

Light Vehicle Inspection Manual

Appendix F Windscreen Damage and Repairs

Appendix F - Windscreen Damage and Repairs

Introduction

Windscreen damage or defects may impair a driver's forward vision, create a potential safety hazard and affect road safety. However, windscreens will be subject to some damage such as sandblasting, cracks, and stone chips during normal operation, therefore some deterioration from new condition is allowable.

Requirements

A windscreen should be clean and free of damage that might impair the driver's view to the front of the vehicle.

Things which might impair a driver's vision are:

- Chips, cracks and scoring.
- Bullseyes and or star fractures.
- Sandblasting.

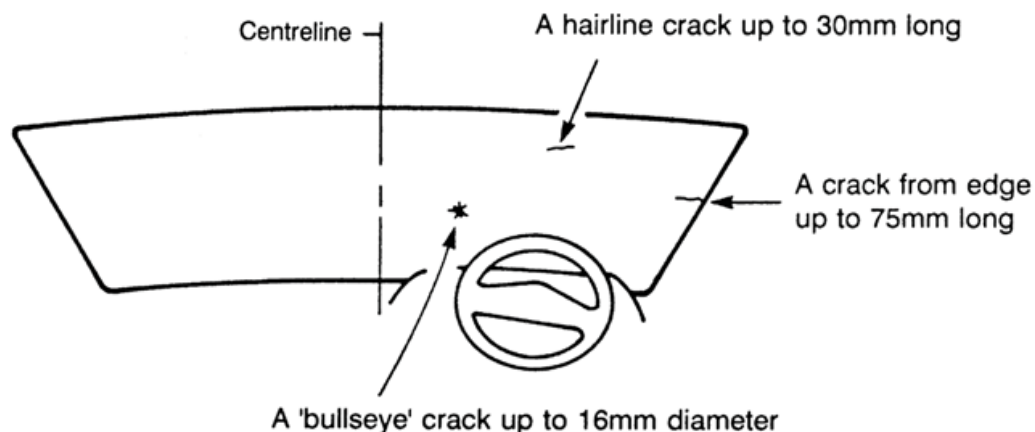
When a damaged windscreen is examined the following factors should be considered:

- The location of the damage.
- The size of the damage.
- Effect on the mechanical strength of the windscreen.

Replace or repair?

To determine if a windscreen should be replaced or repaired, the area of windscreen swept by the wipers to the right of the centre of the vehicle may have bullseyes and star fractures up to 16 mm in diameter and cracks up to 150 mm long which do not penetrate more than one (1) layer of the glass in a laminated windscreen, provided they do not interfere with the driver's vision.

In addition, the 'primary vision area' (the area of the windscreen which is swept by the windscreen wipers) must not be cracked, scored, chipped, sandblasted or otherwise damaged to the extent that it impairs the driver's vision or damages the wiper blades.



It is recommended that all defects be repaired as soon as possible.

Repairing a damaged windscreen, if undertaken correctly, is an acceptable means of reinstating a windscreen to a safe condition.

Repaired windscreens must comply with the following requirements:

- When inspected from the inside of the vehicle, the repair should not exhibit any significant optical defects which would distort or distract the vision of the driver and should restore clarity to the damaged area. (Acceptable limits of repairs are outlined in **Note**).
- Any repair to the windscreen should not reduce the effectiveness of the windscreen wipers.
- Windscreen repair material must be used in accordance with the manufacturer's instructions.

If a repair has been unsuccessful or is unlikely to be effective, the vehicle owner is responsible for replacing the windscreen in order to meet the necessary safety requirements.

Note:

1. *In a repaired windscreen, a faint outline of the repair, or in some cases, a slight dull spot may be visible where the repair has been performed. A repaired crack may also be detectable by a fine hairline surface mark. These are acceptable and should not cause a vehicle to fail a safety inspection provided the damaged windscreen has been repaired to a standard which complies with the requirements outlined in this Appendix.*

To date, the extent of windscreen damage considered to be repairable has not been defined. Improved technology has increased the scope of repairable damage and acceptability can only be determined (in accord with the above standards) after the repair has been completed.

It is recommended that repairs of cracks longer than 350 mm be avoided.

2. *The Australian Standard AS 2366 Windscreen repairs is a voluntary code of practice for the repair of automotive windscreens that gives recommended practices regarding the repair of laminated windscreens. The use of the Australian Standard is not mandatory.*

Approved safety glass

To ensure the safety of all motor vehicle occupants, replacement windscreens must be of an approved safety glass.



The glass must always bear an identification mark indicating the standard to which the glass has been manufactured (e.g. AS2080, BSAU178, JISR3211, ECER-43/00, ANSI-Z26.1) and have a standards mark etched or indelibly printed on the glass.

Windscreens which do not comply with these recognised standards may shatter easily and unexpectedly, creating areas of distorted vision.

Windscreen tinting

Windscreens fitted to motor vehicles manufactured on or after 1 July 1971, are required by law to be made from glass which has a light transmittance of no less 75 percent. Aftermarket tint film may be applied to the upper portion of the windscreen. The tinting must not extend beyond the greater area of:

- Lower than a horizontal line contacting the uppermost point of the arcs swept by the vehicle manufacturer's original wiper blades.
- The upper 10% of the windscreen.

The tinting may be of any shade but must not have a reflectance of more than 10 percent.

Types of windscreens

There are two types of replacement windscreens available for motor vehicles, laminated or tempered.

Laminated glass windscreens are manufactured like a 'sandwich' with glass on the outside and inside surfaces and a clear plastic film between. A laminated screen is more resistant to breakage than tempered glass and even when fractured it remains almost transparent.

Tempered glass is specially treated so that, when broken, it shatters into tiny fragments instead of jagged splinters. Unfortunately, when the windscreen shatters, it is difficult to see through.

Vehicles manufactured on or after 1 January 1994 must be fitted with laminated glass windscreens. Whilst vehicles built before 1 January 1994 do not have to meet this requirement, it is strongly recommended that when a replacement windscreen is needed, laminated glass be used.

More information

Refer to Information Bulletin V51 Vehicle window tinting - <https://nt.gov.au/driving/industry/vehicle-information-bulletins-and-forms>