

Windshield and Roof Glass Repair and Replacement Guidelines

Explains how to determine if a windshield or roof glass panel can be repaired or if replacement is necessary.

Windshield Repair Guidelines

The criteria to determine if a windshield is repairable or if the windshield must be replaced are based on both the severity and the location of the damage. If allowed, the repair process will remove air from the damaged area, either by vacuum or displacement, and fill the break with resin. See "Common Damage Types" for descriptions of commonly occurring types of damage, and use the images and information below to determine if a windshield may be repaired or if replacement is necessary.

NOTE

These guidelines define the allowable windshield repairs determined by Tesla. If local laws or regulations for windshield repair allow only repairs that are more limited than these guidelines, follow the local laws or regulations.

CAUTION

When deployed, the front passenger airbag relies on the passenger side of the windshield to properly position the airbag to protect the passenger. Because windshield repair may affect the positioning of an airbag during deployment, repairs are not allowed in this area.

Figure 1. LH Drive Vehicles

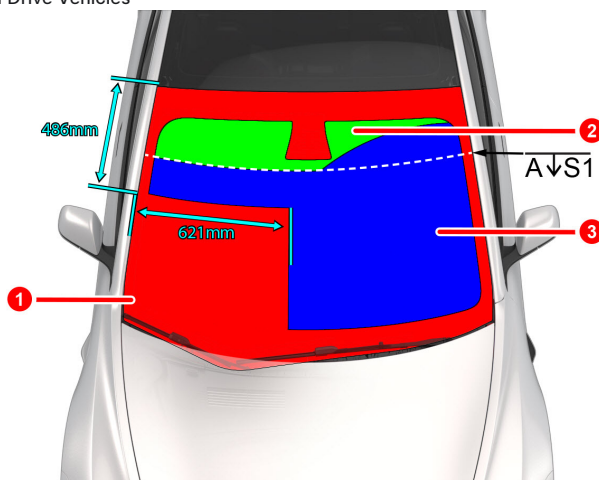
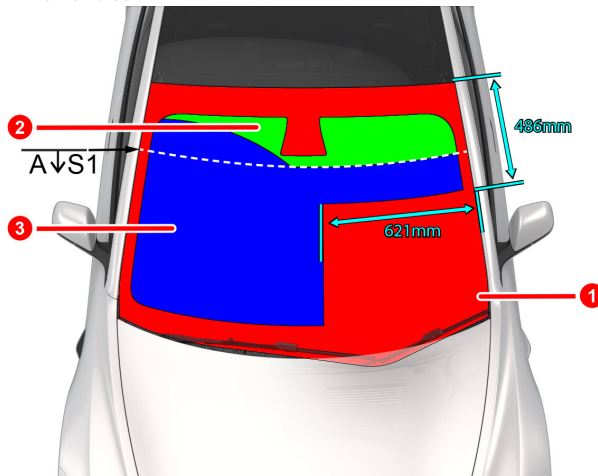








Figure 2. RH Drive Vehicles



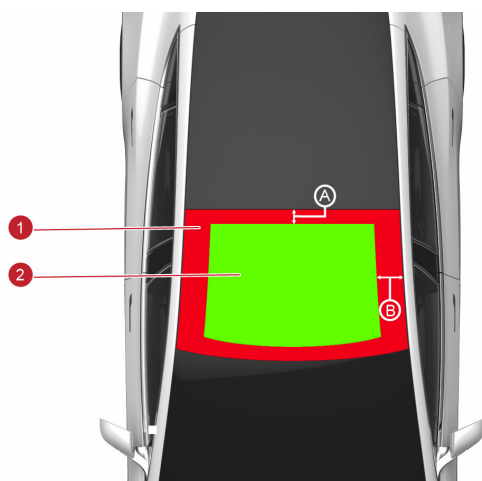
Windshield Area	Allowed Repairs
<p>Area 1 (shown in red in the images above)</p> <p>No repairs are allowed in area 1, which includes:</p> <ul style="list-style-type: none"> The Frit area (the painted area along the outer edges of the windshield). The camera FOV (field of view) plus 25 mm of the surrounding windshield. The passenger side of the windshield. 	<p>Repairs allowed in area 1:</p> <p>None; if the windshield is damaged in this area, it must be replaced.</p> <p> CAUTION When deployed, the front passenger airbag relies on the passenger side of the windshield to properly position the airbag to protect the passenger. Because windshield repair may affect the positioning of an airbag during deployment, repairs are not allowed in this area.</p>
<p>Area 2 (shown in green in the images above)</p> <p>Repair area 2 is a curved area from the edge of the upper Frit area down to the AS1 line (145 mm below the edge of the upper Frit area).</p>	<p>Repairs allowed in area 2:</p> <ul style="list-style-type: none"> Cracks shorter than 50 mm in the exterior layer of glass. Chips less than 50 mm wide in the exterior layer of glass. <p> CAUTION If there is damage to the inner layer of glass, the windshield is not repairable, and it must be replaced.</p> <p>No other repairs are allowed. If the windshield is damaged more than described above, it must be replaced.</p> <p> CAUTION A maximum of three repairs of any kind may be performed on any windshield. If a fourth repair becomes necessary, the windshield must be replaced.</p>
<p>Area 3 (shown in blue in the images above)</p> <p>Repair area 3 is the area below the AS1 line and going down to the upper edge of the bottom Frit area (804 mm).</p> <p> NOTE The driver side repair area is within the wiper sweep contact zone.</p>	<p>Repairs allowed in area 3:</p> <ul style="list-style-type: none"> Rock chips, if the perforation is only in the exterior layer of glass. Spherical damage up to 25 mm diameter, if the perforation is only in the exterior layer of glass. Cracks 25 mm or less in length, if the crack is only in the exterior layer of glass. <p> CAUTION If there is damage to the inner layer of glass, the windshield is not repairable, and it must be replaced.</p> <p>No other repairs are allowed. If the windshield is damaged more than described above, it must be replaced.</p> <p> CAUTION A maximum of three repairs of any kind may</p>

be performed on any windshield. If a fourth repair becomes necessary, the windshield must be replaced.

NOTE
 Properly performed approved windshield repairs on the driver side should have little, if any, impact on visibility for the driver. Also, since the driver side airbag deploys from the steering wheel, windshield repairs have no effect on driver side airbag deployment.

Roof Glass Repair Guidelines

The criteria to determine if roof glass is repairable or if the roof glass must be replaced are based on both the severity and the location of the damage. If allowed, the repair process will remove air from the damaged area, either by vacuum or displacement, and fill the break with resin. See "[Common Damage Types](#)" for descriptions of commonly occurring types of damage, and use the images and information below to determine if the roof glass may be repaired or if replacement is necessary.



Roof Glass Area	Allowed Repairs
<p>Area 1 (shown in red in the images above)</p> <p>No repairs are allowed in area 1, which includes:</p> <ul style="list-style-type: none"> A: Within 50 mm of the front and rear edges of the roof glass. B: Within 253 mm of the LH and RH edges of the roof glass. 	<p>Repairs allowed in area 1:</p> <p>None; if the roof glass is damaged in this area, it must be replaced.</p>
<p>Area 2 (shown in green in the images above)</p>	<p>Repairs allowed in area 2:</p> <ul style="list-style-type: none"> Cracks shorter than 50 mm in the exterior layer of glass. Chips less than 50 mm wide in the exterior layer of glass.

⚠ CAUTION

If there is damage to the inner layer of glass, the roof glass is not repairable, and it must be replaced.

No other repairs are allowed. If the roof glass is damaged more than described above, it must be replaced.

⚠ CAUTION

A maximum of three repairs of any kind may be performed on any roof glass panel. If a fourth repair becomes necessary, the roof glass must be replaced.

Approved Windshield and Roof Glass Repair Kits

The following repair kits are approved for use to repair windshields and roof glass on Tesla vehicles:

i NOTE

The kit may be purchased from Tesla or sourced locally.

Description	Part Number
<p>For North America:</p> <p>Glasweld Essential Windshield Repair Kit</p> <p>For more information, see https://glasweld.com/product/essential-windshield-repair-kit/.</p>	<p>Tesla part number 1128002-00-A</p> <p>Glasweld part number GW-W13100</p>
<p>For EMEA:</p> <p>Duobond Windshield repair system Fixter</p> <p>For more information, see https://www.duobond.com/151010-duobond-windshield-repair-system-fixter.</p>	<p>Tesla part number 1128002-01-A</p> <p>Duobond part number 151010</p>

Common Damage Types

The following types of damage may be repaired if the repair will meet the repair criteria described in the [Windshield Repair Guidelines](#) or the [Roof Glass Repair Guidelines](#).

Common Name for Damage**Description****Bullseye**

Damage that is marked by a separated cone in the outer layer of glass that results in a dark circle with an impact point.



Chip	Non-technical term for damage on a windshield.
Combination Break	Damage with multiple characteristics, for example a bullseye containing a star crack, or a bullseye that also has short or long crack(s).



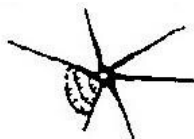
Crack	Single line of separation that may emanate from an impact point. There are different types of cracks: <ul style="list-style-type: none">• Short: 150 mm or less.• Long : More than 150 mm.• Edge: Extends to the edge of the glass roof panel or the windshield Frit (the painted area along the outer edges of the windshield).• Floater: Does not extend to the edge of the glass roof panel or the windshield Frit (the painted area along the outer edges of the windshield).• Stress: Extends from an edge but does not have an impact point.
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Half Moon Partial bullseye.

Legs Subsurface cracks that emanate from the break.

Pit Impact point from which a small piece of glass is missing.

Star Break Damage that exhibits a series of legs that emanate from the break.



Stone Break Non-technical term for damage on a windshield.

Surface Pit A nick in the glass associated with normal wear and tear that does not penetrate the outer layer of glass.

Repairs to windshields and roof glass panels should be performed using only [Approved Windshield and Roof Glass Repair Kits](#).

For vehicle and glass panel preparation information, refer to the [Service Manual](#) procedure to Remove and Replace or to Remove and Install the specific glass component.