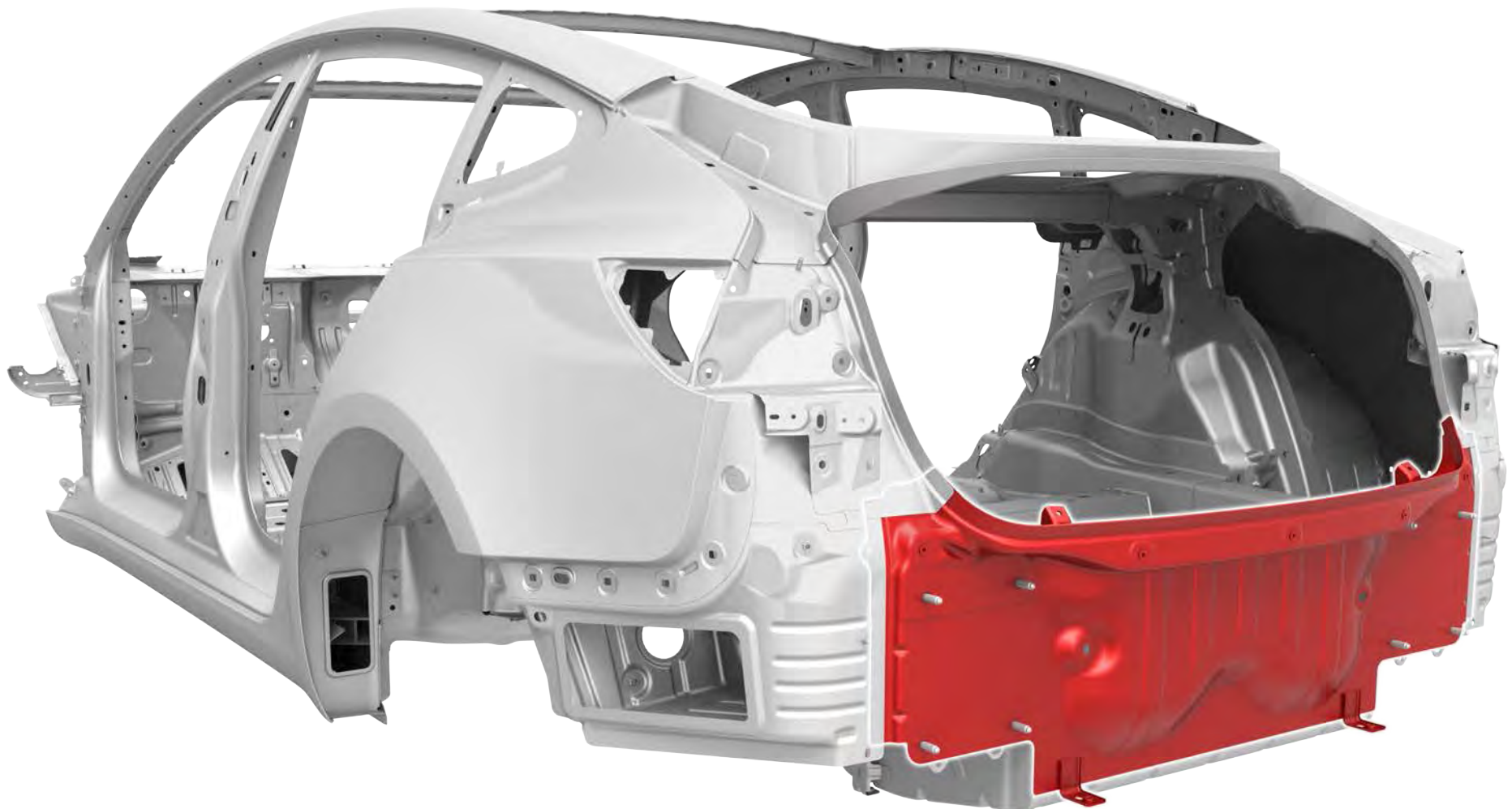




Rear Body Panel



cardiagn.com



Parts List

Quantity	Part Number	Description	Image / Notes
1	1077958-S0-A	Rear Body Panel	
30 rivets needed; order 30 rivets	1028719-00-A	● Structural Rivet, 4.8 mm	All rivets come in packages of 10; order all rivets in multiples of 10.
6 rivets needed; order 10 rivets	1063943-00-A	● Structural Bulb Rivet, 6.5 mm	All rivets come in packages of 10; order all rivets in multiples of 10.
2 rivets needed; order 10 rivets	1069328-00-A	☆ Flow Form Rivet S08	All rivets come in packages of 10; order all rivets in multiples of 10.
2 rivets needed; order 10 rivets	1069329-00-A	★ Flow Form Rivet S18	All rivets come in packages of 10; order all rivets in multiples of 10.
8	2007069	Bolt, M10x1.5x30	Rear Rail to Rear Body Panel
8	1047337-00-A	Nut, M10x1.5	Rear Rail to Rear Body Panel
2	—	Structural Adhesive	⚠ WARNING: Use only Tesla-approved structural adhesive; refer to BR-15-92-008, "Approved Structural Adhesive and Urethane Sealants" for a list of current approved structural adhesives. Refer to BR-17-92-002, "Obtaining Adhesives, Coolant, and Other Chemicals" for information on how to obtain approved structural adhesive.
1	—	Seam Sealer	Source locally; not available from Tesla.

These part numbers were current at the time of publication. Use the revisions listed or later, unless otherwise specified in the [Parts Manual](#).



Repair Information

Repair Information	Warnings and Cautions	Special Tools
If there is a possibility that the Rear Frame Rails have been damaged, make sure to check the alignment of the Rear Frame Rails.	 WARNING: Wear the appropriate personal protective equipment (PPE) when performing this procedure.  CAUTION: This procedure involves both steel and aluminum components. Use the appropriate tools at each step to avoid cross-contamination.	The special tool listed below is required to perform this procedure: • Flow form rivet installation tool



Prerequisites

No welded, riveted, or bonded panels need to be removed prior to performing this procedure.



Removal

1

Identify the component materials in the repair area.

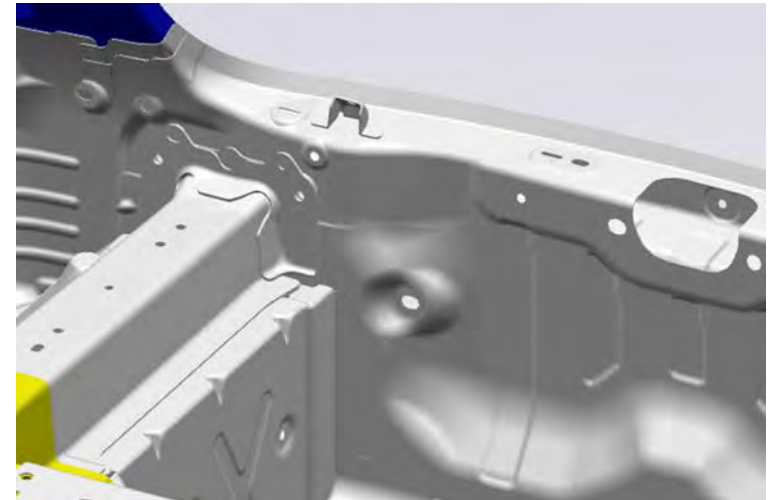
 Aluminum

 Mild Steel

 High-Strength Steel



NOTE: Refer to [BR-17-10-005](#), “Model 3 Body Structure Materials and Allowed Operations”, for information about the material each structural component is made from and the operations that are allowed on each type of material.





Removal

2 Remove the original component.

A

Use a hammer to remove the studs. Discard the studs.

■ Stud (x8)



CAUTION: Clamp the Rear Body Panel to the Rear Frame Rails to prevent the components from being damaged during the removal of the studs.



NOTE: The studs are replaced with new bolts and nuts in a [later step](#).





Removal

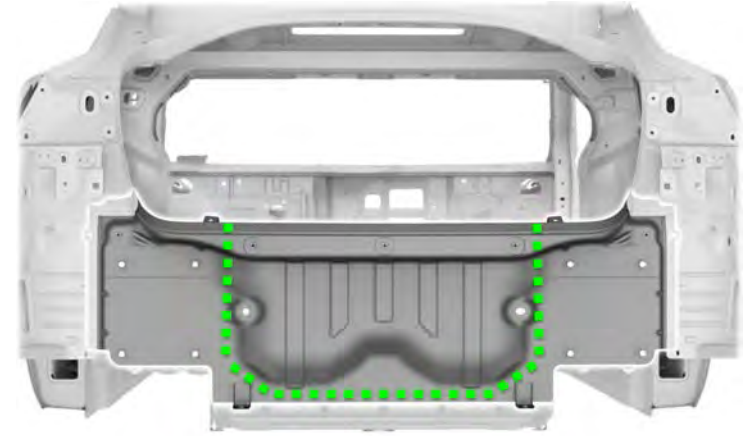
2 Remove the original component (continued).

B Cut the original component on the green dashed lines shown to remove the bulk of the component.

■ ■ ■ ■ ■ Cut Line



CAUTION: Do not damage the surrounding components.





Removal

2 Remove the original component (continued).

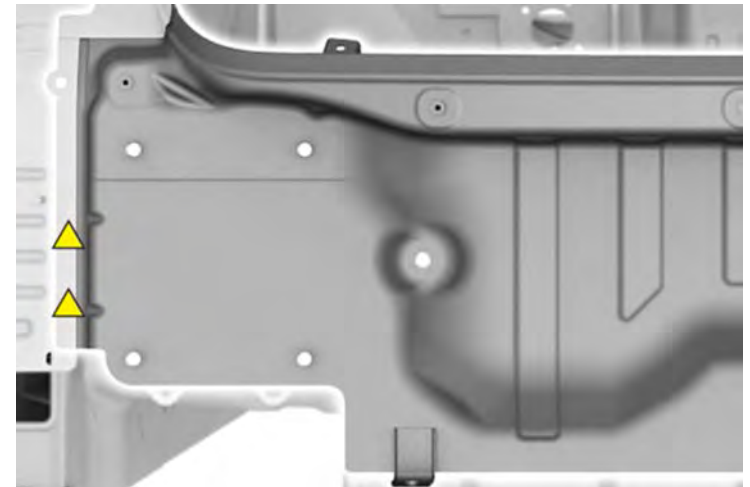
C Remove any seam sealer as necessary to identify the factory spot welds.

D Use a drill with a 6.8 mm (17/64 in) bit to drill through the spot welds shown.

▲ Factory Spot Weld (x4)



NOTE: Structural bulb rivets are installed in these locations in a [later step](#).

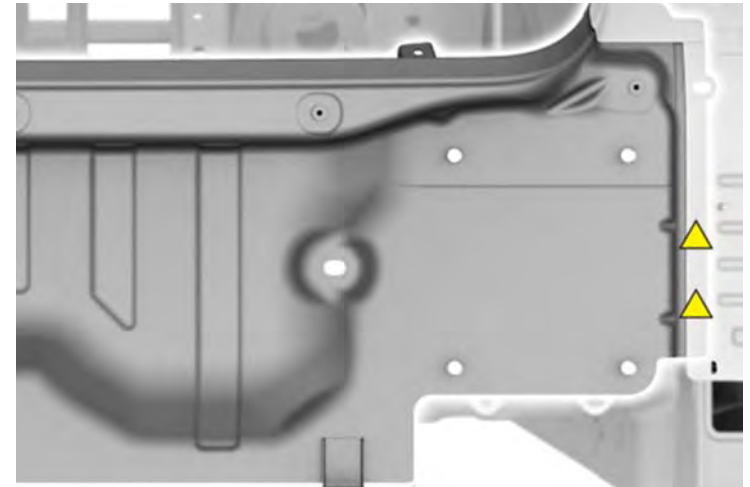




Removal

2 Remove the original component (continued).

D Use a drill with a 6.8 mm (17/64 in) bit to drill through the spot welds shown (continued).





Removal

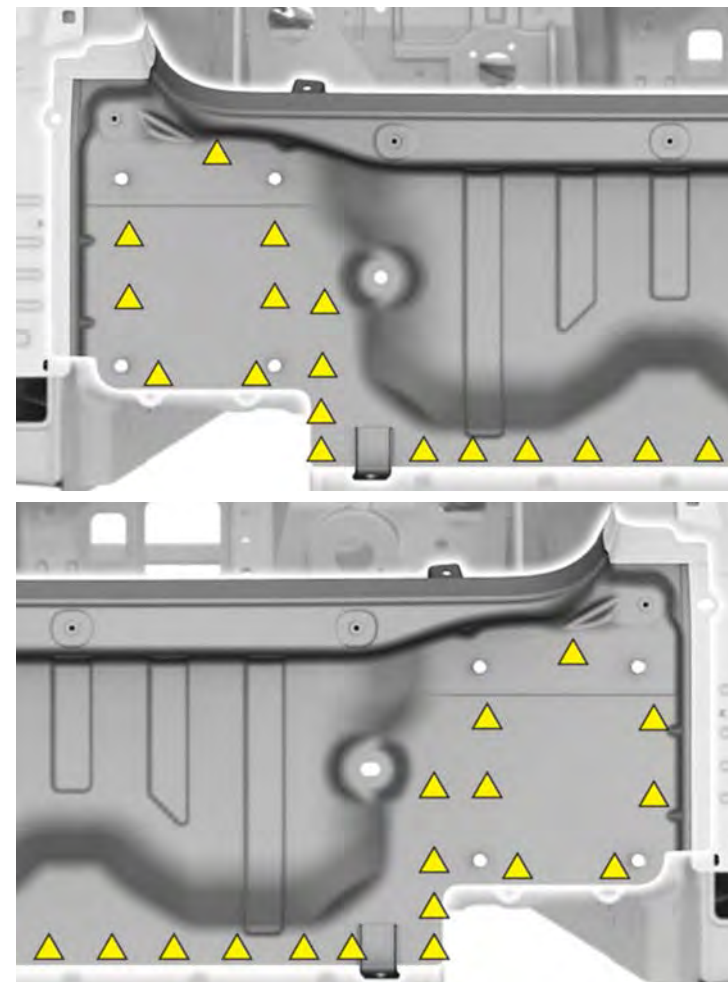
2 Remove the original component (continued).

E Use a drill with a spot weld bit to drill out the remaining spot welds on the original Rear Body Panel where it attaches to the Rear Member Rail Assemblies and to the Rear Trunk Floor Panel.

▲ Factory Spot Weld (x32)



NOTE: Factory spot weld locations shown are approximate. Exact spot weld locations and number vary from vehicle to vehicle.





Removal

2 Remove the original component (continued).

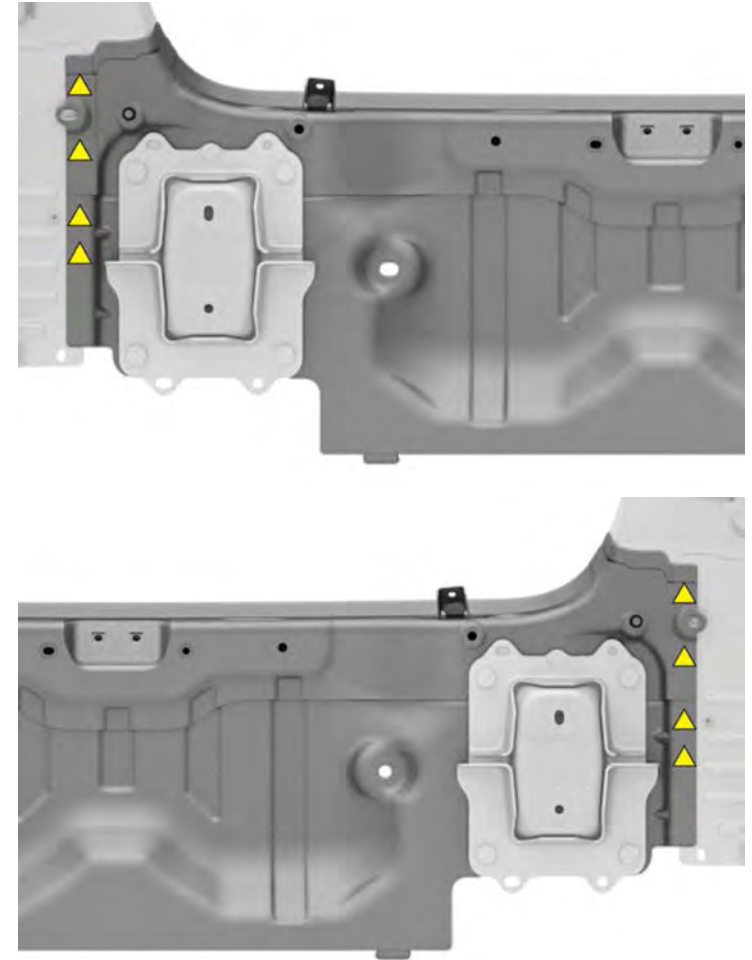
F

From the inside of the vehicle, use a drill with a spot weld bit to drill out the spot welds that attach the remaining pieces of the Rear Body Panel to the Rear Quarter.

▲ Factory Spot Weld (x8)



NOTE: Factory spot weld locations shown are approximate. Exact spot weld locations and number vary from vehicle to vehicle.





Removal

2 Remove the original component (continued).

F From the inside of the vehicle, use a drill with a spot weld bit to drill out the spot welds that attach the remaining pieces of the Rear Body Panel to the Rear Quarter (continued).



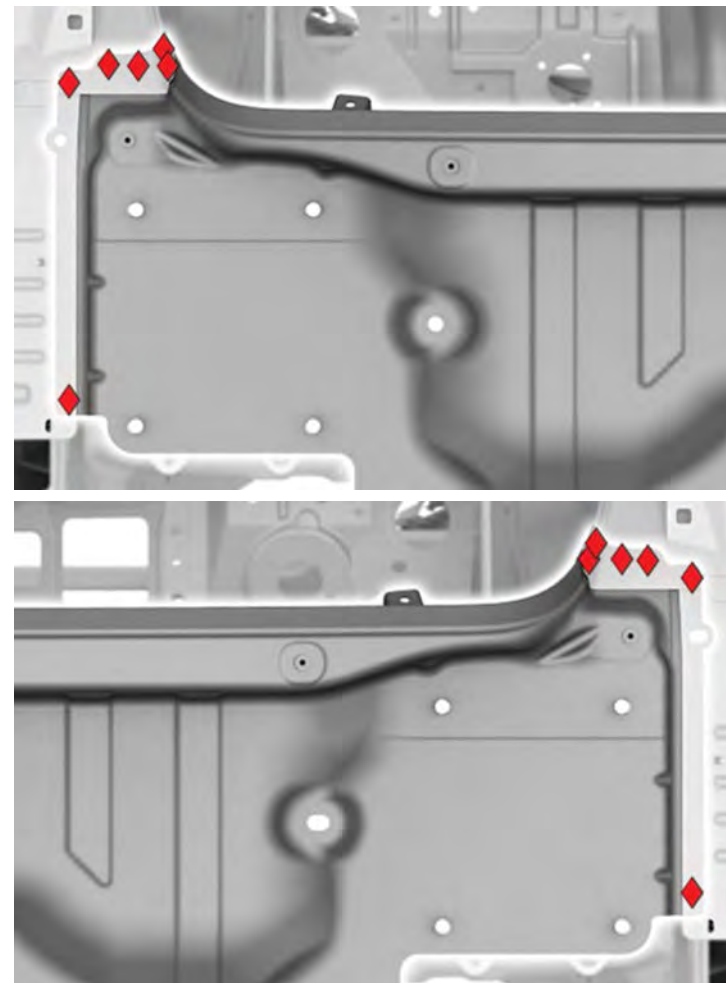


Removal

2 Remove the original component (continued).

G Use an SPR removal tool or a drill with a high-strength steel bit to remove the factory self-piercing rivets. Use a belt sander for any factory self-piercing rivets that cannot be removed with an SPR removal tool or a drill.

◆ Factory SPR (x12)





Removal

2 Remove the original component (continued).

G Use an SPR removal tool or a drill with a high-strength steel bit to remove the factory self-piercing rivets. Use a belt sander for any factory self-piercing rivets that cannot be removed with an SPR removal tool or a drill (continued).





Removal

2 Remove the original component (continued).

H

Use a heat gun to heat the adhesive joints, and then use a hammer and chisel to remove the remaining pieces of the original component.



WARNING: Do not heat the adhesive joints above 100°C (212°F). Heating the adhesive joints above 100°C (212°F) can weaken the aluminum and compromise vehicle crash integrity.



WARNING: Do not heat any adhesive joints of components that are not being removed. Heating adhesive joints weakens the adhesive bond and could compromise vehicle crash integrity.





Removal

3

Use a disc sander with a medium-abrasive surface conditioning disc to remove any remaining materials from the bond paths. Use a belt sander with a medium-abrasive belt for any areas that cannot be reached with a disc sander. Vacuum any adhesive dust.



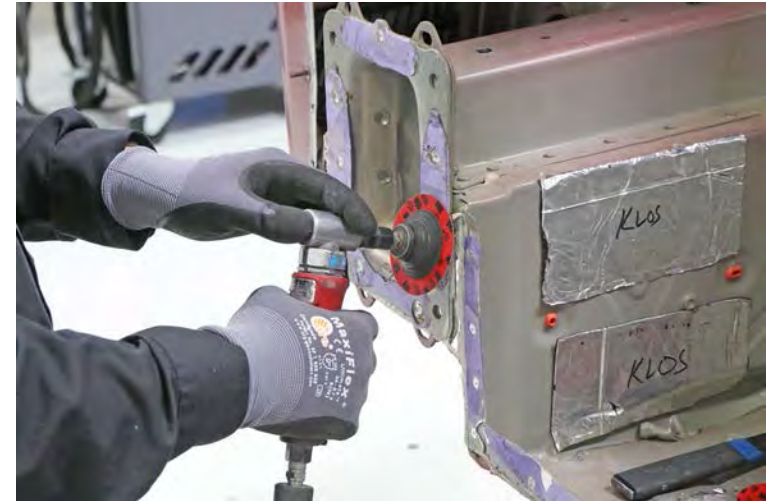
WARNING: Remove the epoxy adhesive in a well-ventilated area. Wear suitable personal protective equipment.



WARNING: Use only sanding wheels and belts that are 80 grit or finer on aluminum components. Using sanding wheels or belts that are coarser than 80 grit can cause fractures in the aluminum.



CAUTION: Beware of cross-contamination. Do not use the same equipment to remove epoxy from aluminum and steel. Cross-contamination might result in galvanic corrosion.





Replacement

1 Prepare for installation.

A Put the new component into position.



TIP: If necessary, use a rubber mallet to tap the new component into position.





Replacement

1 Prepare for installation (continued).

B Temporarily install the new bolts and nuts, but do not torque them at this time.

 Bolt, hex-head (x8)

C Clamp the new component into place.





Replacement

1 Prepare for installation (continued).

D

Mark the fastener locations on the new component.

● Structural Rivet, 4.8 mm (x30)

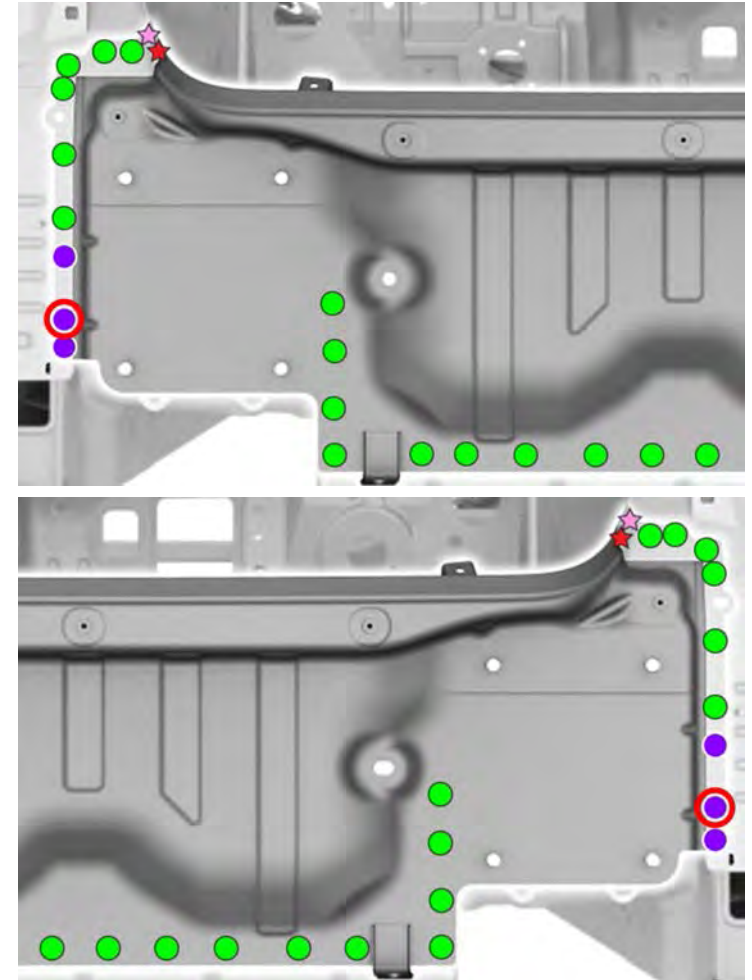
● Structural Bulb Rivet, 6.5 mm (x6)

☆ Flow Form Rivet S08 (x2)

★ Flow Form Rivet S18 (x2)



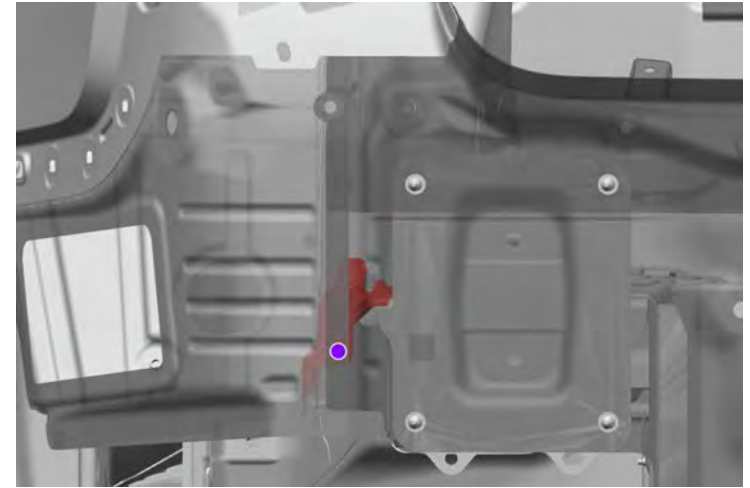
NOTE: Make sure that the structural bulb rivets circled in red are installed through the Rear Body Panel, the Rear Quarter Outer Lower, and the Rear Rail to Lower Quarter Extension (highlighted in red in the third image).





Replacement

- 1 Prepare for installation (continued).
- D Mark the fastener locations on the new component (continued).





Replacement

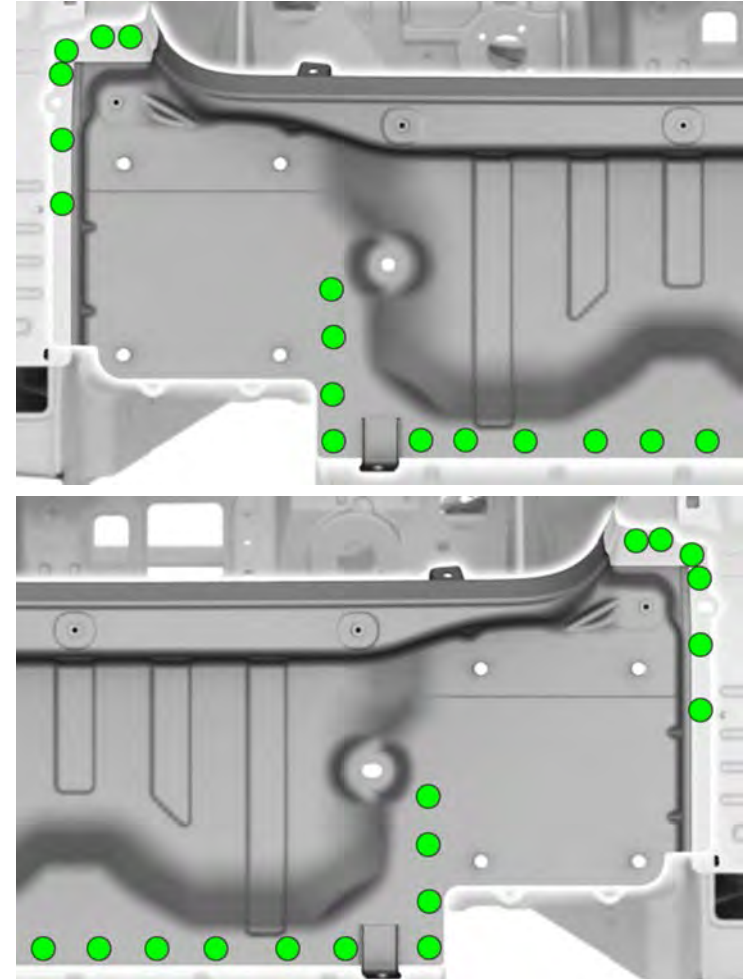
1 Prepare for installation (continued).

E Use a drill with a 4.8 mm (3/16 in) bit to drill holes for structural rivets.

● Structural Rivet, 4.8 mm (x30)



NOTE: Install a grip screw after drilling each hole to keep the panel aligned while drilling the remaining holes.





Replacement

- 1 Prepare for installation (continued).
- E Use a drill with a 4.8 mm (3/16 in) bit to drill holes for structural rivets (continued).





Replacement

1 Prepare for installation (continued).

F Use a drill with a 6.8 mm (17/64 in) bit to drill holes for structural bulb rivets.

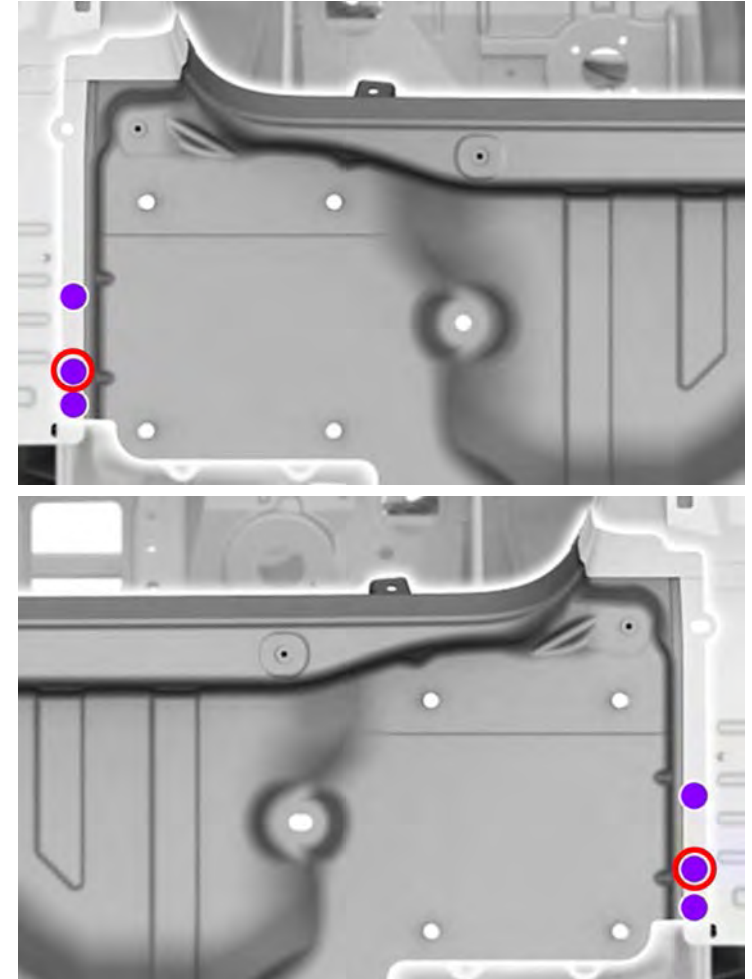
● Structural Bulb Rivet, 6.5 mm (x6)



NOTE: Make sure that the structural bulb rivets circled in red are installed through the Rear Body Panel, the Rear Quarter Outer Lower, and the Rear Rail to Lower Quarter Extension (highlighted in red in the third image).



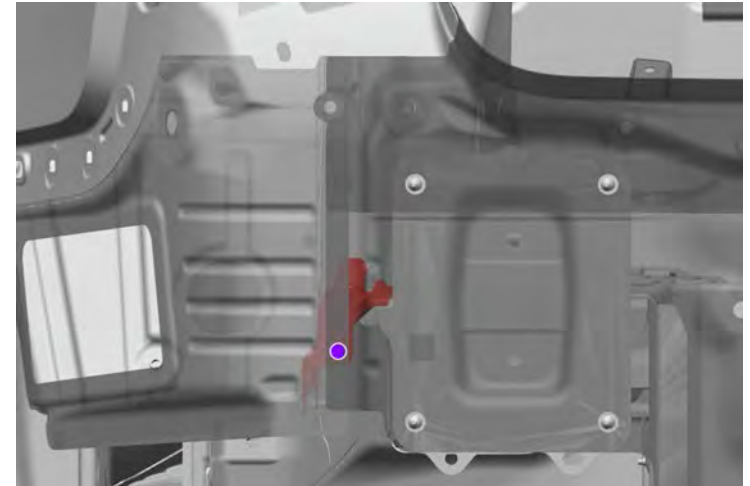
NOTE: Install a grip screw after drilling each hole to keep the panel aligned while drilling the remaining holes.





Replacement

- 1 Prepare for installation (continued).
- F Use a drill with a 6.8 mm (17/64 in) bit to drill holes for structural bulb rivets (continued).





Replacement

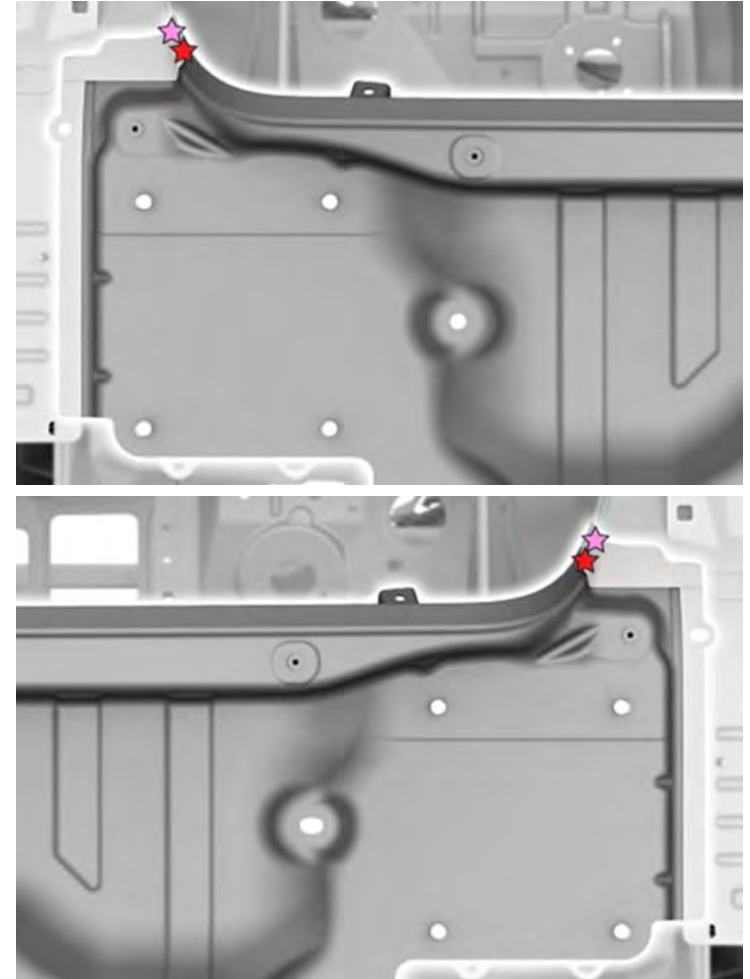
1 Prepare for installation (continued).

G

Create holes for flow form rivets.

☆ Flow Form Rivet S08 (x2)

★ Flow Form Rivet S18 (x2)





Replacement

- 1 Prepare for installation (continued).
- G Create holes for flow form rivets (continued).
-
- H Mark the bond path areas on the new component and the vehicle. These areas will be prepared for bonding in the next step.





Replacement

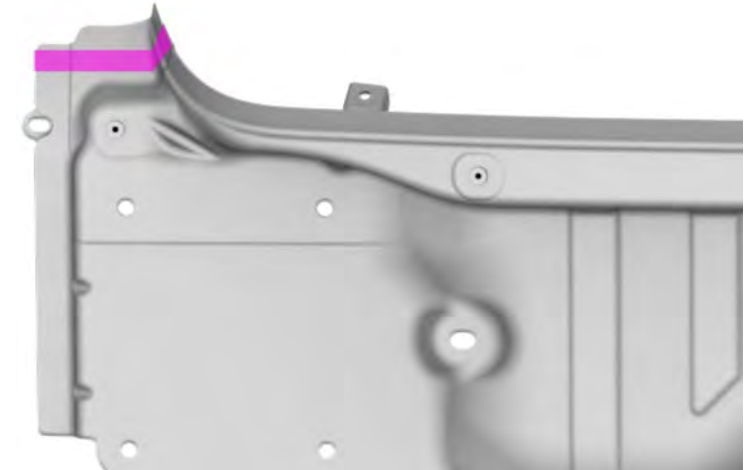
- 1 Prepare for installation (continued).
 - 1 Remove the new component.



- 2 Prepare the surfaces.
 - A Use a red Scotch-Brite pad or equivalent to scuff the new component in the steel-to-aluminum bond path areas.
 Steel-to-Aluminum Bond Path



NOTE: The images show the outer side of the component.

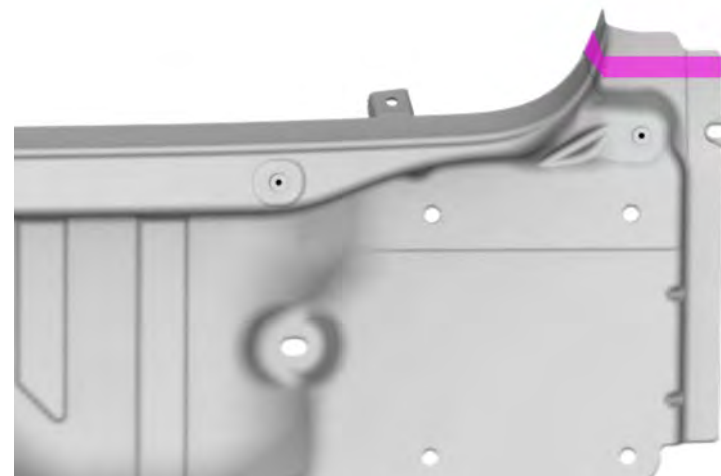




Replacement

2 Prepare the surfaces (continued).

A Use a red Scotch-Brite pad or equivalent to scuff the new component in the steel-to-aluminum bond path areas (continued).





Replacement

2 Prepare the surfaces (continued).

B

Use a disc sander with a medium-abrasive surface conditioning disc to remove the e-coat on the new component in the bond path areas. Use a belt sander with a medium-abrasive belt for any areas that cannot be reached with a disc sander.

 Aluminum-to-Aluminum Bond Path



WARNING: Remove the e-coat in a well-ventilated area. Wear suitable personal protective equipment.



WARNING: Use only sanding wheels and belts that are 80 grit or finer on aluminum components. Using sanding wheels or belts that are coarser than 80 grit can cause fractures in the aluminum.



CAUTION: Within two hours of removing the e-coat or paint, cover the abraded aluminum areas in the bond path with a thin primer layer of structural adhesive. If the abraded aluminum areas are not primed within two hours, they must be abraded again to remove any oxidation.



NOTE: The first image shows the outer side of the component. The second image shows the inner side of the component.



Replacement

2 Prepare the surfaces (continued).

B Use a disc sander with a medium-abrasive surface conditioning disc to remove the e-coat on the new component in the bond path areas. Use a belt sander with a medium-abrasive belt for any areas that cannot be reached with a disc sander (continued).





Replacement

2 Prepare the surfaces (continued).

B Use a disc sander with a medium-abrasive surface conditioning disc to remove the e-coat on the new component in the bond path areas. Use a belt sander with a medium-abrasive belt for any areas that cannot be reached with a disc sander (continued).





Replacement

2 Prepare the surfaces (continued).

C Clean all the bond paths on the new component or components and on the vehicle with isopropyl alcohol (IPA).



WARNING: Wipe off the remaining isopropyl alcohol with a clean, dry towel immediately after application. Do not let the remaining isopropyl alcohol air dry. Allowing the remaining isopropyl alcohol to air dry can compromise the adhesive bond.



3 Apply structural adhesive.

A Spread a thin coating of structural adhesive as a primer layer on the bond paths on the vehicle and the new component.



WARNING: Use only Tesla-approved structural adhesive; refer to [BR-15-92-008](#), "Approved Structural Adhesive and Urethane Sealants" for a list of current approved structural adhesives.



NOTE: Assembly must be performed while the primer layer is still wet. The drying time of the adhesive varies depending on temperature and humidity.





Replacement

3 Apply structural adhesive (continued).

B While the primer layer is still wet, apply a bead of structural adhesive on top of the primer layer on the new component.



4 Install the new component.

A Put the new component into position.



TIP: If necessary, use a rubber mallet to tap the new component into position.

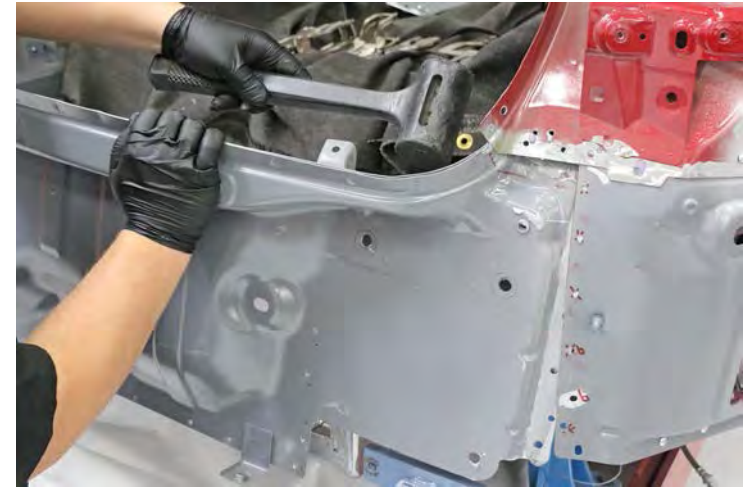




Replacement

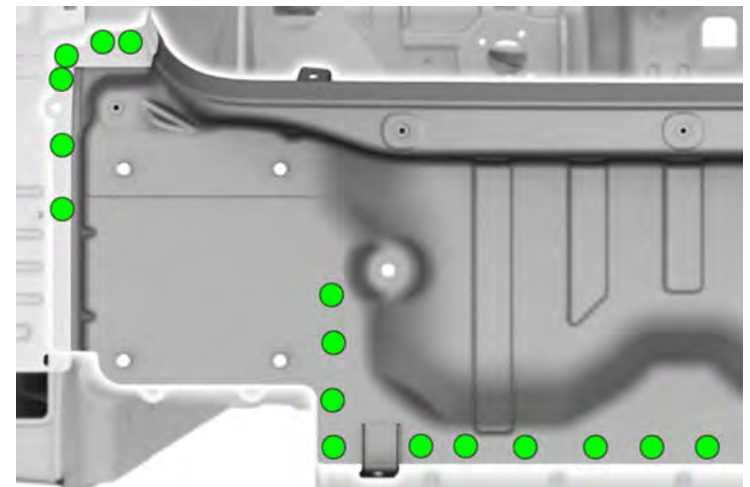
4 Install the new component (continued).

A Put the new component into position (continued).



B Insert the structural rivets.

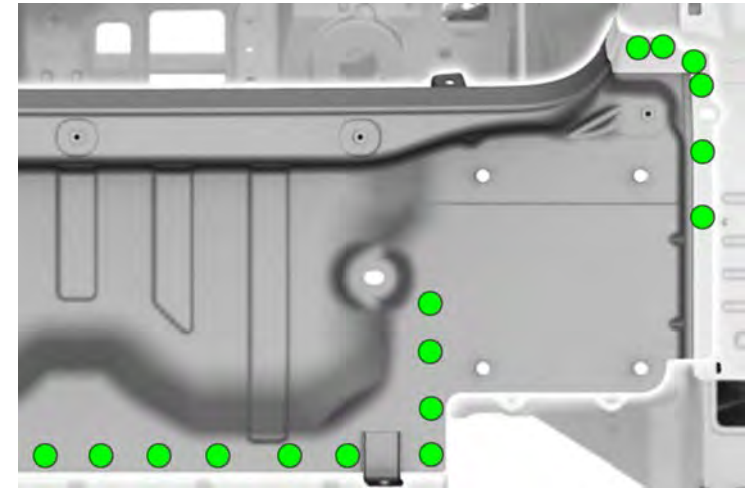
● Structural Rivet, 4.8 mm (x30)





Replacement

- 4 Install the new component (continued).
- B Insert the structural rivets (continued).



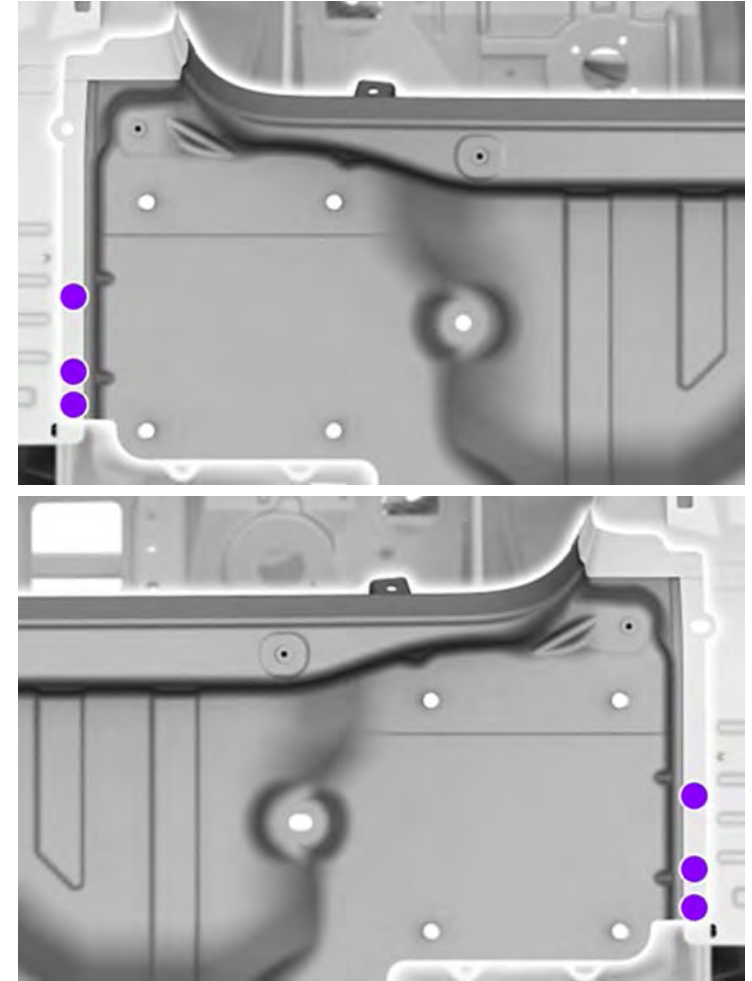


Replacement

4 Install the new component (continued).

C Insert the structural bulb rivets.

● Structural Bulb Rivet, 6.5 mm (x6)





Replacement

- 4 Install the new component (continued).
- C Insert the structural bulb rivets (continued).



- D Insert the flow form rivets.
 - ★ Flow Form Rivet S08 (x2)
 - ★ Flow Form Rivet S18 (x2)



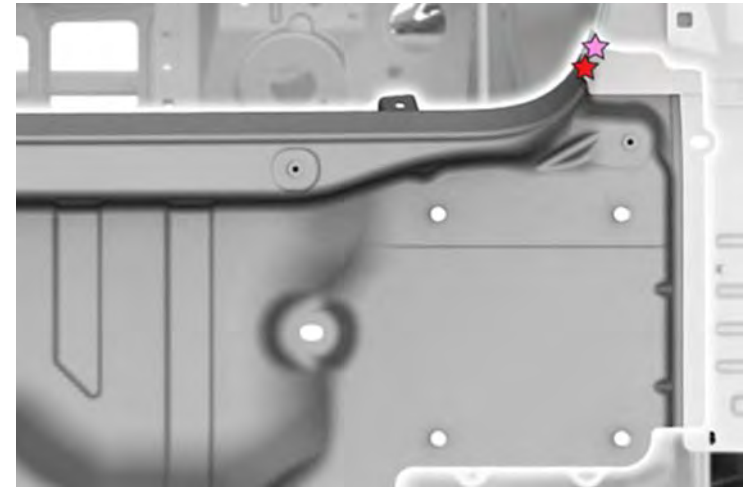


Replacement

4 Install the new component (continued).

D Insert the flow form rivets (continued).

E Clamp the areas where flow form rivets will be installed.





Replacement

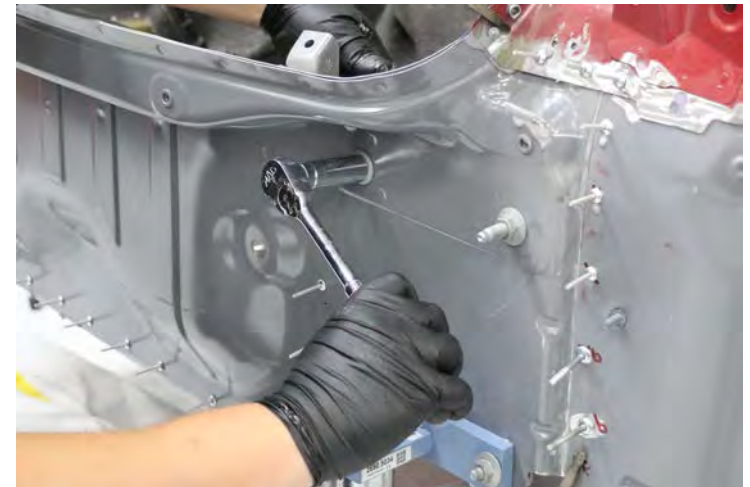
4 Install the new component (continued).

F Temporarily install the new bolts and nuts, but do not torque them at this time.

■ Bolt, hex-head (x8)



NOTE: The new nuts are torqued during the installation of the Rear Bumper Beam.





Replacement

4 Install the new component (continued).

G Install the structural rivets.

H Install the structural bulb rivets.





Replacement

4 Install the new component (continued).

I Install the flow form rivets.

J Wipe off any excess adhesive.





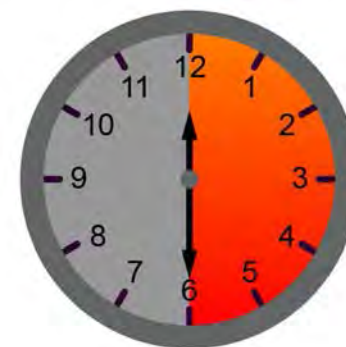
Replacement

4 Install the new component (continued).

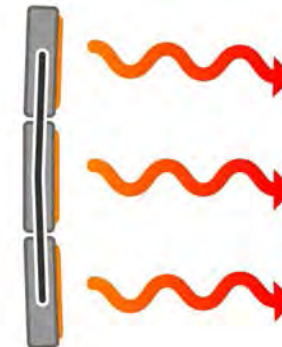
K Bake the structural adhesive so that the bonded panels reach a temperature of 60°C–80°C (140°F–176°F) for at least 30 minutes to achieve full strength.



WARNING: Do not allow the High Voltage Battery to reach a temperature above 74°C (165°F). Heating the High Voltage Battery above 74°C (165°F) for an extended period could result in injury to personnel and/or damage to the battery.



00:30:00+



60°C–80°C

5 Seal the seams in the factory locations, and as necessary.