



Rear Wheel Arch (Complete)



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Parts List

Quantity	Part Number	Description	Image / Notes
1	1108147-SO-A (LH) 1108148-SO-A (RH)	Rear Wheel Arch	 The Rear Wheel Arch is listed in the Parts Manual as the "Rear Wheelhouse Reinforcement Closeout Panel".
31 rivets needed; order 40 rivets.	1063943-00-A	● Structural Bulb Rivet, 6.5 mm	All rivets come in packages of 10; order all rivets in multiples of 10.
4 rivets needed; order 10 rivets.	1028719-00-A	● Structural Rivet, 4.8 mm	All rivets come in packages of 10; order all rivets in multiples of 10.
1	—	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
This procedure is for the left-hand component; the procedure is identical for the right-hand component. This procedure can be performed with the Trunk Floor Extension in place. However, the photographs in this procedure show a vehicle where the Trunk Floor Extension has been removed.	 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: • SPR removal tool



Prerequisites

1

Left-hand component only: Before working on the vehicle, make sure that high voltage current is not present (refer to the appropriate section in [BR-17-17-004](#), "Disconnecting 12V and High Voltage Power on Model 3").



WARNING: Only technicians who have been trained in High Voltage Awareness are permitted to perform the Vehicle Electrical Isolation procedure. Proper personal protective equipment (PPE) and insulating high voltage gloves with a minimum rating of class 0 (1000V) must be worn any time a high voltage cable is handled. Refer to [TN-15-92-003](#), "High Voltage Awareness Care Points" for additional safety information.



2

Remove the C-Pillar Reinforcement.





Prerequisites

3

Remove the Rear Wheelhouse Reinforcement.





Removal

1 Remove the original component.

A

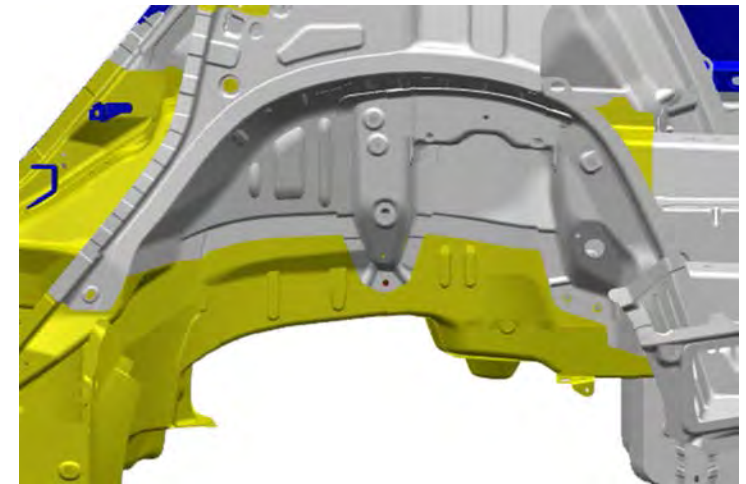
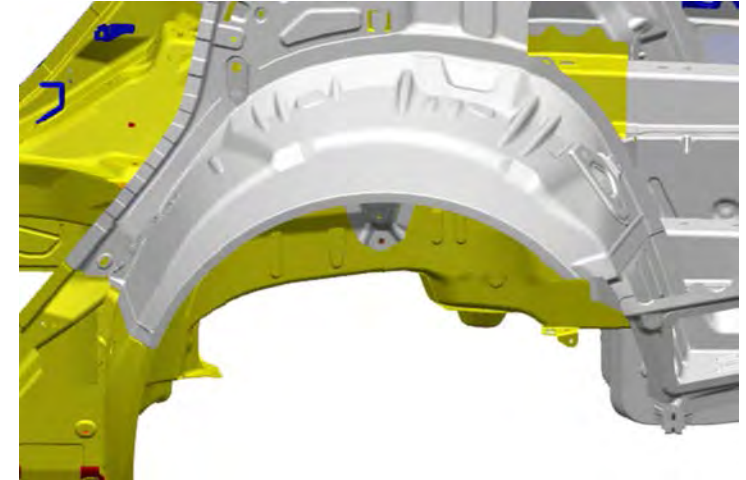
Identify the component materials in the repair area.

■ Aluminum

■ 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

1 Remove the original component (continued).

B

Remove the foam dam.



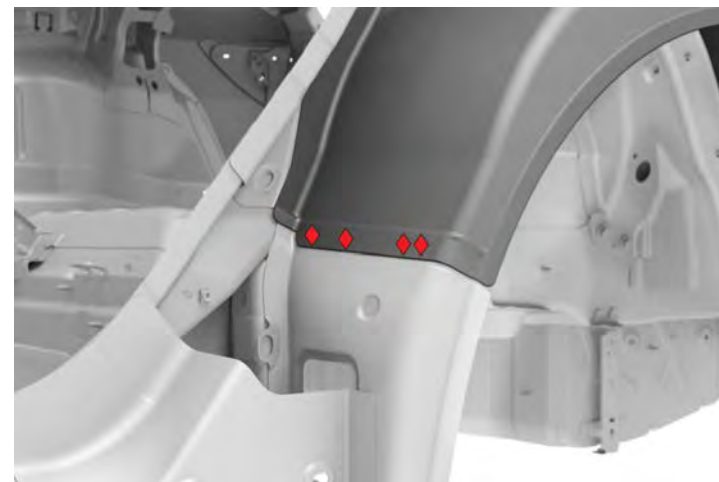
NOTE: Save the foam dam for reinstallation in a [later step](#).

C

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 (x4)





Removal

- 1 Remove the original component (continued).
 - C 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

1 Remove the original component (continued).

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

▲ Factory Spot Weld (x1)



E Use a drill with a spot weld bit to drill out the factory spot welds.

▲ Factory Spot Weld

■ Factory Spot Weld Areas



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



NOTE: The areas highlighted in yellow indicate multiple factory spot welds.





Removal

- 1 Remove the original component (continued).
- E Use a drill with a spot weld bit to drill out the factory spot welds (continued).





Removal

1 Remove the original component (continued).

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



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.



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.





Removal

- 1 Remove the original component (continued).
- F** Use a heat gun to heat the adhesive joints, and then use a hammer and chisel to remove the original component (continued).





Removal

2

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 and clamp it into place.





Replacement

1 Prepare for installation (continued).

B Put the new Rear Wheelhouse Reinforcement into position and mark the outline on the new Rear Wheel Arch. Remove the new Rear Wheelhouse Reinforcement.



NOTE: These marks are used to locate the holes for structural bulb rivets in a [later substep](#).

C Use a drill with a 4.8 mm (3/16 in) bit to drill holes for structural rivets through the existing holes in the Rear Wheelhouse Extension.

● Structural Rivet, 4.8 mm (x4)



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).

C

Use a drill with a 4.8 mm (3/16 in) bit to drill holes for structural rivets through the existing holes in the Rear Wheelhouse Extension (continued).





Replacement

1 Prepare for installation (continued).

D Mark the locations for structural bulb rivet holes on the new component.

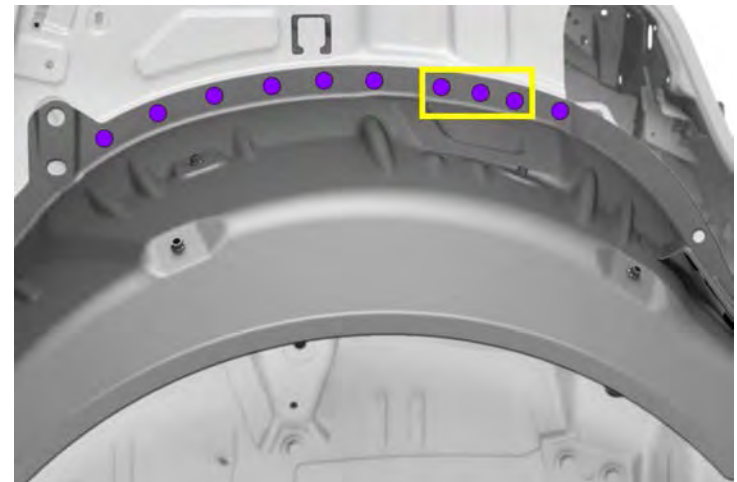
● Structural Bulb Rivet, 6.5 mm (x31)



NOTE: Mark the locations for the structural bulb rivets outlined in yellow so that they do not interfere with the installation of the new Rear Wheelhouse Reinforcement.



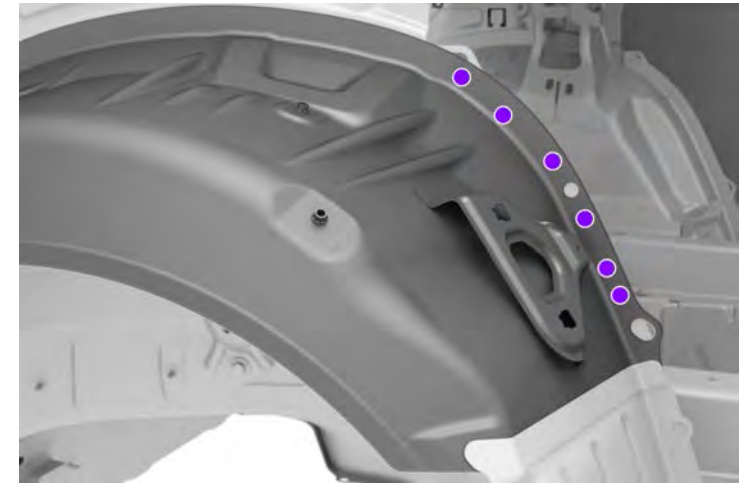
NOTE: If the Rear Inner Quarter has been replaced as part of this repair, drill through the holes where bolts were installed during that procedure to secure the panel while the adhesive cured.





Replacement

- 1 Prepare for installation (continued).
- D** Mark the locations for structural bulb rivet holes on the new component (continued).





Replacement

1 Prepare for installation (continued).

D Mark the locations for structural bulb rivet holes on the new component (continued).

E Use a drill with a 6.7 mm (17/64 in) bit to drill holes for structural bulb rivets.



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 6.7 mm (17/64 in) bit to drill holes for structural bulb rivets (continued).



- F Remove the new component.





Replacement

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



- 2 Prepare the surfaces of the vehicle and the new component for installation.
 - 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





Replacement

2 Prepare the surfaces of the vehicle and the new component for installation (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 of the vehicle and the new component for installation (continued).

B Use a disc sander with a medium-abrasive surface conditioning disc to remove the e-coat on the new component in the aluminum-to-aluminum 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: Take the appropriate steps to minimize the cross-contamination of steel and aluminum components during the repair.



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.





Replacement

2 Prepare the surfaces of the vehicle and the new component for installation (continued).

B Use a disc sander with a medium-abrasive surface conditioning disc to remove the e-coat on the new component in the aluminum-to-aluminum 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 of the vehicle and the new component for installation (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.



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 vehicle.



- 4 Install the new component.
- A Put the new component into position.





Replacement

4 Install the new component (continued).

B Insert the structural rivets and the structural bulb rivets.

● Structural Rivet, 4.8 mm (x4)

● Structural Bulb Rivet, 6.5 mm (x31)



NOTE: Insert the structural bulb rivets outlined in yellow from the outside of the vehicle. Insert all other structural bulb rivets from the inside of the vehicle.

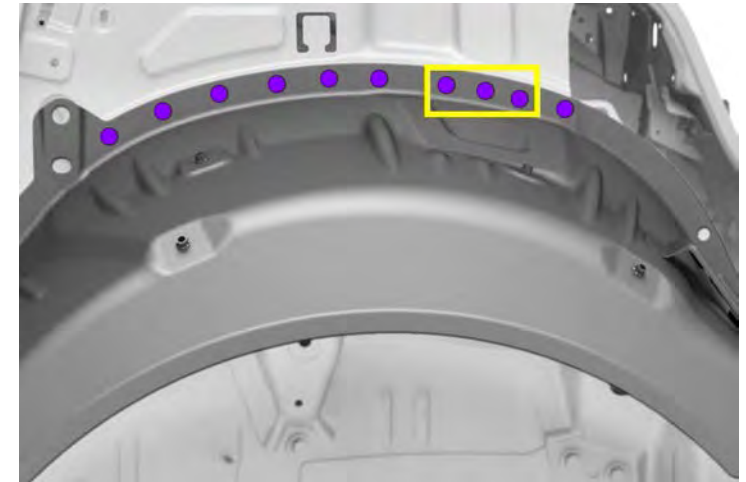




Replacement

4 Install the new component (continued).

B Insert the structural rivets and the structural bulb rivets (continued).





Replacement

4 Install the new component (continued).

B Insert the structural rivets and the structural bulb rivets (continued).

C Install the structural rivets and the structural bulb rivets.





Replacement

4 Install the new component (continued).

D Wipe off any excess adhesive.

E Clamp the new component in any areas that do not have fasteners.





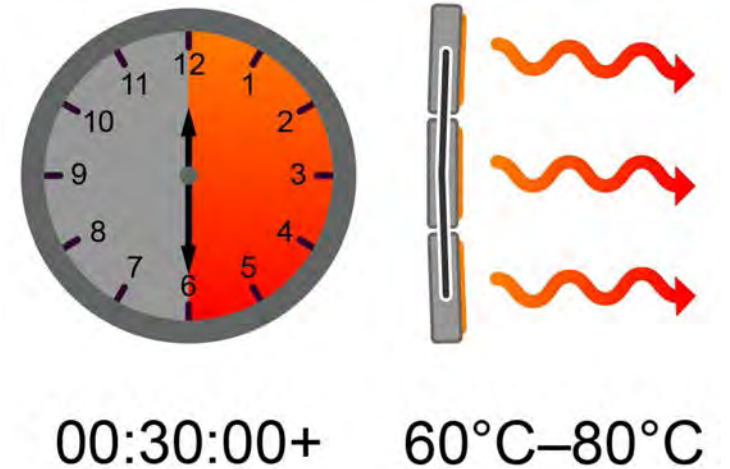
Replacement

4 Install the new component (continued).

F 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.



5 Reinstall the foam dam that was removed in an [earlier step](#).



Replacement

6

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

7

Install the new Rear Wheelhouse Reinforcement.





Replacement

8

Install the new C-Pillar Reinforcement.

