

Correct as at 24th May 2019. It may be superseded at any time.

Extract taken from: NZTA Vehicle Portal > VIRMs > Light vehicle repair certification > Vision

## 3 Vision

### 3-1 Windscreen

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#### Reasons for rejection

1. A windscreen that is required to be made of laminated glass is not made of laminated glass.
2. The incorrect adhesive has been used to bond in a piece of glazing.
3. A piece of glazing that is required to comply with an approved glazing standard did not comply, or cannot be demonstrated to have complied, with at least one of the standards listed in Table 311 at the time the glazing was fitted ([Note 3](#)).
4. A windscreen that has been repaired has not been repaired to an approved standard.
5. There is no documentation to support that a repair to a windscreen has been completed to an approved standard.
6. A piece of glazing fitted to a vehicle of class LA, LB1, LB2, LC, LD, LE1 or LE2 is not made of a transparent material that does not shatter.
7. A windscreen has scratches, discolouration or other defects that unreasonably impair the drivers vision or compromise the strength of the windscreen.
8. The windscreen bonding area of the A-pillar has been repaired and the original glazing adhesive has not been removed fully or until only a thin film is left before the new adhesive was used.
9. The wrong adhesive has been used previously and the original glazing adhesive has not been removed fully before the new adhesive was used.

#### Note 1

For a vehicle manufactured before 1 January 1991, a glazing marking which contains one or more of the approved trade names in Table 312 is evidence that a piece of glazing complies with an approved glazing standard.

#### Note 2

Curved scenic skylights above the cant rail, curved windows at the front and rear corners, skylights, louvres and interior partitions in omnibuses (vehicles of class MD1 and MD2) are not required to comply with approved glazing standards if they are made of transparent material that does not shatter.

#### Note 3

Any repairs to a windscreen must have documentation to show that the repair was carried out to an approved standard.

#### Table 3-1-1 List of approved glazing standards\*


UN-ECE Regulation No.	EEC/EC Directive	FMVSS	ADR	Japan	Others
43	92/22 2001/92	205	8	TS for Window Glass or JIS R3211	BS 857 BS 5282 BS AU 178a ANSI/SAE Z26.1 NZS 5443 AS 2080 AS/NZS 2080 SABS 1191/1193 or ABG (behind driver only)

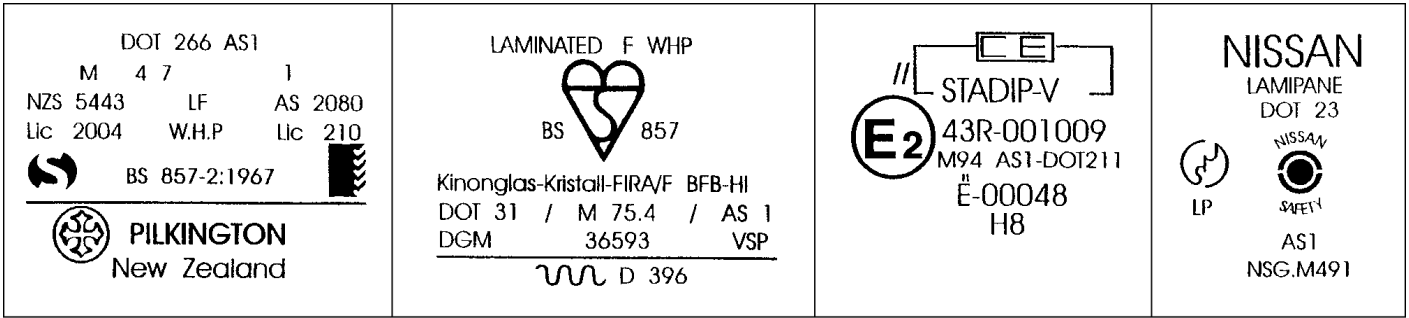
\* A piece of glazing that is required to comply with an approved glazing standard must comply with at least one of the standards listed in the table.

**Table 3-1-2. Approved trade names for glazing**

Armourfloat Armourplate Blindex Duolite Safety Duplate Safety Flolite Ford Indestructo Ford Safety Glass Ford Silver Arrow Glacetex	Hankuk Glass Safety Heat Line HMC Glass Safety Hankuk TF5 HMC Glass Safety Hankuk TV5 Indestructo Nippon Safety NM Laminated Safety Glass FHP Peerless	Plexite Safetyflex Safety MGB (Meloplate) Safety MGB (Melite Safety Plate) Sekurit Sigla Spectrofloat Splintex Sunmat Suntex Safety Glass	Temperlite Temperlite Santa Marina Thorex Connex Triplex Triplex Plate Tuflite Tyneside Veracetex
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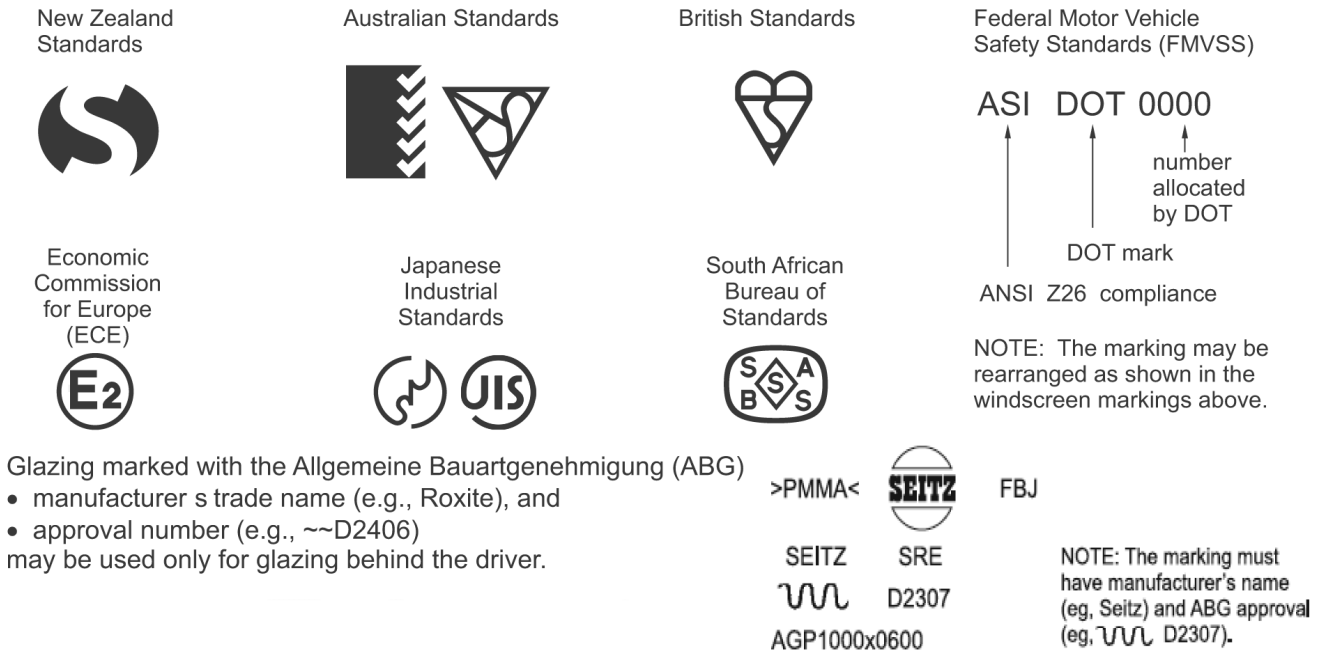
**Table 3-1-3. Glossary of codes for safety glass (including laminated glass) ([Note 1](#))**

L	laminated glass
F	float glass
P	plate glass
LF	laminated float
LP	laminated plate
/	toughened, when near the  mark
// or ///	laminated, when near the  mark
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
<b>FMVSS codes</b>	
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 drivers 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)
<b>Glazing cut from mother sheet</b>	
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 3-1-1. Approved standards markings**

The above standard markings may assist in determining compliance with approved standards.



**Figure 3-1-2. Typical laminated glazing markings**

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

**Figure 3-1-3. Types and maximum sizes of windscreen damage**

## Summary of legislation

### Applicable legislation

- [Land Transport Rule: Vehicle Repair 1998](#)
- [Land Transport Rule: Glazing, Windscreen Wipe and Wash, and Mirrors 1999.](#)

### Mandatory equipment

1. Windscreens fitted to the following vehicles must be made of laminated glass:

- a) vehicles of class MA, MB, MC and NA manufactured on or after 1 July 1986
- b) vehicles of class MD1 and MD2 manufactured on or after 1 July 1997
- c) vehicles not covered by any of the defined vehicle classes manufactured on or after 1 January 2001.

2. All glazing fitted to vehicles of class LA, LB1, LB2, LC, LD, LE1 and LE2 must be made of a transparent material that does not shatter.

### Compliance with approved standards

3. Windscreens fitted to the following vehicles must comply with one or more of the approved glazing standards in Table 311:

- a) vehicles of group M and N manufactured on or after 1 January 1960, and
- b) vehicles not covered by any of the defined vehicle classes manufactured on or after 1 January 2001.

4. Glazing in locations other than windscreens fitted to the following vehicles must comply with one or more of the approved glazing standards in Table 311:

- a) vehicles of group M ([Note 2](#)) and N manufactured on or after 1 February 1977 ([Note 1](#))
- b) vehicles not covered by any of the defined vehicle classes manufactured on or after 1 January 2001.

### Condition

5. A windscreen must be mechanically sound, strong and securely affixed to the vehicle.

6. A windscreen must not have scratches or other defects that:

- a) unreasonably impair vision, or

b) compromise its strength.

Page amended **1 October 2013** (see [amendment details](#)).