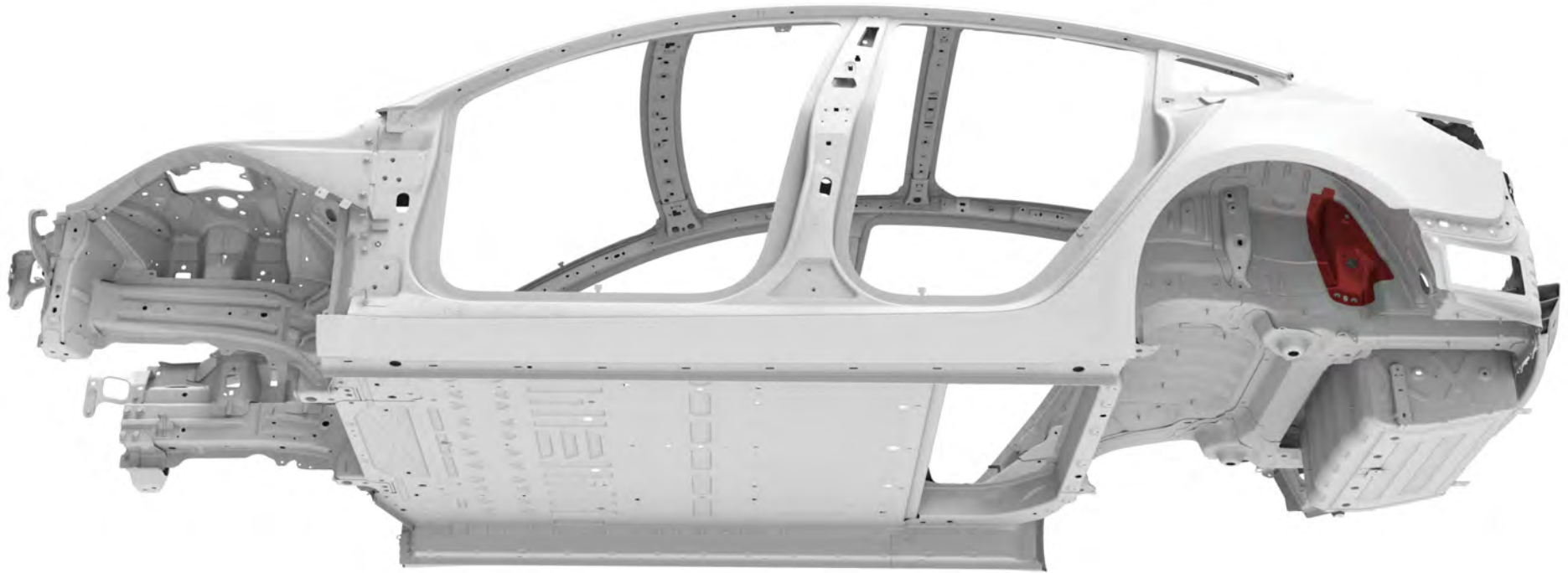




Rear Wheelhouse Rear Stiffener



cardiagn.com



Parts List

Quantity	Part Number	Description	Image / Notes
1	1091443-S0-D (LH) 1091444-S0-D (RH)	STIFF, RR WHEELHOUSE RR - SVC (Rear Wheelhouse Rear Stiffener)	
11 rivets needed; order 20 rivets	1028408-00-A	 Structural Rivet, 6.5 mm Short	All rivets come in packages of 10; order all rivets in multiples of 10.
2	1063260-00-C	 Bolt, hex-head, M8x23.5	
1	—	Structural Adhesive	Refer to BR-17-92-002 , "Obtaining Adhesives, Coolant, and Other Chemicals" for information on how to obtain approved 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. 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.	 WARNING: Wear the appropriate personal protective equipment (PPE) when performing this procedure.	No special tools are required to perform this procedure.



Prerequisites

Remove the Rear Damper Mount Upper.





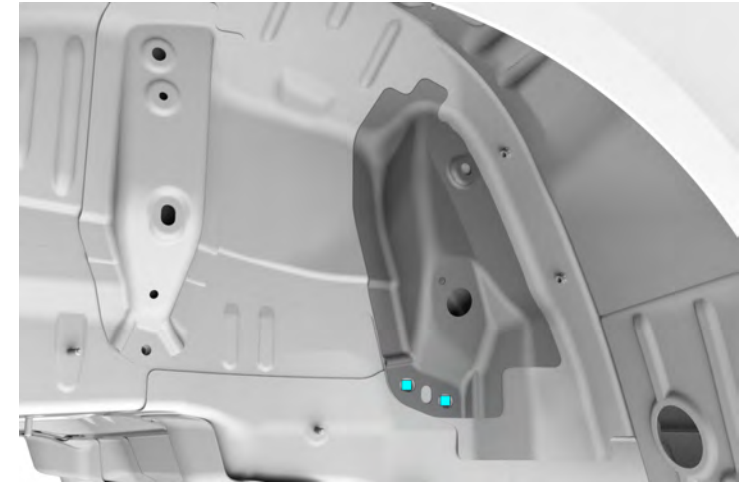
Removal

Remove the original component.

A

Remove and discard the original bolts.

 Bolt, hex-head



B

Use a drill with a spot weld bit to drill out the factory spot welds. Use a belt sander to sand down any factory spot welds that cannot be reached with a drill.

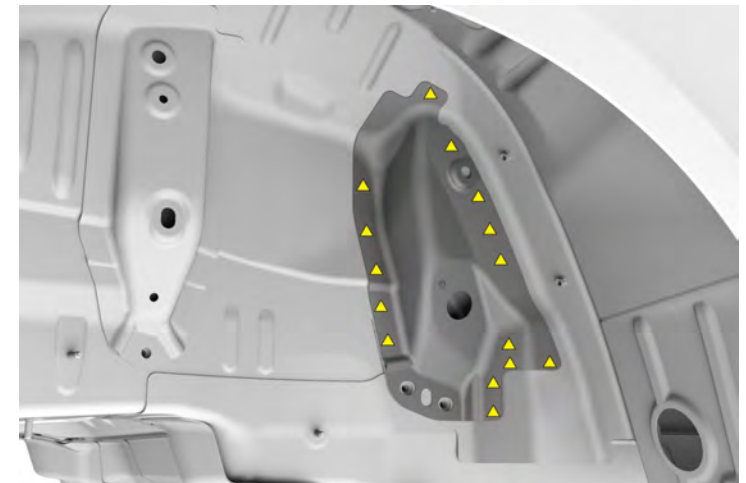
 Factory Spot Weld



CAUTION: Do not damage the surrounding components.



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





Removal

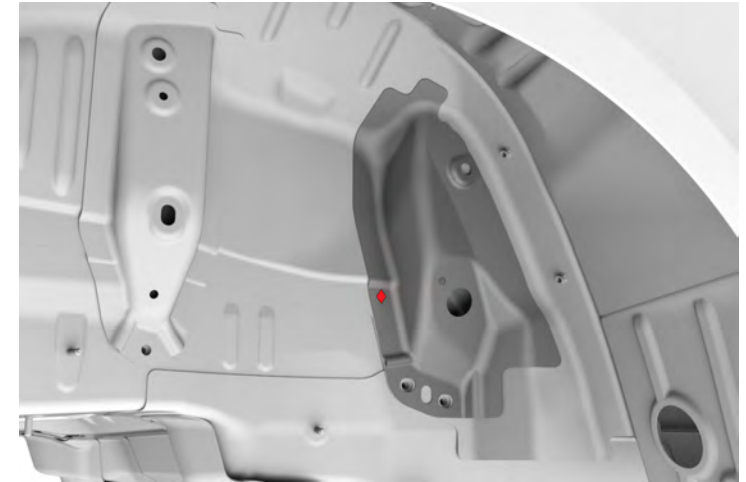
Remove the original component (continued).

- 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.

 Factory SPR



NOTE: Factory SPR locations shown are approximate. Exact rivet locations and number may vary from vehicle to vehicle.



- D** 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 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

Remove the original component (continued).

E

Use a disc sander with a medium-abrasive surface conditioning disc to remove any remaining materials from the mating surfaces. 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.



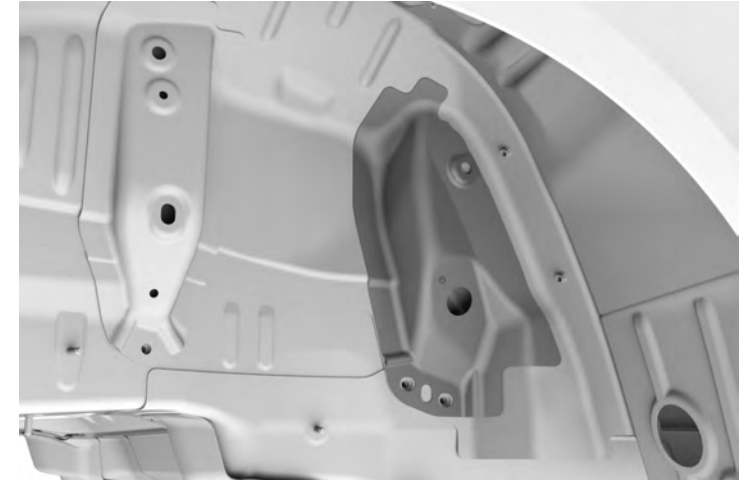
WARNING: Use only sanding wheels and belts that are 80 grit or finer on aluminum components. Using sanding wheels or belts that are coarser than 80 grit can cause fractures in the aluminum.



Replacement

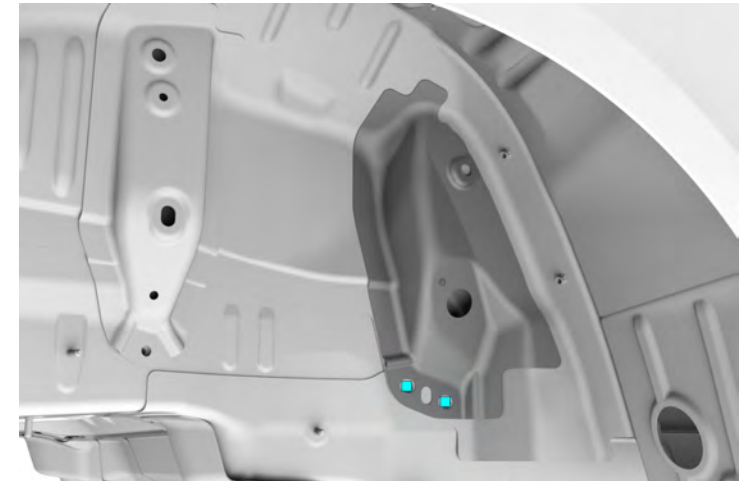
1 Prepare for installation.

A Put the new component into position and secure it in place.



B Temporarily install the hex-head bolts, but do not torque them at this time.

■ Bolt, hex-head (x2)





Replacement

1 Prepare for installation (continued).

C Mark the fastener locations on the new component.

● Structural Rivet, 6.5 mm Short (x11)



NOTE: Use the measurements indicated to avoid interference with Rear Rail Upper Connector Bracket behind panel.



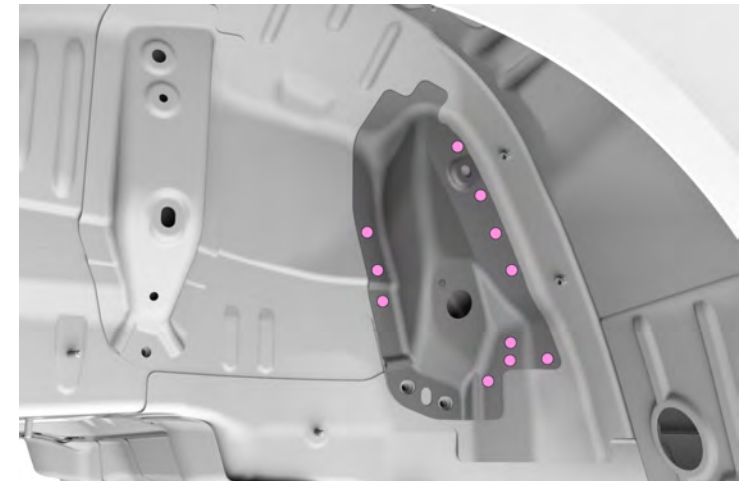
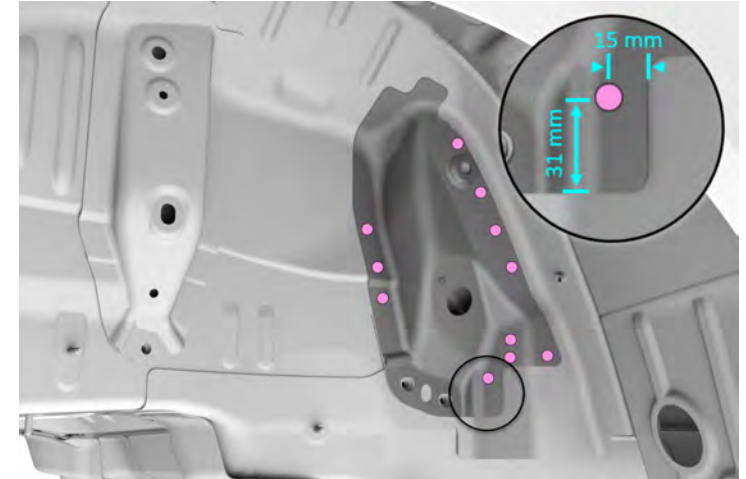
NOTE: Rivets replacing factory SPR locations will go through the existing SPR holes in the vehicle.

D Drill 6.7 mm holes for structural rivets.

● Structural Rivet, 6.5 mm Short (x11)



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 Mark boundary lines along all mating surfaces between the new component and the vehicle for surface preparation.
 - F Remove the new component.



Replacement

2 Prepare the surfaces.

A Use a red Scotch-Brite pad or equivalent to scuff the e-coat on the mating surfaces of the new component and the vehicle.

B Clean all the mating surfaces of the new component or components and 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.



Replacement

3 Apply structural adhesive.

A

Spread a thin coating of structural adhesive as a primer layer on the mating surfaces of the vehicle and the new component.



CAUTION: If any bare metal mating surfaces have been exposed for two hours or longer, abrade the mating surfaces again to remove oxidation, then clean the mating surfaces with isopropyl alcohol (IPA).



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

B

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



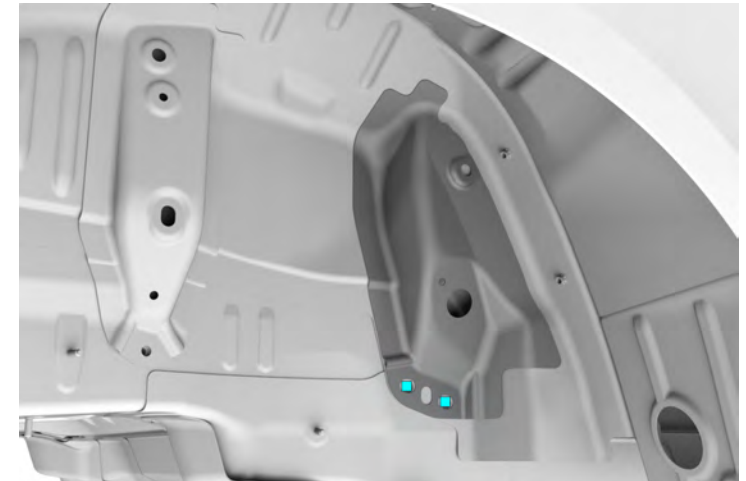
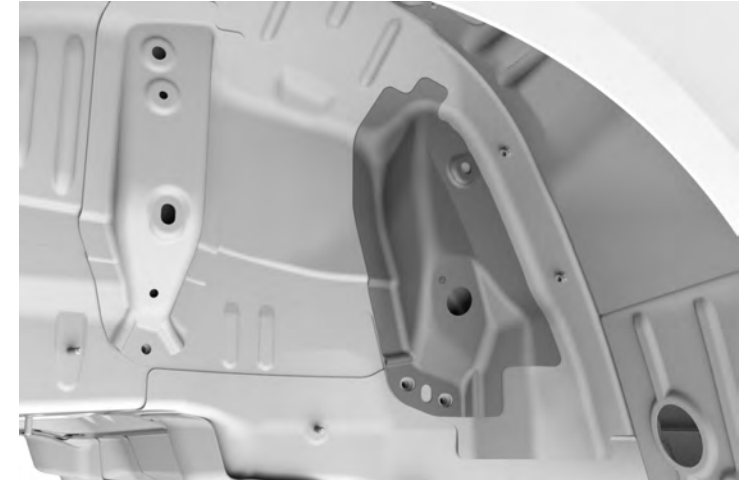
Replacement

4 Install the new component.

A Put the new component into position and secure it in place.

B Install the bolts, but do not torque them at this time.

■ Bolt, hex-head, M8x23.5 (x2)



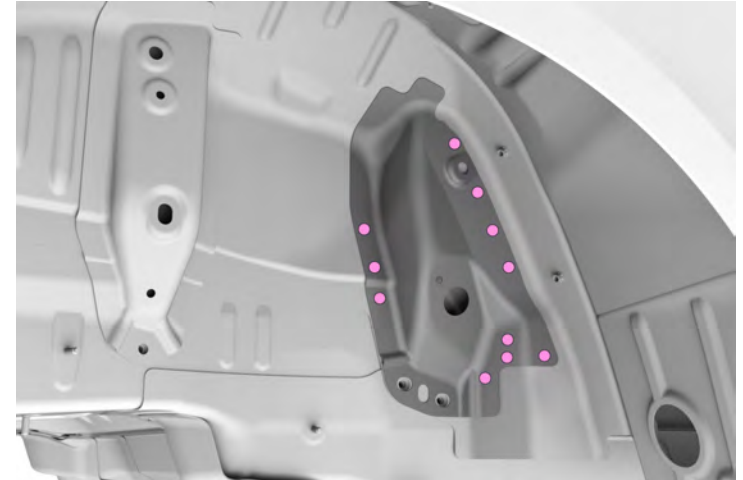


Replacement

4 Install the new component (continued).

C Insert the structural rivets.
● Structural Rivet, 6.5 mm Short (x11)

D Install the structural rivets.





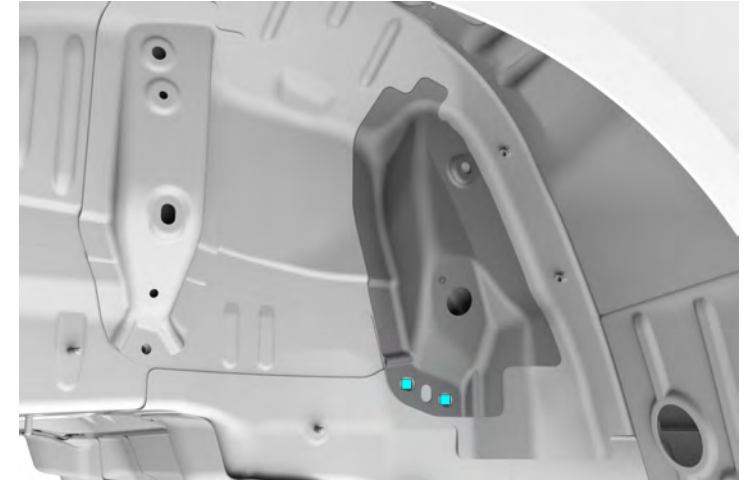
Replacement

4 Install the new component (continued).

E Torque the bolt to 24 Nm.

■ Bolt, hex-head (x2)

F Wipe off any excess adhesive.





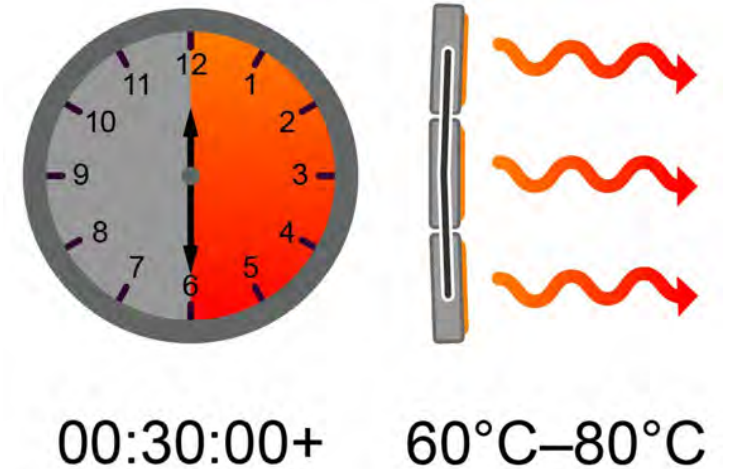
Replacement

4 Install the new component (continued).

G 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.



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



Replacement

5

Install the Rear Damper Mount Upper.

