

- Model Y Collision Repair Procedures
  - General Information
  - Recent Changes In This Manual
  - General Repair Guidelines
  - Approved Parts, Tools, and Supplies
  - Part Repairability Guidelines
    - Approved Wheel Repairs
    - Cast Rear Under Body (1-Piece) Repair Guidelines**
    - Cast Rear Under Body (2-Piece) Repair Guidelines
    - Front Bumper Fascia Repair Guidelines
    - Painting Park Assist Sensors
    - Windshield and Roof Glass Repair and Replacement Guidelines
- Reference Information
  - Body Side Panels
  - Center Under Body Panels
  - Front Inner Panels
  - Rear End Panels
  - Rear Quarter Inner Panels
  - Rear Under Body - 1 Piece Casting
  - Rear Under Body - 2 Piece Casting
  - Roof Panels

# Cast Rear Under Body (1-Piece) Repair Guidelines

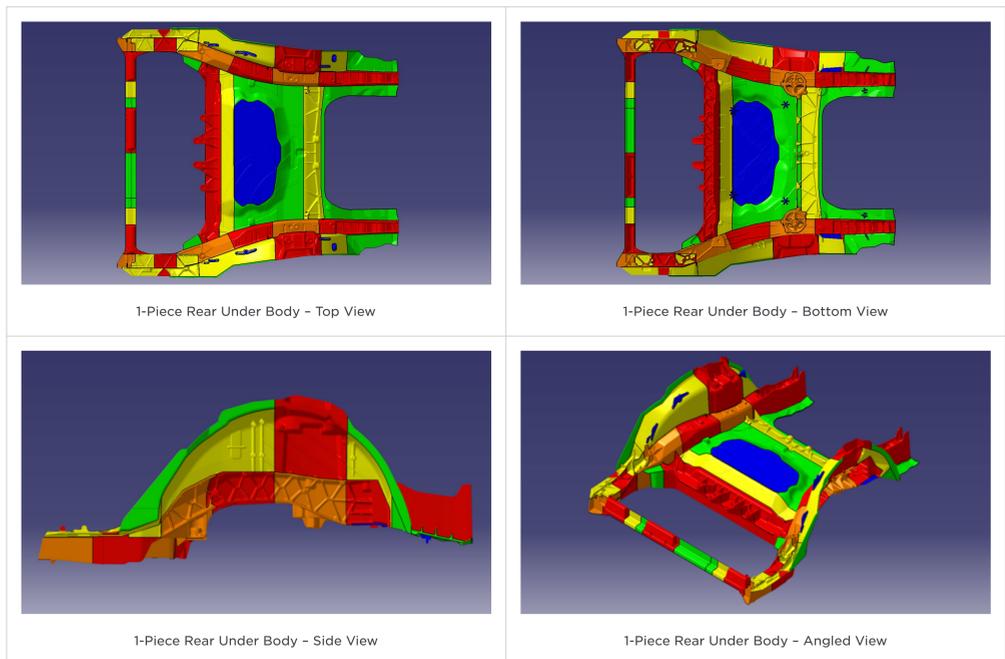
Explains how to determine if the cast Rear Under Body can be repaired or if replacement is required.

The criteria to determine if a 1-piece cast Rear Under Body component is repairable or if the Rear Under Body must be replaced are based on both the severity and the location of the damage. Use the images and information below to determine if the Rear Under Body component may be repaired or if replacement is required.

**Note**  
Depending on the build date and location of manufacture, a Model Y vehicle might have a 1-piece Rear Under Body or a 2-piece Rear Under Body. Use the images in the sections below to identify damage to a 1-piece Rear Under Body. If the damaged vehicle has a 2-piece Rear Under Body, refer to the [Cast Rear Under Body \(2-Piece\) Repair Guidelines](#).

The images below show several different sides of the cast Rear Under Body, and contain highlighted areas. Compare the damaged area of the vehicle's cast Rear Under Body to the images below, then use the repair criteria corresponding to the color of the highlighted area to find the criteria to use to determine if the damaged area of the Rear Under Body can be repaired.

**Note**  
If damage spans repair areas, [contact Tesla Collision Repair](#) for assistance **before starting the repair**. Do not repair damage that crosses repair area boundaries without prior approval from Tesla Collision Repair.



Based on the colors used in the images above, the allowed repairs are as follows:

Table 1. Allowed Repairs

Area Color	Allowed Repairs
<b>Blue areas:</b>	<ul style="list-style-type: none"> <li>• Tabs that are broken off entirely can be welded back into place.</li> <li>• Tabs or sections that are partially broken or cracked can be repaired by welding.</li> <li>• Bent tabs or sections can be straightened using cold methods.</li> </ul> <p><b>Note</b> Do not use heat methods to straighten tabs or sections.</p>
<b>Green areas:</b>	<ul style="list-style-type: none"> <li>• Welding damage up to 50 mm is allowed.</li> <li>• For damage more than 50 mm in length, <a href="#">contact Tesla Collision Repair</a> for assistance.</li> <li>• A broken stud may be welded on or replaced with a double-ended stud. See <a href="#">Replacing a Damaged Stud</a> for more information.</li> <li>• Bent webbing sections may be straightened using cold methods.</li> </ul> <p><b>Note</b> Do not use heat methods to straighten webbing sections.</p> <p><b>Note</b> After repair, bent webbing sections should be restored to within 1.5 mm of their original position.</p> <p><b>Note</b> <a href="#">Contact Tesla Collision Repair</a> if there are concerns about the number or width of discontinuities in the component.</p>
<b>Yellow areas:</b>	<ul style="list-style-type: none"> <li>• Welding damage up to 30 mm is allowed (a reinforcement plate is not required).</li> <li>• Welding damage between 30 mm and 50 mm in length is allowed, but reinforcement plates (Tesla part number 1076938-E0-B) must also be installed. See <a href="#">Installing a Reinforcement Plate</a> for more information.</li> <li>• For damage more than 50 mm in length, <a href="#">contact Tesla Collision Repair</a> for assistance.</li> <li>• A broken stud may be welded on or replaced with a double-ended stud. See <a href="#">Replacing a Damaged Stud</a> for more information.</li> <li>• Bent webbing sections may be straightened using cold methods.</li> </ul> <p><b>Note</b> Do not use heat methods to straighten webbing sections.</p> <p><b>Note</b> After repair, bent webbing sections should be restored to within 1.5 mm of their original position.</p>
<b>Orange areas:</b>	<ul style="list-style-type: none"> <li>• Welding a crack up to 30 mm is allowed, but a reinforcement plate (Tesla part number 1076938-E0-B) must also be installed. See <a href="#">Installing a Reinforcement Plate</a> for more information.</li> <li>• For damage more than 30 mm in length, <a href="#">contact Tesla Collision Repair</a> for assistance.</li> <li>• A broken stud may be welded on or replaced with a double-ended stud. See <a href="#">Replacing a Damaged Stud</a> for more information.</li> <li>• Bent webbing sections may be straightened using cold methods.</li> </ul> <p><b>Note</b> Do not use heat methods to straighten webbing sections.</p> <p><b>Note</b> After repair, bent webbing sections should be restored to within 1.5 mm of their original position.</p>
<b>Red areas:</b>	<p>None; if the Rear Under Body is damaged in these areas, <a href="#">contact Tesla Collision Repair</a> for assistance.</p> <p><b>Note</b> A broken stud may replaced with a double ended stud. See <a href="#">Replacing a Damaged Stud</a> for more information.</p> <p><b>Warning</b> Welding is not allowed in this area.</p>

## Installing a Reinforcement Plate

Reinforcement plates may be installed on the Rear Under Body only at the direction of the Tesla Collision Repair Support Team, or as specified in the Allowed Repairs tables (above). Reinforcement plates on the Rear Under Body are installed as follows:

**Note**  
Reinforcement plates on the Rear Under Body are not installed by welding; Rear Under Body reinforcement plates are installed only with structural adhesive.

1. Straighten the area where the reinforcement plate will be installed using cold methods.

**Note**  
Do not use heat methods to straighten webbing sections.

2. Cut a section of reinforcement plate to length.

**Note**  
Reinforcement plates are placed on both sides of cracked or straightened webbing. Make sure that each reinforcement plate covers the maximum surface area around the repair area.

3. Trim and rework the reinforcement plate as necessary to snugly fit over the area to be reinforced, and allow for any adjoining panels.
4. Remove any contaminants from the mating surfaces on the repair area and the reinforcement plate by cleaning them with isopropyl alcohol (IPA) prior to applying structural adhesive.
5. Apply structural adhesive.
6. Fit the reinforcement plates into position and clamp them into place.
7. Wipe off excess structural adhesive.

**Warning**  
Before performing any repair that requires fasteners to be installed through an installed reinforcement plate, [contact Tesla Collision Repair](#) for assistance. Because the reinforcement plate increases panel stack thickness, it may be necessary to change fasteners used in repairs performed after the reinforcement plate has been installed.

## Replacing a Damaged Stud

A damaged or broken stud may be replaced using a double-ended stud (Tesla part number 1463292-00-C).

To replace a broken stud:

1. Grind down the damaged stud until it is flush with the surrounding material.
2. Use a center punch to mark the center of the remaining part of the stud (the location of the replacement stud).
3. Drill a 5.5 mm. hole that is 22 mm. deep in the replacement stud location.
4. Remove all debris from the drilled hole.
5. Insert the self-tapping double ended stud and torque it to 5 Nm.