MC, NA	-	Safety glass with approved trade name or approved standard	Laminated glass with approved standard	Laminated glass with approved standard	Laminated glass with approved standard
MD1, MD2	-	Safety glass with approved trade name or approved standard	Safety glass with approved standard	Safety glass with approved standard	Laminated glass with approved standard
Low volume vehicles	-	-	-	LVV Code	LVV Code

Table 5-1-2. Required markings for other glazing

Vehicle class	Date of manufacture		
	before 1/2/77	1/2/77-1/1/91	from 1/1/91
MA, MB ¹ , MC, NA, MD1 ¹ , MD2 ¹	-	Safety glass with approved trade name or approved standard	Safety glass with approved standard
Low volume vehicles	-	-	LVV Code

¹ Curved scenic skylights above the cant rail, curved windows at front and rear corners, skylights, louvres and interior partitions may be made of transparent material of a kind that does not shatter. This material is not usually marked.

Table 5-1-3. Approved trade names for glazing

Armourfloat	Hankuk Glass Safety Heat Line	Plexite	Temperlite
Armourplate		Safetyflex	Temperlite Santa Marina
Blindex	HMC Glass Safety Hankuk TF5	Safety MGB (Meloplate)	Thorex Connex
Duolite Safety		Safety MGB (Melite Safety Plate)	Triplex
Duplicate Safety	HMC Glass Safety Hankuk TV5	Sekurit	Triplex Plate
Flolite	Indestructo	Sigla	Tuflite
Ford Indestructo	Nippon Safety	Spectrofloat Splintex	Tyneside
Ford Safety Glass	NM Laminated Safety Glass	Sunmat	Veracetex
Ford Silver Arrow	FHP	Suntex Safety Glass	
Glacetex	Peerless		












<p>New Zealand Standards</p>  <p>Economic Commission for Europe (ECE)</p> 	<p>Australian Standards</p>  <p>Japanese Industrial Standards</p> 	<p>British Standards</p>  <p>South African Bureau of Standards</p> 	<p>Federal Motor Vehicle Safety Standards (FMVSS)</p> <p>AS1 DOT 0000</p> <p>↑ ↑ ↑</p> <p>ANSI Z26.- compliance DOT mark number allocated by DOT</p> <p>NOTE: The marking may be rearranged; as shown in the windscreen markings above</p>
<p>Allgemeine Bauartgenehmigung (ABG)</p> <p>>PMMA<  FBJ</p> <p>SEITZ SRE NOTE: The marking must have manufacturer's name (eg, Seitz) and ABG approval (eg,  D2307).</p> <p> D2307</p> <p>AGP1000x0600</p>			

Figure 5-1-1. Approved standards markings










<p>DOT 266 AS1</p> <p>M 4 7 1</p> <p>NZS 5443 LF AS 2080</p> <p>Lic 2004 W.H.P Lic 210</p>  <p>BS 857-2:1967</p>  <p>PILKINGTON New Zealand</p>	<p>LAMINATED F WHP</p>  <p>BS 857</p> <p>Kinonglas-Kristall-FIRA/F BFB-HI</p> <p>DOT 31 / M 75.4 / AS 1</p> <p>DGM 36593 VSP</p> <p> D 396</p>	 <p>STADIP-V</p> <p>43R-001009</p> <p>M94 AS1-DOT211</p> <p>E-00048</p> <p>H8</p>	<p>NISSAN</p> <p>LAMPANE</p> <p>DOT 23</p>  <p>LP</p>  <p>AS1</p> <p>NSG.M491</p>
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Figure 5-1-2. Typical laminated glazing markings (Note 1)

Vision

5-1 Glazing (cont.)

Table 5-1-4. Glossary of codes for safety glass (including laminated glass) (Note 1)

L = laminated glass
F = float glass
P = plate glass
LF = laminated float
LP = laminated plate
/ = toughened, when near the 
// or /// = laminated, when near the 
TS = toughened glass
TP = toughened plate
T = toughened or tempered
Z = zone tempered
HP = high performance laminated safety glass
WHP = complies with impact test (windscreen high performance laminated safety glass)
DOT = Department of Transport (USA)
AS↕1 or AS±2 = the glass, in the direction of the arrow, complies with the 70% light transmission requirement
ANSI = American National Standards Institute
FMVSS codes
AS1 = for use anywhere in the vehicle
AS2 = for use anywhere in the vehicle other than windscreen
AS3 = for rear and rear side windows only
AS4 and AS5 = for glazing not used for driver's vision (eg the rear window of heavy truck cabs or convertible tops, windows/doors in motorhome bodies, ute canopies, rear windows on buses, roof glazing etc)
Glazing cut from mother sheet
L.76WHP = laminated, 0.76 mm interlayer, suitable for all locations
L.38 = laminated, 0.38 mm interlayer, must not be used for windscreens
PCZ26.1 = polycarbonate, meets requirements of ANSI Z26, must not be used for windscreens

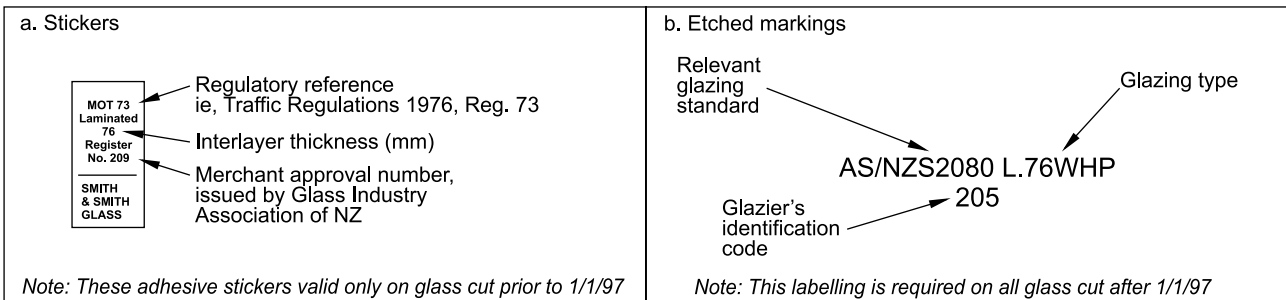


Figure 5-1-3. Typical markings required on glazing cut from mother sheet

Summary of legislation

Permitted glazing

3. Wire glass may be used in any window behind the driver's seat, if required or allowed under any legislation.
4. Vehicles of class MD1 or MD2 may be fitted with the following, which may be made of a transparent material of a kind that does not shatter:
 - a) curved scenic skylights above the cant rail
 - b) curved windows at the front and rear corners
 - c) skylights
 - d) louvres
 - e) interior partitions.

Glazing condition

5. Glazing must be mechanically sound, strong, and securely affixed to the vehicle.
6. A windscreen and front side windows must be clean and free of obstruction to ensure the driver has sufficient vision through the glazing to operate the vehicle safely.
7. A windscreen must not have scratches and other defects that:
 - a) unreasonably impair vision, or
 - b) compromise its strength.
8. A laminated windscreen must not show signs of discolouration that could unreasonably impair the driver's vision.
9. Glazing in roof panels may be tinted.

Glazing performance

10. A windscreen visible light transmittance (VLT) must be at least 70%.
11. Front side windows VLT must be at least 35%.
12. Glazing must not have a mirrored effect sufficient to dazzle other road users.

Reasons for rejection

Glazing condition

5. A piece of glazing is not mechanically sound, or is not securely affixed to the vehicle.
6. A windscreen or front side window is so dirty or obstructed that the driver's vision is impaired.
7. A windscreen has damage that prevents the wiper blades from working properly.
8. A windscreen has scratches, discolouration or other defects that unreasonably impair the driver's vision or compromise the strength of the windscreen.

Condition within the critical vision area (CVA)

9. The critical vision area (CVA) of a windscreen (**Figure 5-1-4**) is damaged (apart from scratching and surface pitting that does not affect the driver's vision, such as small stone marks).

Condition outside the CVA

10. A windscreen has damage (**Note 2**) of the types and exceeding the dimensions in **Table 5-1-5**.
11. Any damage that extends through more than one layer of glass.

Glazing performance

12. The overall visible light transmittance (VLT) (**Note 4**) of a windscreen is less than 70%.
13. The overall VLT of a front side window is less than 35%.
14. Glazing has a mirrored effect sufficient to dazzle other road users (unless it is OE and has an approved standard marking).

Vision 5-1 Glazing (cont.)

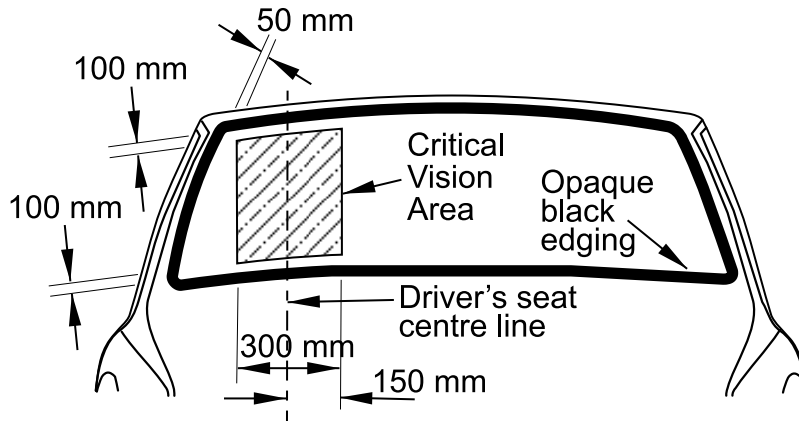


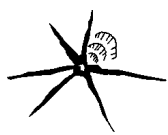







Figure 5-1-4. Windscreen critical vision area (CVA)

Table 5-1-5. Types and maximum sizes of windscreen damage (Note 2).

(see Figure 5-1-5 for actual-size diagrams)

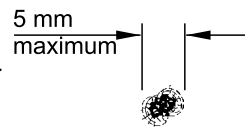
<p>CRATER</p>  <p>Maximum diameter 5 mm</p>	<p>HORSESHOE</p>  <p>Maximum diameter 25 mm</p>	<p>STAR</p>  <p>Maximum diameter 30 mm</p>	<p>BULLSEYE</p>  <p>Maximum diameter 20 mm</p>	<p>CRACK</p>  <p>Maximum diameter 100 mm</p>
<p>COMBINATION SAME TYPE</p>  <p>Diameter of the smallest circle around all incidences is measured and maximum diameter applied.</p>		<p>COMBINATION DIFFERENT TYPES</p>  <p>Each type measured and maximum diameter applied separately.</p>		<p>COMBINATION SAME + DIFFERENT</p>  <p>Diameters of the smallest circles around all incidences of same types are measured and maximum diameter applied.</p>

COMBINATION DAMAGE

Combination: same type

Diameter of the smallest circle around all incidences is measured and maximum diameter applied.

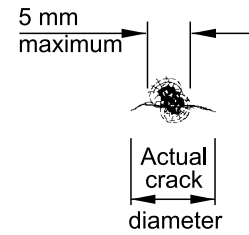
Example:
Two craters:
Maximum diameter
5 mm for both
craters together.



Combination: same + different types

Each type is measured and maximum diameter applied separately.

Example:
Two craters + crack:
Maximum diameter
5 mm for two craters;
100 mm for the crack,
whichever applies.



Combination: different types

Each type measured and maximum diameter applied.

Example:
Bullseye + crack:
Maximum diameter
20 mm for the bullseye;
100 mm for the crack,
whichever applies.

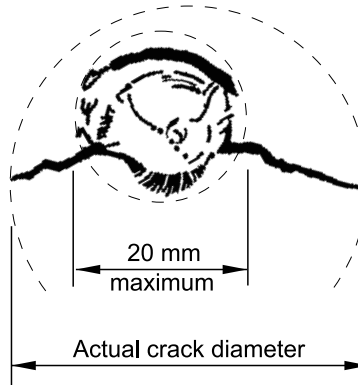


Figure 5-1-5. Actual maximum sizes of types of windscreen damage

Vision

5-1 Glazing (cont.)

Summary of legislation

Permitted modifications

13. A modification that affects glazing is permitted if within the limits in **Table 5-1-6**.

Glazing removal

14. Permanent removal of OE-specified glazing that affects the structural integrity of the vehicle (eg bonded glazing) must be certified in accordance with the Low Volume Vehicle Code.

Condition of modified glazing

15. Overlays must not have any bubbling or other defects that could unreasonably impair vision.
16. Glazing must not have any scratches or other defects that unreasonably impair vision or compromise the strength of the glazing.

Performance of modified glazing

17. Modifications must not:
- unreasonably impair vision through a windscreen or a front side window, or a rear or rear side window in the case of MA vehicles other than stretch limousines or body transfer vehicles, or
 - adversely affect the strength or mechanical performance of the glazing or the vehicle.

Windscreen repair

18. Windscreens: a repair to a windscreen carried out on or after 1 January 1997 must comply with whichever of the following standards is applicable at the date of repair:
- New Zealand standard 5470: 1993, Code of Practice for Automotive Windscreen Repair (superseded by Australian Standard/New Zealand standard 2366: 1999, Windscreen Repairs), or
 - Australian standard 2366-1990, Repair of Laminated Glass Windscreens fitted to Road Vehicles (superseded by Australian Standard/New Zealand standard 2366: 1999, Windscreen Repairs).

Reasons for rejection

Permitted modifications

15. A modification that affects glazing is not within the limits in **Table 5-1-6**.

Glazing removal

16. OE glazing that affects the structural integrity of the vehicle (eg bonded glazing) has been permanently removed but the vehicle has not been certified to the LVV Code and is not fitted with a valid LVV certification plate, or the operator is not able to produce a valid modification declaration or authority card.

Condition of modified glazing

17. Glazing has scratches or other defects that unreasonably impair vision or compromise the strength of the glazing.

Performance of modified glazing

18. A modification:
- unreasonably impairs the driver's vision through the windscreen or a front side window, or
 - adversely affects the strength or mechanical performance of the glazing or the vehicle.

Windscreen repair

19. A windscreen that has been rejected for a WoF or CoF has been repaired and re-presented without the required documentation (**Note 6**).

Table 5-1-6. Permitted modifications

Fitting of or modification to:	Modification permitted provided that:
Overlays (Note 1): See below for overlays on windscreens, front side windows, rear and rear side windows, and sun roofs	<ul style="list-style-type: none"> • overlays do not: <ul style="list-style-type: none"> - have any bubbling or other defect that could unreasonably impair vision, or - have a mirrored effect that is sufficient to dazzle other road users, or - affect the performance of any high-mounted stop lamp fitted to the vehicle.
Windscreens (Note 3):	
Stickers (Note 1)	<ul style="list-style-type: none"> • stickers are wholly within 100 mm of the top or bottom edge, or 50 mm of the side edges, unless required or permitted by legislation, eg: <ul style="list-style-type: none"> - a licence label - a road user licence label - a WoF label - an alternative fuel sticker - a current parking permit or other document issued by the local authority - learner L-plates (in sticker format) provided the driver's vision is not unreasonably affected.
Anti-glare band overlay (Note 1)	<ul style="list-style-type: none"> • the overlay is transparent, and • the overlay does not extend below the bottom edge of the vehicle's OE sun visors when they are folded down as far as possible towards the windscreen, and • the overlay does not contain print below a line that is 100 mm below and parallel to the top edge of the windscreen.
Clear or transparent stoneguard overlay (Note 1)	<ul style="list-style-type: none"> • the vehicle is not of class MA or MC, and • the overlay is applied only to the bottom edge of the windscreen, and • the top edge of the overlay does not extend any higher than the highest point of the steering wheel.
Radio antennae	<ul style="list-style-type: none"> • antennae are wholly within 100 mm of any edge.
Front side windows:	
Transparent overlays (Note 5)	<ul style="list-style-type: none"> • the overall visible light transmittance (VLT) is not reduced to below 35%.
Stickers	<ul style="list-style-type: none"> • stickers are wholly within 100 mm of the bottom edge, or 50 mm of any other edge, unless required or permitted by legislation.
Radio antennae	<ul style="list-style-type: none"> • antennae are wholly within 100 mm of any edge.
Rear and rear side windows (behind the driver's seat) - class MA vehicles except stretch limousines and body transfer vehicles:	
Transparent overlays (Note 5)	<ul style="list-style-type: none"> • the overall visible light transmittance (VLT) is not reduced to below 35%, and • the vehicle is equipped on both sides with external rear-view mirrors.
Stickers	<ul style="list-style-type: none"> • the stickers are wholly within 100 mm of any edge, unless required or permitted by legislation.

Vision 5-1 Glazing (cont.)

Fitting of or modification to:	Modification permitted provided that:
Radio antennae	<ul style="list-style-type: none"> antennae are wholly within 100 mm of any edge.
Rear and rear side windows (behind the driver's seat) - any vehicle class except MA, but including stretch limousines and body transfer vehicles:	
Overlays and other modifications	<ul style="list-style-type: none"> the vehicle is equipped on both sides with external rear-view mirrors.
Stickers	<ul style="list-style-type: none"> stickers may be applied anywhere on the glazing but, if not wholly within 100 mm of any edge, the vehicle must be equipped on both sides with external rear-view mirrors.
Radio antennae	<ul style="list-style-type: none"> in-service requirements for condition and performance are met.

Fitting of or modification to:	Modification always permitted:
Monsoon shields	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met.
Electric demisters	
Sunroofs (overlays and stickers applied anywhere on the glazing, radio antennae, and electric demisters)	
Any modification for the purposes of law enforcement or the provision of emergency services	

Note 1 Definitions

Windscreen means all glazing extending across the front of a vehicle that is not parallel to the vehicle's longitudinal centreline, but does not include a wind deflector. No fitting or overlays of stickers are permitted to the windscreen except those previously mentioned.

Laminated glass means glazing consisting of two or more pieces of sheet glass, plate glass or float glass bonded together by one or more intervening layers of plastic material.

Overlay means a transparent, translucent or opaque self-adhesive or clinging film that is applied to large areas, or the whole, of a piece of glazing, including anti-glare band overlays, stoneguard overlays.

Sticker means a self-adhesive or clinging film, with or without print on it, that is applied for purposes such as, but not limited to, advertising, identification, information, or for aesthetic or legal reasons.

Anti-glare band overlay means a tinted overlay that is transparent and that is applied along the top edge of the windscreen for the purpose of reducing glare from the sun.

Stoneguard overlay means a clear overlay that is transparent and that is applied along the bottom edge of the windscreen for the purpose of preventing damage to the windscreen from stones and other debris thrown up by other vehicles.

Note 2 Damage includes any unrepaired damage and attempted visible repairs.

Note 3 Visible light transmittance (VLT) is the proportion of visible light that passes through glazing, measured perpendicular to the glazing. Overall VLT is the VLT of the glazing together with any overlays.

Note 4 Any OE opaque edging (usually black) is not considered part of the windscreen when determining the boundaries of the CVA, or the areas permitted for stickers, print on an anti-glare band, or radio antennae.

Note 5 Perforated overlays are usually made from printed-on materials. They are therefore not transparent and may be fitted only where stickers are allowed.

Note 6 When a windscreen has been rejected for a warrant of fitness, repaired, and then re-presented for inspection, the repair must be certified to AS/NZS 2366: 1999, AS 2366-1990 or NZS 5470: 1993. Proof of certification is the receipt issued in accordance with the relevant standard by the repairer. For AS/NZS 2366: 1999, the windscreen repair invoice must include:

- a) invoice number
- b) date of repair
- c) date of invoice (if different from date of repair)
- d) trading name and address of repairer
- e) name or identification of person performing the repair
- f) make of vehicle
- g) registration number of vehicle, or if registration number is unavailable then the vehicle identification number (VIN) or chassis number
- h) details of work carried out
- i) type and location of repaired damage on the windscreen (it is recommended that this be marked on a schematic windscreen on the invoice form)
- j) in the case of repairs performed to this standard, a statement that the repairs have been made in accordance with and comply with AS/NZS 2366.1 using a repair system that complies with AS/NZS 2366.2
- k) any guarantees or warranties given.

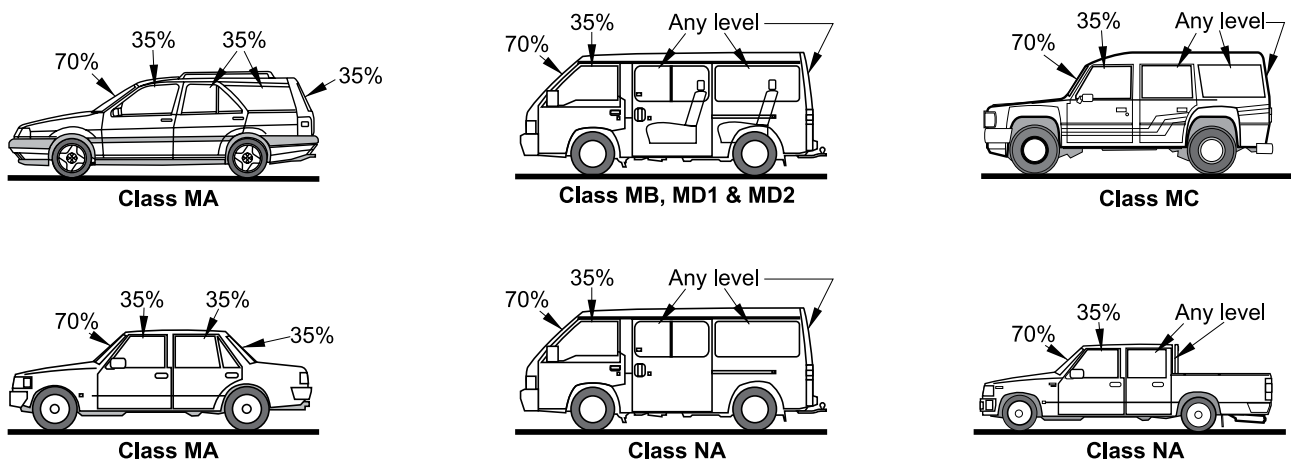


Figure 5-1-6. Minimum VLT limits for modified glazing (tinted overlays) for different vehicle classes

(Note The minimum VLT for any windscreen is 70% but no overlays may be fitted.)

Vision 5-1 Glazing

Summary of legislation

Applicable legislation

- Land Transport Rule: Glazing, Windscreen Wipe and Wash, and Mirrors 1999
- Land Transport Rule: External Projections 2001

Mandatory equipment

1. Refer to general vehicle pages.
2. A glazing marking required in **Table 5-1-8** or **Table 5-1-9** is missing, unless it is hard plastic glazing behind the driver's seat in a vehicle manufactured before 1 January 1991.

Condition

3. Refer to general vehicle pages.

Performance

4. Refer to general vehicle pages.

Modification

5. The permanent removal of OE glazing that affects the structural integrity of the vehicle requires certification by an HVS certifier.

Reasons for rejection

Mandatory equipment

1. Refer to general vehicle pages.
2. A glazing marking required in **Table 5-1-8** or **Table 5-1-9** is missing, except for hard plastic glazing behind the driver's seat in a vehicle manufactured before 1 January 1991.

Condition

3. Refer to general vehicle pages.
4. A wire-mesh windscreen stoneguard (**Figure 5-1-7**):
 - a) top edge is **both** above the top of the steering wheel in its highest adjusted position **and** above 225 mm measured from the bottom edge of the windscreen, or
 - b) has a mesh size smaller than 12 mm, or
 - c) makes it difficult to access the windscreen for cleaning.

Performance

5. Refer to general vehicle pages (**Note 6**).

Modification

Permitted modifications

6. Refer to general vehicle pages.
7. OE glazing that affects the structural integrity of the vehicle has been permanently removed and:
 - a) is missing proof of HVS certification, ie:
 - i. the vehicle was modified or repaired before the last CoF inspection and no LANDATA record has been entered, or
 - ii. the vehicle was modified or repaired since the last CoF inspection and no valid LT400 form from an HVS certifier of category HVEC, HVMC or HVIC has been presented.

Windscreen repair

8. Refer to general vehicle pages.

Vision

5-1 Glazing (cont.)

Table 5-1-8. Required markings for windscreens on heavy vehicles

Vehicle class	Date of manufacture			
	Before 1/1/60	1/1/60-31/12/90	1/1/91-30/6/97	From 1/7/97
MD3, MD4, ME, NB, NC	-	Safety glass with approved trade name or approved standard	Safety glass with approved standard	Laminated glass with approved standard

Table 5-1-9. Required marking for other glazing on heavy vehicles

Vehicle class	Date of manufacture		
	Before 1/2/77	1/2/77-31/12/90	From 1/1/91
MD3 ¹ , MD4 ¹ , ME ¹ , NB, NC	-	Safety glass with approved trade name or approved standard	Safety glass with approved standard

¹ Curved scenic skylights above the cant rail, curved windows at front and rear corners, skylights, louvres and interior partitions may be made of transparent material of a kind that does not shatter. This material is not usually marked.

Note 1 With reference to **Figure 5-1-4** (general vehicle pages) the upper and lower boundaries of the CVA must be taken as:

Upper boundary: the lower of 100 mm from the edge of the glazing or 900 mm from the top of the uncompressed seat cushion

Lower boundary: the higher of the top of the uncompressed seat cushion or 100 mm from the bottom of the windscreen.

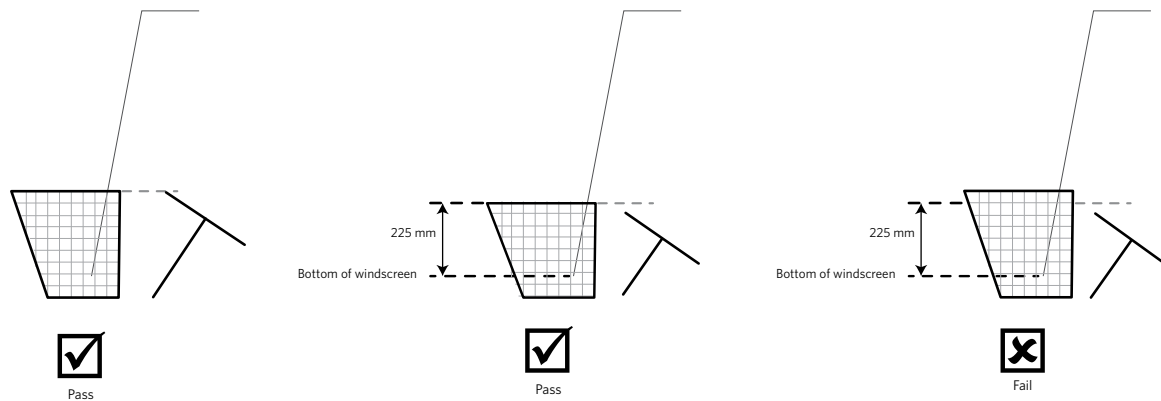


Figure 5-1-7. Stoneguard measurements

Vision

5-2 Sun visors

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Equipment 2004
- Land Transport Rule: Interior Impact 2002

Mandatory equipment

1. A vehicle other than of class LE must be fitted with a sun visor for the driver's use if it is reasonable and practicable to do so (**Note 1**).

Permitted equipment

2. A vehicle of class LE may be fitted with a sun visor.
3. Additional sun visors may be fitted in other positions.

Condition

4. The condition of a sun visor must be such that the likelihood of injury to occupants is minimised.

Performance

5. A driver's sun visor must be effective.

Modification

6. A sun visor that is not OE or that has been affected by a modification (**Note 1**):
 - a) must meet the requirements for equipment, condition and performance, and
 - b) does not require LVV specialist certification.

Reasons for rejection

Mandatory equipment

1. A sun visor for the driver's use is not fitted to a vehicle (other than of class LE) which can practicably be fitted with a sun visor (**Note 1**).

Condition

2. A sun visor:
 - a) is insecurely mounted, or
 - b) for the driver, cannot be adjusted from the normal driving position, or
 - c) cannot maintain its adjusted position, or
 - d) has been modified or has deteriorated, and the likelihood of injury to vehicle occupants has not been minimised.

Performance

3. A driver's sun visor does not effectively aid the driver's vision by intercepting the glare from the sun.

Note 1 Definitions

Sun visor means any attachment mounted above the inside of the windscreen and provided for the purpose of shielding the eyes of the driver and other front seat passengers from solar glare.

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Vision

5-3 Windscreen wipe and wash

Summary of legislation

Applicable legislation

- Land Transport Rule: Glazing, Windscreen Wipe and Wash, and Mirrors 1999

Mandatory equipment

- A vehicle manufactured before 1 January 1992 that is fitted with a windscreen must have a windscreen wipe system.
- A vehicle manufactured on or after 1 January 1992 that is fitted with a windscreen must have a windscreen wipe and wash system.
- Windscreen wipers must be power driven, unless they follow OE specifications in a vehicle manufactured before 1 January 1960.

Permitted equipment

- A vehicle may be fitted with a wash system when this is not required.

Condition

- A vehicle's windscreen wipe system must be efficient and within the vehicle manufacturer's operating limits.

Performance

- The equipment fitted must be capable of keeping an adequate area of the windscreen clean and clear so that the vehicle may be operated safely under all reasonably foreseeable conditions.

Modifications

- An OE windscreen washing system may be removed from a vehicle manufactured before 1 January 1992.
- A modification to the windscreen wipe system must be inspected and certified by an LVV specialist certifier unless the vehicle:
 - is excluded from the requirement for LVV specialist certification (**Table 5-3-1**), and
 - has been inspected in accordance with the requirements in this manual, including those for equipment, condition, and performance.

Reasons for rejection

Mandatory equipment

- A vehicle that has a windscreen is not fitted with a windscreen wipe system.
- A vehicle manufactured on or after 1 January 1992 is not fitted with a windscreen wash system.
- A vehicle manufactured on or after 1 January 1960 is fitted with wipers that are not power driven.

Condition

Windscreen wipe system

- The wiper operating device is missing.
- A wiper arm or wiper blade is:
 - missing, or
 - insecure, or
 - damaged so as to affect the performance of the wipers.
- The wiper operating mechanism is:
 - missing, or
 - insecure, or
 - damaged so as to affect the performance of the wipers.

Windscreen wash system

- A wash system component is missing or insecure.
- The wash operating device is missing.

Performance

Windscreen wipe system

- A windscreen wiper does not wipe the windscreen effectively, preventing adequate forward vision by the driver.
- The wipe operating device is unable to activate the wipe system.

Vision

5-3 Windscreen wipe and wash (cont.)

Reasons for rejection

Windscreen wash system

- 11. A windscreen wash nozzle does not discharge washer liquid directly onto the windscreen.
- 12. The wash operating device is unable to activate the wash system.

Modifications

- 13. A modification affects a windscreen wipe system, and:
 - a) is not excluded from the requirements for LVV specialist certification (**Table 5-3-1**), and
 - b) is missing proof of LVV specialist certification, ie:
 - i. the vehicle is not fitted with a valid LVV certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Table 5-3-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is never required:
Removal of a windscreen wash system from a vehicle manufactured before 1/1/1992	<ul style="list-style-type: none"> • in-service requirements for condition and performance must be met.
Any modification for the purposes of law enforcement or the provision of emergency services	

Vision

5-4 Rear-view mirrors

Summary of legislation

Applicable legislation

- Land Transport Rule: Glazing, Windscreen Wipe and Wash, and Mirrors 1999

Mandatory equipment

- A vehicle must be fitted with one or more of the rear-view mirrors listed in **Table 5-4-1**.

Permitted equipment

- Additional rear-view mirrors may be fitted.

Condition

- A rear-view mirror must be:
 - securely attached so that the risk of injury is minimised, and
 - mounted so that vibration does not inhibit the driver's required clear view to the rear, and
 - sufficiently adjustable, and able to maintain its position.

Performance

- A rear-view mirror must provide a clear view to the rear of:
 - the motor vehicle itself, and
 - the vehicle's load, and
 - any towed trailer and its load.
- A rear-view mirror must be sufficiently isolated from vibrations.

Modifications

- The fitting of additional rear-view mirrors, or a modification that affects rear-view mirrors, must be inspected and certified by an LVV specialist certifier, unless the vehicle:
 - is excluded from the requirement for LVV specialist certification (**Table 5-4-2**), and
 - has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

Reasons for rejection

Mandatory equipment

- A mandatory rear-view mirror identified in **Table 5-4-1** is missing.

Condition

- A rear-view mirror:
 - is not mounted securely, or
 - cannot be adjusted, or
 - cannot maintain its adjusted position, or
 - is corroded or dirty, or
 - is damaged so that it increases the risk of injury to vehicle occupants.

Performance

- A rear-view mirror:
 - does not provide a clear view to the rear of the vehicle, or
 - is not sufficiently isolated from vibrations.

Modifications

- A modification affects rear-view mirrors, and:
 - is not excluded from the requirements for LVV specialist certification (**Table 5-4-2**), and
 - is missing proof of LVV specialist certification, ie:
 - the vehicle is not fitted with a valid LVV certification plate, or
 - the operator is not able to produce a valid modification declaration or authority card.

Note 1 A vehicle with overlays on the rear side windows and rear screen must be fitted with a left-hand and a right-hand exterior mirror.

Vision

5-4 Rear-view mirrors

Table 5-4-1. Mandatory requirements for rear-view mirrors¹

Vehicle class	Year of manufacture	
	Before 1 January 2000	From 1 January 2000
MA, MB, MC	External R/H side or interior	External R/H side and interior
NA	External R/H side or interior	External R/H side and interior or external L/H side
MD1, MD2	External R/H side and external L/H side	External R/H side and external L/H side

¹ For left-hand drive vehicles, read R/H side instead of L/H side, and L/H side instead of R/H side.

Table 5-4-2. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is never required:
Additional or substituted rear-view mirrors, or removal of a non-mandatory mirror	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met.
Any modification for the purposes of law enforcement or the provision of emergency services	

Vision**5-4 Rear-view mirrors****Summary of legislation****Applicable legislation**

- Land Transport Rule: Windscreen Wipe and Wash, and Mirrors 1999

Mandatory equipment

1. A class MD3, MD4, ME, NB and NC vehicle must be fitted with an outside left-hand and an outside right-hand rear-view mirror.
2. An unclassified heavy vehicle must be fitted with at least one rear-view mirror.

Permitted equipment

3. Refer to general vehicle pages.

Condition

4. Refer to general vehicle pages.

Performance

5. Refer to general vehicle pages.

Modification and repair

6. A rear-view mirror that is affected by a modification or repair:
 - a) must meet the requirements for equipment, condition and performance, and
 - b) does not require HVS certification.

Reasons for rejection**Mandatory equipment**

1. A class MD3, MD4, ME, NB or NC vehicle is not fitted with:
 - a) an outside left-hand rear view mirror, or
 - b) an outside right-hand rear view mirror.
2. An unclassified vehicle is not fitted with at least one rear view mirror.

Permitted equipment

3. Refer to general vehicle pages.

Condition

4. Refer to general vehicle pages.

Performance

5. Refer to general vehicle pages.

Vision

5-5 PSV driver's vision

Summary of legislation

Applicable legislation

- Land Transport Rule: Passenger Service Vehicles 1999

Performance

- The vehicle must provide the driver with a direct or indirect (**Note 1**) view of:
 - the interior of the vehicle (except for stretch limousines), and
 - the exterior vicinity of passenger entry and exit doors.
- Seats must not be positioned where their occupants will obstruct the driver's view through the windscreen or front side windows.
- A vehicle may have closed-circuit cameras fitted to provide the driver with a view of the vehicle's:
 - interior, or
 - exterior towards the rear of the vehicle when reversing.
- The screens for the driver's view of the interior of the vehicle must be operational at all times when the vehicle is carrying passengers.
- There must be a separate screen for every camera unless a single screen is fitted with a switching device that automatically defaults back from the selected view to allow the driver to monitor passengers entering and exiting the vehicle.

Reasons for rejection

Condition and performance

- The driver's view through the windscreen or front side window is obstructed.
- A passenger seat is positioned so that its occupant obstructs the driver's view through the windscreen or front side windows.
- The interior of the vehicle, except a stretch limousine, cannot be seen by the driver either:
 - directly, or
 - indirectly using mirrors or closed-circuit cameras (**Note 1**).
- The exterior vicinity of the passenger entry and exit doors cannot be seen by the driver either:
 - directly, or
 - indirectly using existing rear-view mirrors or additional mirrors.
- A closed-circuit camera:
 - provides a view that is not of the vehicle interior or the vehicle exterior to the rear for reversing, or
 - has a screen that does not operate, or
 - does not have either:
 - a separate screen for every camera, or
 - a single screen with a switching device that automatically defaults back from the selected view (the rear exterior of the vehicle for reversing) to the view that allows the driver to monitor passengers entering and exiting the vehicle.

Note 1 The indirect view may be provided using rear-view mirrors (section 5-4), additional mirrors, or closed-circuit cameras.

Vision

5-5 PSV driver's vision

Summary of legislation

Applicable legislation

- Land Transport Rule: Passenger Service Vehicles 1999

Performance

- The vehicle must provide the driver with a direct or indirect (**Note 1**) view of:
 - the interior of the vehicle (except for stretch limousines), and
 - the exterior vicinity of passenger entry and exit doors.
- Seats must not be positioned where their occupants will obstruct the driver's view through the windscreen or front side windows.
- A vehicle may have closed-circuit cameras fitted to provide the driver with a view of the vehicle's:
 - interior, or
 - exterior towards the rear of the vehicle when reversing.
- The screens for the driver's view of the interior of the vehicle must be operational at all times when the vehicle is carrying passengers.
- There must be a separate screen for every camera unless a single screen is fitted with a switching device that automatically defaults back from the selected view to allow the driver to monitor passengers entering and exiting the vehicle.

Reasons for rejection

Condition and performance

- The driver's view through the windscreen or front side window is obstructed.
- A passenger seat is positioned so that its occupant obstructs the driver's view through the windscreen or front side windows.
- The interior of the vehicle, except a stretch limousine, cannot be seen by the driver either:
 - directly, or
 - indirectly using mirrors or closed-circuit cameras (**Note 1**).
- The exterior vicinity of the passenger entry and exit doors cannot be seen by the driver either:
 - directly, or
 - indirectly using existing rear-view mirrors or additional mirrors.
- A closed-circuit camera:
 - provides a view that is not of the vehicle interior or the vehicle exterior to the rear for reversing, or
 - has a screen that does not operate, or
 - does not have either:
 - a separate screen for every camera, or
 - a single screen with a switching device that automatically defaults back from the selected view (the rear exterior of the vehicle for reversing) to the view that allows the driver to monitor passengers entering and exiting the vehicle.

Note 1 The indirect view may be provided using rear-view mirrors (section 5-4), additional mirrors, or closed circuit cameras.

Vision**5-6 PSV demisters****Summary of legislation****Applicable legislation**

- Land Transport Rule: Passenger Service Vehicles 1999

Mandatory equipment

1. The front windscreen and side windows used by the driver must be equipped with effective demisting equipment, adjustable from the driver's seat.

Reasons for rejection**Mandatory equipment**

1. The windscreen or a side window used by the driver is not equipped with demisting equipment.

Condition and performance

2. The demisting equipment:
 - a) does not operate, or
 - b) is ineffective, eg the air is not hot enough or there is insufficient volume, or
 - c) cannot be operated from the driver's seat.

Vision**5-6 PSV demisters****Summary of legislation****Applicable legislation**

- Land Transport Rule: Passenger Service Vehicles 1999

Mandatory equipment

1. The front windscreen and side windows used by the driver must be equipped with effective demisting equipment, adjustable from the driver's seat.

Reasons for rejection**Mandatory equipment**

1. The windscreen or a side window used by the driver is not equipped with demisting equipment.

Condition and performance

2. The demisting equipment:
 - a) does not operate, or
 - b) is ineffective, eg the air is not hot enough or there is insufficient volume, or
 - c) cannot be operated from the driver's seat.

