

# Vision

5-1 Glazing

5-2 Sunvisors

5-3 Windscreen wipe and wash

5-4 Rear-view mirrors



## Summary of legislation

### Applicable legislation

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

### Mandatory and permitted 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, MD2, MD3, MD4, ME, NB and NC 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.
3. Vehicles and glazing must also comply with the requirements relating to mandatory and permitted equipment set out in the *VIRM: In-service certification*, section 5-1.

### Compliance with approved standards

4. Windscreens fitted to the following vehicles must comply with one or more of the approved glazing standards in **Table 5-1-1**:
  - a) vehicles of group M and N manufactured on or after 1 January 1960 (**Note 1**)
  - b) vehicles not covered by any of the defined vehicle classes manufactured on or after 1 January 2001.
5. Glazing in locations other than windscreens fitted to the following vehicles must comply with one or more of the approved glazing standards in **Table 5-1-3 (Note 4)**:
  - 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, performance and modification

6. Glazing must comply with the requirements relating to condition, performance and modification set out in the *VIRM: In-service certification*, section 5-1 (**Note 3**).

## Reasons for rejection

### Mandatory and permitted equipment

1. A windscreen that is required to be made of laminated glass is not made of laminated glass.
2. 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.
3. A vehicle or piece of glazing does not comply with a requirement relating to mandatory or permitted equipment set out in the *VIRM: In-service certification*, section 5-1.

### Compliance with approved standards

4. 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 5-1-3** at the time the vehicle was manufactured or the glazing was fitted.

### Condition, performance and modification

5. A piece of glazing does not comply with a requirement relating to condition, performance or modification set out in the *VIRM: In-service certification*, section 5-1.

**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 5-1-2** 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, MD2, MD3, MD4 and ME) are not required to comply with approved glazing standards if they are made of transparent material that does not shatter.

**Note 3** The 35% VLT limit on rear and rear-side windows of MA class vehicles only applies to modified glazing. If the glazing is OE, unmodified, and is marked as complying with an approved standard or trade name, the glazing may be passed even with a VLT of less than 35%.

**Note 4** See Technical bulletin 13 for an explanation of policy and requirements relating to glazing on house-trucks.

**Table 5-1-1. 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 JIS R3211 Article 29	BS 857 BS 5282 BS AU 178a ANSI/SAE Z26.1 NZS 5443 AS 2080 AS/NZS 2080 SABS 1191/1193 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 5-1-2. Approved trade names**

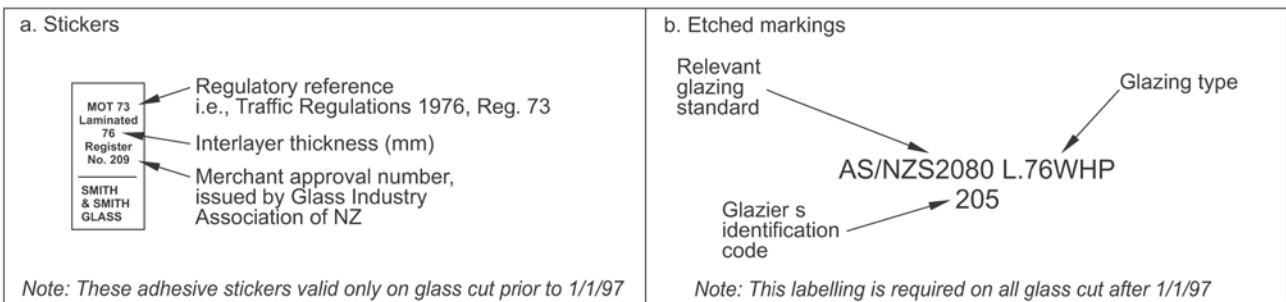
Armourfloat	Safetyflex
Armourplate	Safety MGB (Meloplate)
Blindex	Safety MGB (Melite Safety Plate)
Duolite Safety	Sekurit
Duplicate Safety	Sigla
Flolite	Spectrofloat
Ford Indestructo	Splintex
Ford Safety Glass	Sunmat
Ford Silver Arrow	Suntex Safety Glass
Glacetex	Temperlite
Hankuk Glass Safety Heat Line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



**Vision**      **5-1 Glazing (cont.)**

**Table 5-1-4. Glossary of codes for laminated glass**

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
WHP = complies with impact test
DOT = Department of Transport (US)
A↕S or A±S = the glass, in the direction of the arrow, complies with the 70% light transmission requirement
ANSI = American National Standards Institute
<b>FVMSS 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 = plastic glazing not suitable for driver's vision
<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 5-1-3. Typical markings required on glazing cut from mother sheet**

Vehicles must comply with the requirements relating to mandatory equipment, permitted equipment, condition, performance and modification set out in the *VIRM: In-service certification*, section 5-2.

There are no additional requirements in respect of sunvisors for the inspection and certification of vehicles for entry into service.



Vehicles must comply with the requirements relating to mandatory equipment, permitted equipment, condition, performance and modification set out in the *VIRM: In-service certification*, section 5-3.

There are no additional requirements in respect of windscreen wipe and wash systems for the inspection and certification of vehicles for entry into service.



Vision

5-4 Rear-view mirrors

Summary of legislation

Applicable legislation

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

Mandatory equipment

- Vehicles must comply with the requirements relating to mandatory equipment set out in the *VIRM: In-service certification*, section 5-4.

Compliance with approved standards

- The rear-view mirrors required to be fitted to group M and N vehicles manufactured on or after 1 January 1996 must comply with one or more of the approved rear-view mirror standards in **Table 5-4-1 (Note 1)**.

Condition and performance

- Rear-view mirrors must comply with the requirements relating to condition and performance set out in the *VIRM: In-service certification*, section 5-4.

Reasons for rejection

Mandatory equipment

- A vehicle does not comply with a requirement relating to mandatory equipment set out in the *VIRM: In-service certification*, section 5-4.

Compliance with approved standards

- A rear-view mirror that is required to comply with an approved rear-view mirror standard did not comply, or cannot be demonstrated to have complied, with at least one of the standards listed in **Table 5-4-1** at the time the vehicle was manufactured or the rear-view mirror was fitted (**Note 1**).

Condition and performance

- A rear-view mirror does not comply with a requirement relating to condition or performance set out in the *VIRM: In-service certification*, section 5-4.

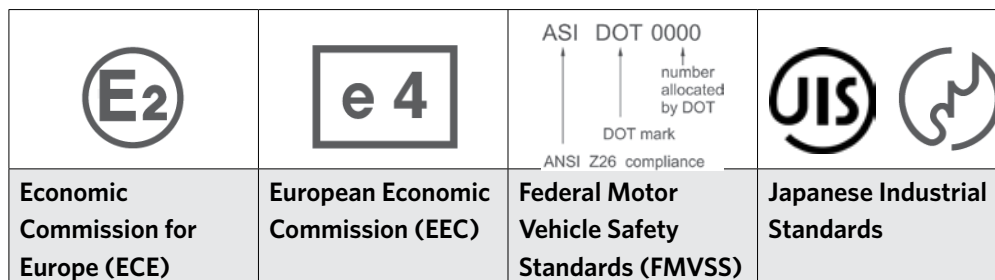
**Note 1** The rear-view mirror standard must be recorded on the vehicle compliance checklist. If a mirror does not have an approved standards marking but was fitted as original equipment, it must be recorded as 'OE', along with any identifying information, such as the make.

**Table 5-4-1. Approved rear-view mirror standards\***

UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan
46	71/127 79/795 85/205 86/562 87/354 88/321 2003/97 2005/27	111	14	TS for installation position of outside rear-view mirrors Installation position of outside rear-view mirrors Article 44

\* A rear-view mirror that is required to comply with an approved rear-view mirror standard must comply with at least one of the standards listed in the table.

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



**Figure 5-4-1. Typical standards markings**

