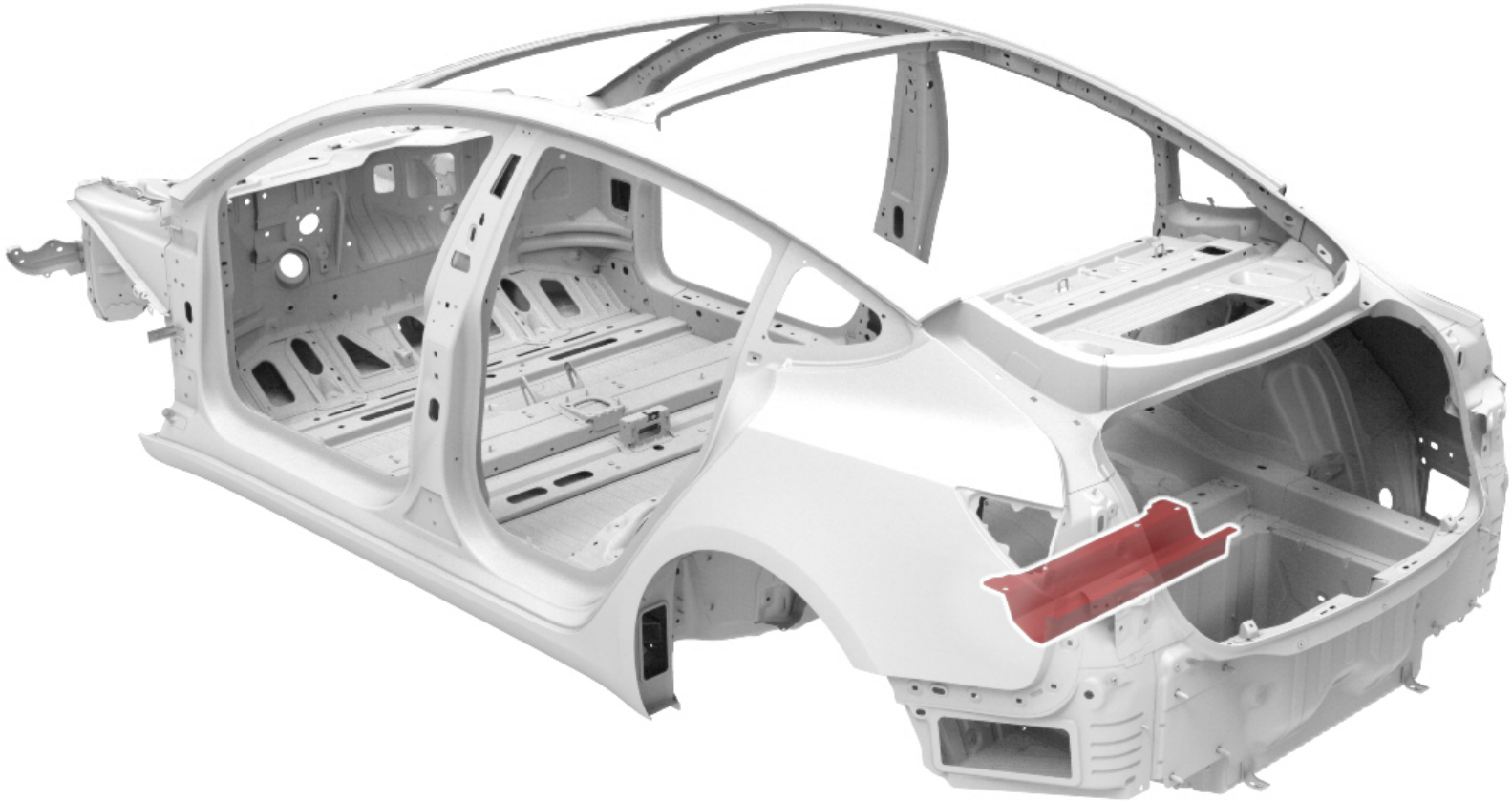
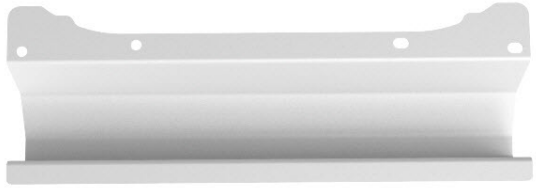
Rear Subframe Lower Crossmember



Parts List

Quantity	Part Number	Description	Image / Notes
1	1097163-S0-D	Cross Member-Rr Subframe Lower (Rear Subframe Lower Crossmember)	
14 rivets needed; order 20 rivets	1454538-00-A	High Strength Structural Rivet, 6.5 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. Source locally; not available from Tesla.
1	_	Seam Sealer	Source locally; not available from Tesla.

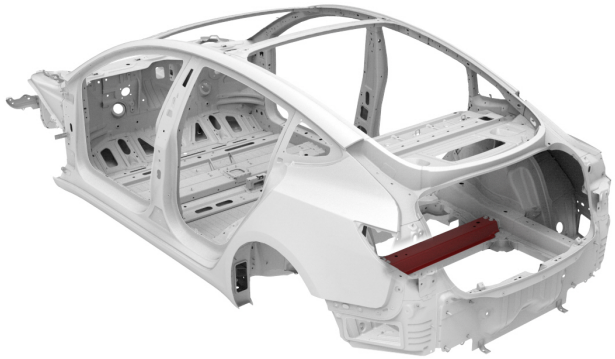
These part numbers were current at the time of publication. Use the revisions listed or later, unless otherwise specified in the Parts Manual.

Repair Information

Repair Information	Warnings and Cautions	Special Tools
	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. Refer to BR-17-10-005, "Model 3 Body Structure Materials and Allowed Operations," for more information.	No special tools are required to perform this procedure.

Prerequisites

Remove the Rear Subframe Upper Crossmember.

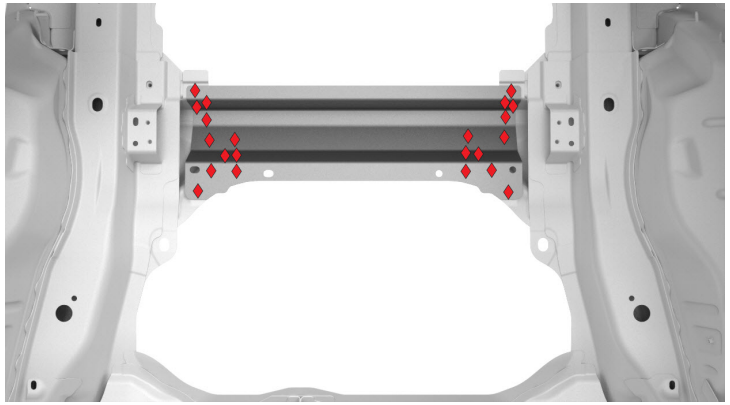


Removal

Remove the original component.

A 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



B 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).

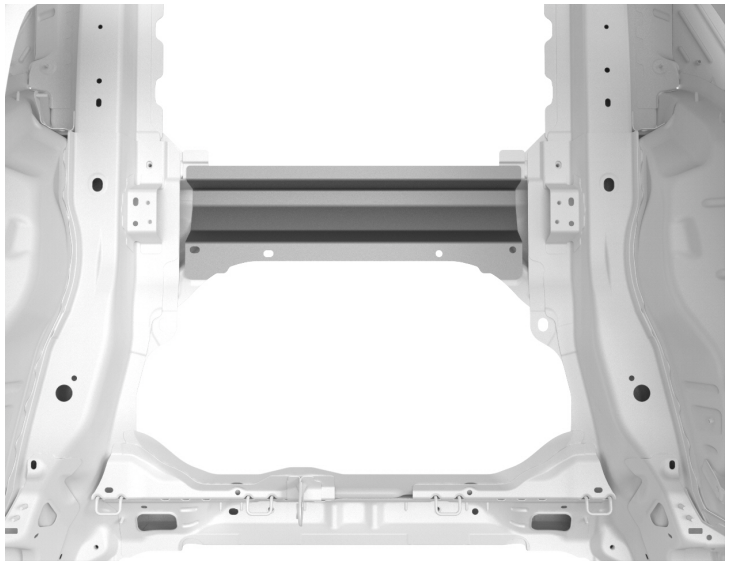
C Use a disc sander with a medium-abrasive surface conditioning disc to remove any remaining materials from the mating surfaces. Use a belt sander with a medium-abrasive belt for any areas that cannot be reached with a disc sander. Vacuum any adhesive dust.

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

Replacement

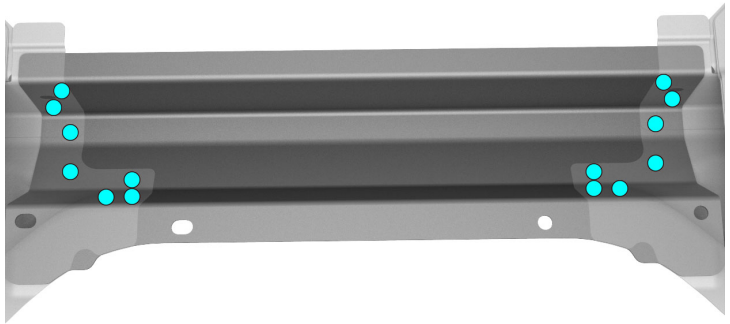
1 Prepare for installation.

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



B Mark the fastener locations on the new component.

- High Strength Structural Rivet, 6.5 mm (x14)



NOTE: Use the existing SPR holes in the original component as a template to mark the locations for SPRs on the new component.

Replacement

1 Prepare for installation (continued).

C Drill 6.7 mm holes for structural rivets.

- High Strength Structural Rivet, 6.5 mm (x14)

NOTE: Drill 6.7 mm holes for structural rivets in the new component through the existing holes that were used for the factory self piercing rivets in the original component.

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

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

Replacement

1 Prepare for installation (continued).

E Remove the new component.

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.

Replacement

2 Prepare the surfaces (continued).

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.

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.

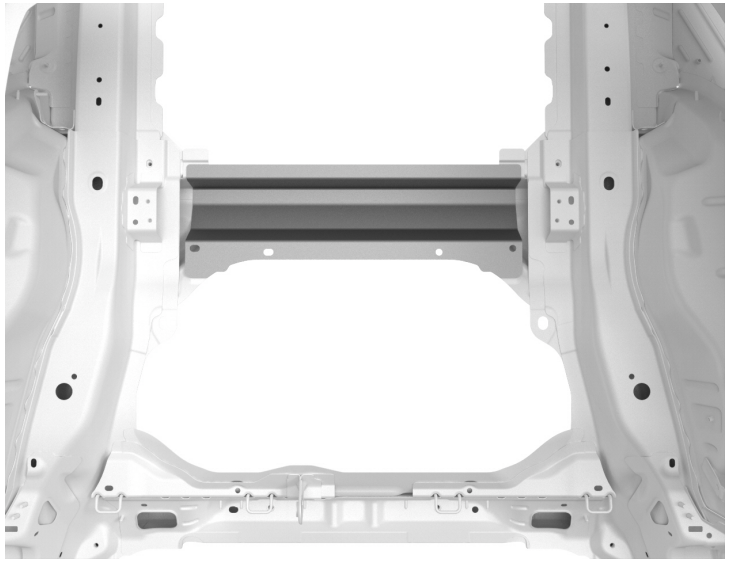
Replacement

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 and secure it in place.

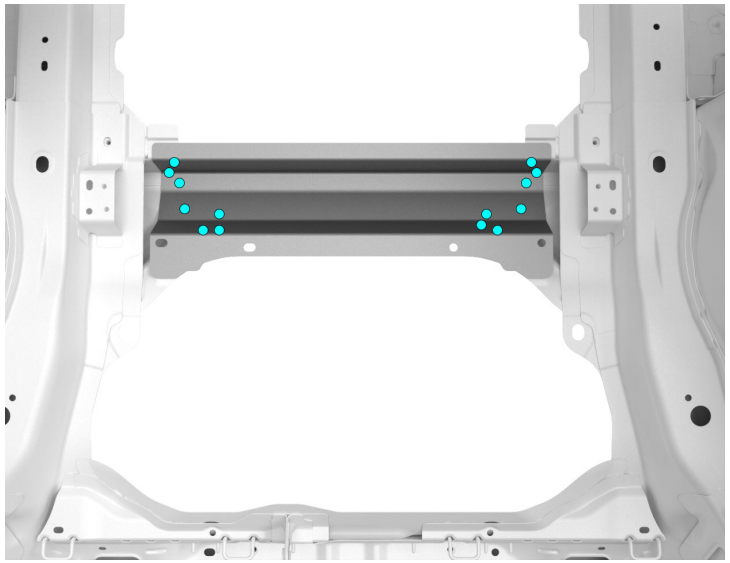


Replacement

4 Install the new component (continued).

B Insert the structural rivets.

- High Strength Structural Rivet, 6.5 mm (x14)



C Clamp all bonded areas not secured with a fastener.

Replacement

4 Install the new component (continued).

D Install the structural rivets.

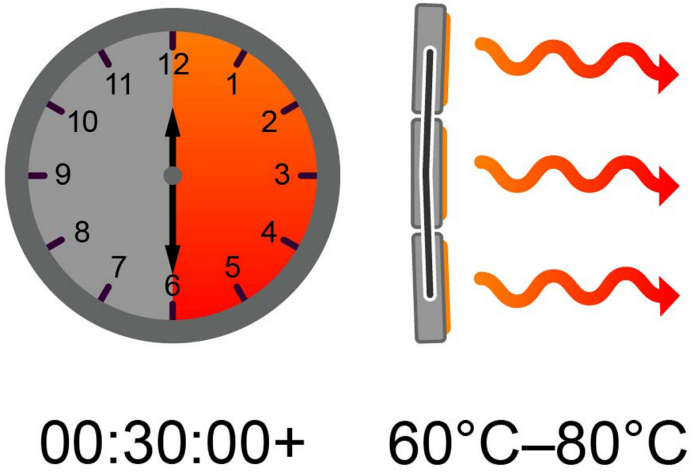
E Wipe off any excess adhesive.

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.



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

Replacement

5 Install the Rear Subframe Upper Crossmember.