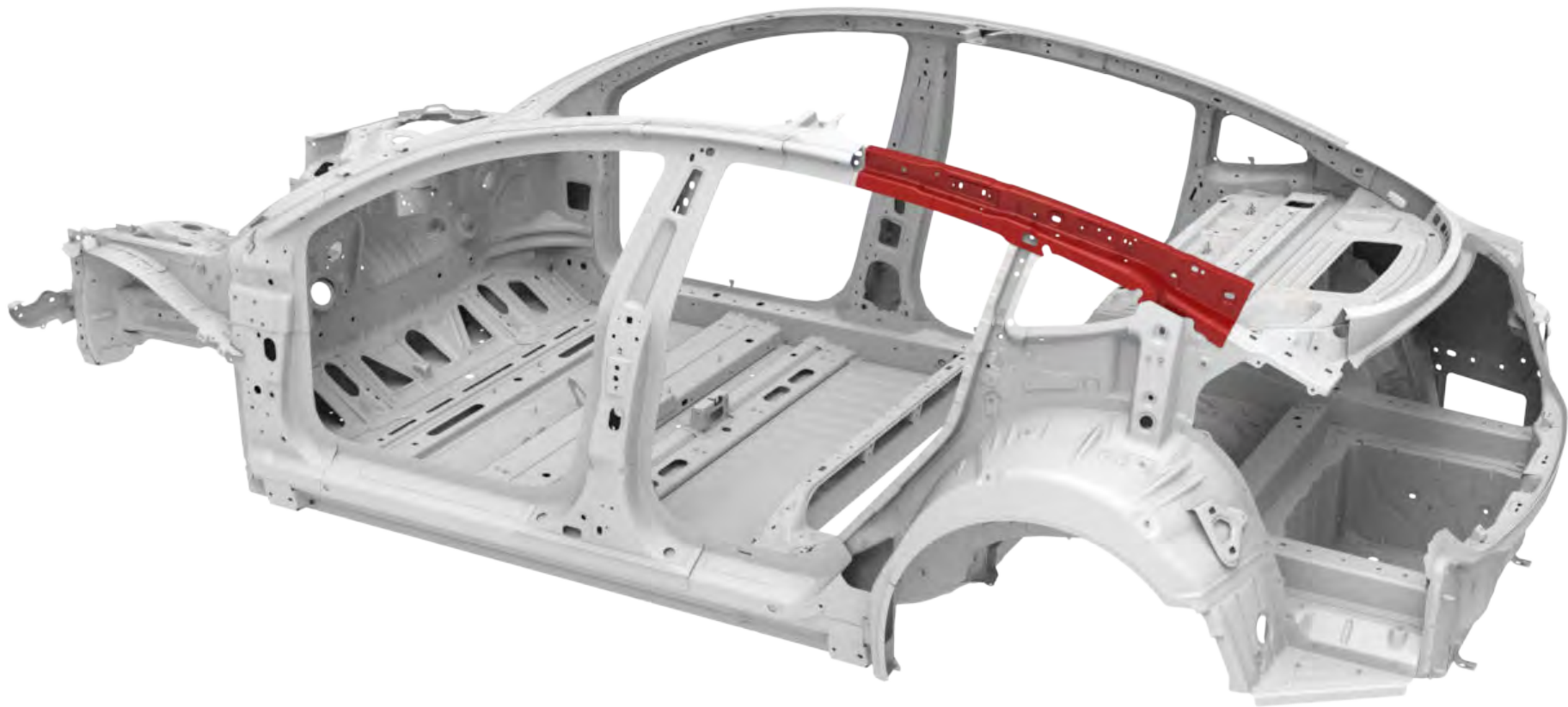




Cantrail Extension Inner





Parts List

Quantity	Part Number	Description	Image / Notes
1	1096101-SO-C (LH) 1096102-SO-C (RH)	Cantrail Inner Extension	
3 rivets needed; order 10 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 rivets needed; order 10 rivets	1069308-00-A	● Countersunk Rivet, 4.8 mm Short	All rivets come in packages of 10; order all rivets in multiples of 10.
1 rivets needed; order 10 rivets	1069331-00-A	★ Flow Form Rivet S38	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.
1	—	Urethane Sealant	Refer to BR-17-92-002 , "Obtaining Adhesives, Coolant, and Other Chemicals" for information on how to obtain approved structural adhesive.



Parts List

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.  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.	The special tools listed below are required to perform this procedure: • Countersink Drill Tool • Resistance Spot Welder Use only an approved resistance spot welder. Refer to BR-16-92-007, "Approved Welders" for a list of current approved resistance spot welders.



Prerequisites

1

Disconnect 12V and high voltage power (refer to the appropriate section in [BR-17-17-004](#), "Disconnecting 12V and High Voltage Power on Model 3").



WARNING: Before disconnecting the 12V power supply, make sure that all windows are at least slightly open. Attempting to open a door with a fully-closed window when the 12V power supply is disconnected could result in door glass shatter.



NOTE: Before disconnecting the 12V power supply, make sure that the driver's door window is fully open. Failure to lower the driver's door window before disconnecting the 12V power supply could result in vehicle lockout.

2

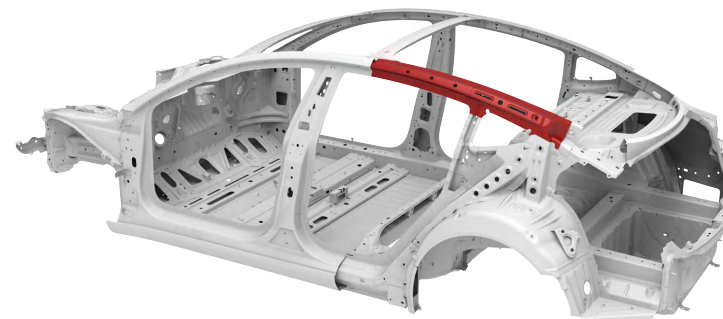
Remove the Quarter Outer Complete panel.



Prerequisites

3

Remove the Roof Rail Extension.

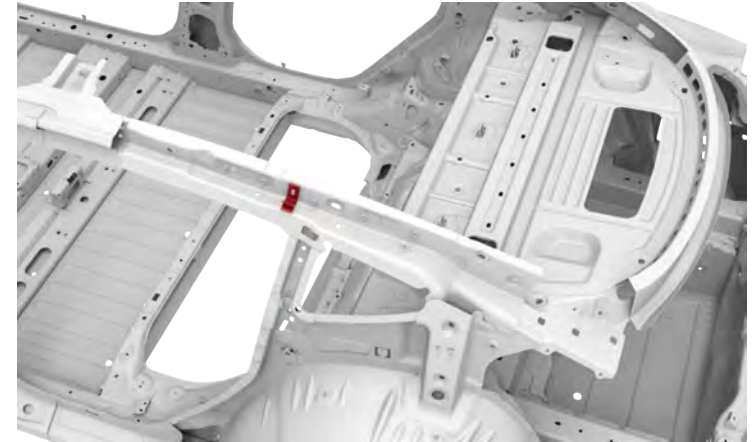




Removal

1

Remove the foam dam and save it for reinstallation at a later step.



2

Remove factory fasteners.

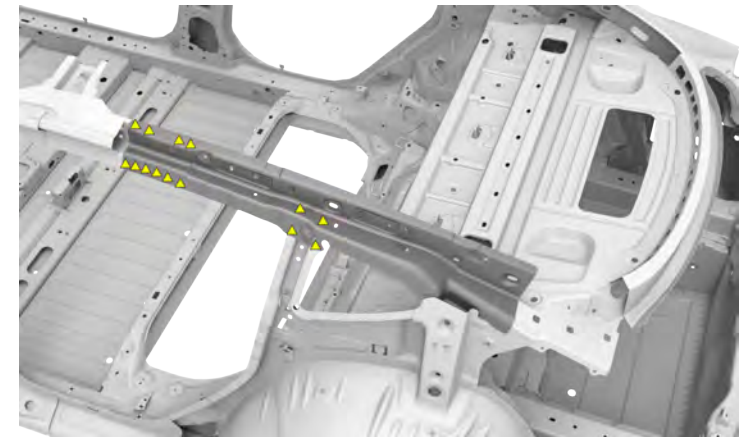
A

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



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





Removal

2 Remove factory fasteners (continued).

B 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: An S38 Flow Form Rivet will be installed in the location circled in red when the Quarter Outer Complete is reinstalled.



3 Remove the original component.

A 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 Remove the original component (continued).

B 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.

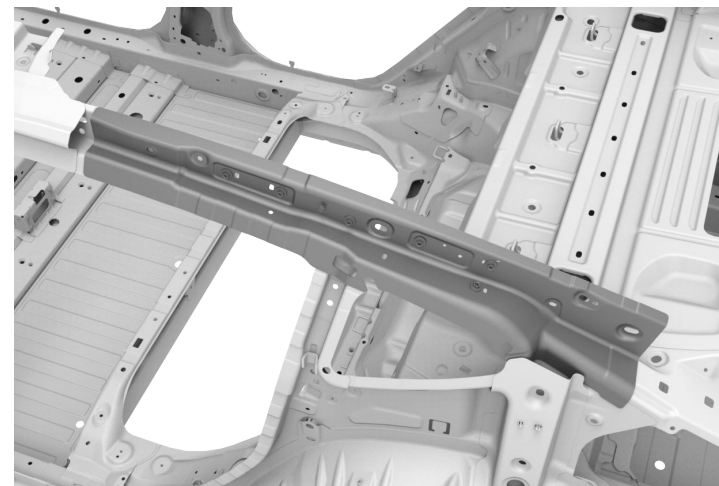
A Put the new component into position and secure it in place.

B Mark the fastener locations on the new component.

▲ Installation Spot Weld

● Structural Rivet, 6.5 mm Short

● Countersunk Rivet, 4.8 mm Short





Replacement

1 Prepare for installation (continued).

C Use a drill with a 6.7 mm bit to drill holes for structural rivets.
● Structural Rivet, 6.5 mm Short



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).

D

Drill a 4.8 mm hole for a countersunk rivet.

● Countersunk Rivet, 4.8 mm Short



CAUTION: Drill holes for countersunk rivets far enough away from the corners and any other obstructions to provide enough clearance (approximately 18 mm) for the Microstop countersink cage assembly.



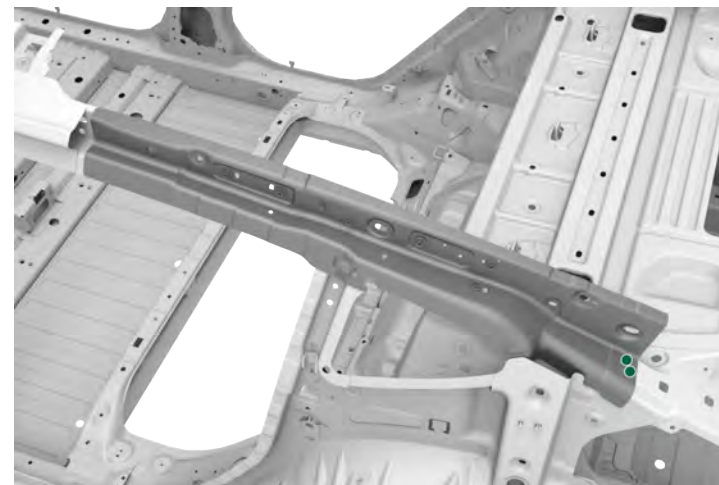
NOTE: Install a grip screw after drilling each hole to keep the panel aligned while drilling the remaining holes.



NOTE: If the depth adjustment for the Microstop countersink cage assembly has not already been set, do the procedure in the [Microstop Countersink Kit tool instructions](#) to adjust the tool.

E

Remove the new component.





Replacement

2

Prepare the surfaces.

A

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

B

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).

- C** Use a disc sander with a medium-abrasive surface conditioning disc to remove the e-coat from the mating surfaces of the new component. Use a belt sander with a medium-abrasive belt for any areas that cannot be reached with a disc sander.

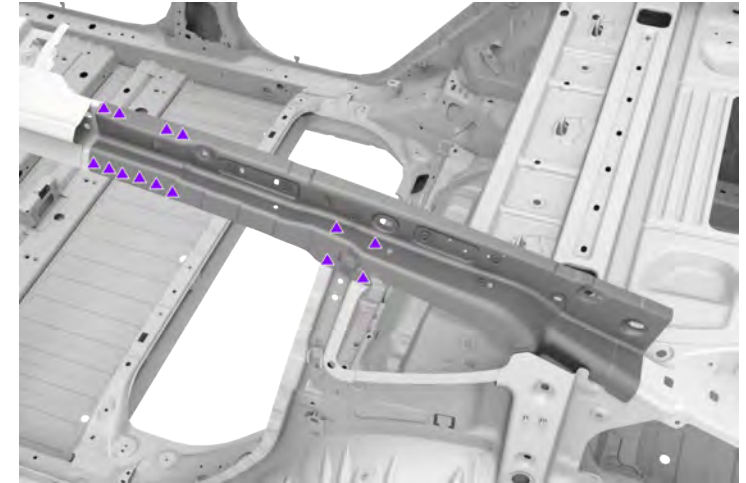


WARNING: Remove the e-coat in a well-ventilated area. Wear suitable personal protective equipment.

- D** Clean all the mating surfaces and weld areas 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 new component.



Replacement

4 Install the new component.

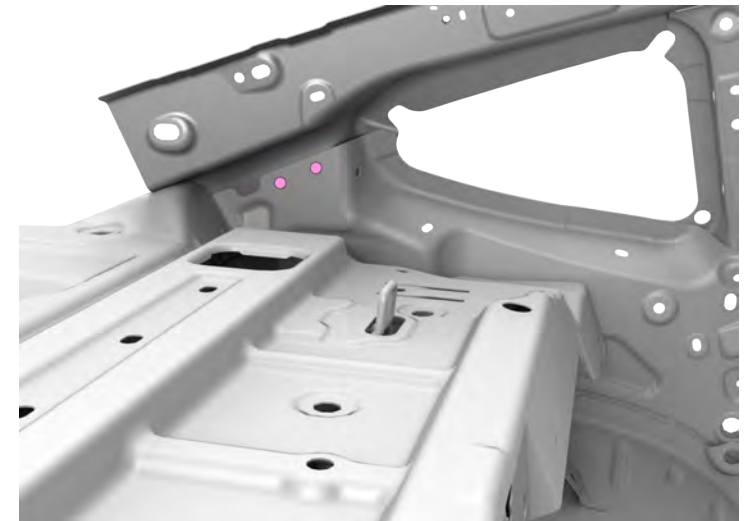
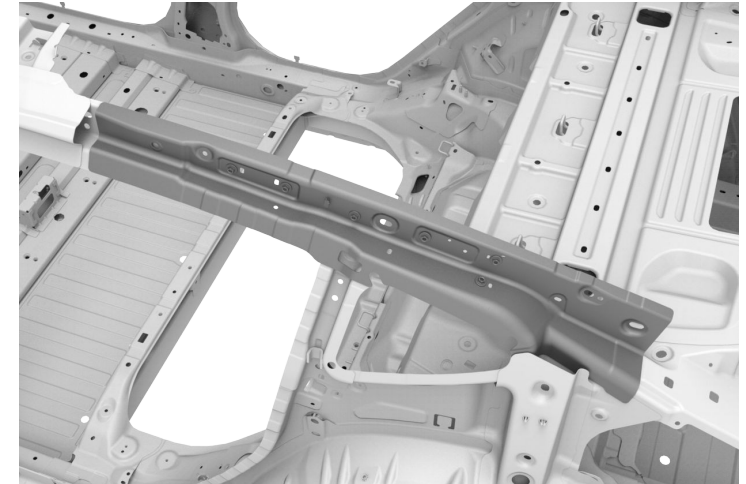
A Put the new component into position and secure it in place.

B Insert structural rivets.

● Structural Rivet, 6.5 mm Short (x3)



NOTE: The two rivets shown in the first image are installed from inside the vehicle.





Replacement

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

- C Insert countersunk rivets.
- Countersunk Rivet, 4.8 mm Short (x2)





Replacement

4 Install the new component (continued).

D

Install structural rivets.

- Structural Rivet, 6.5 mm Short (x3)
- Countersunk Rivet, 4.8 mm Short (x2)





Replacement

4 Install the new component (continued).

E Perform resistance spot welding.
▲ Installation Spot Weld



WARNING: Failure to follow all welding safety precautions, including the use of personal protective equipment, could result in serious injury or property damage. Only technicians who have successfully met Tesla's requirements for welding training are authorized to weld structural components on Tesla vehicles.



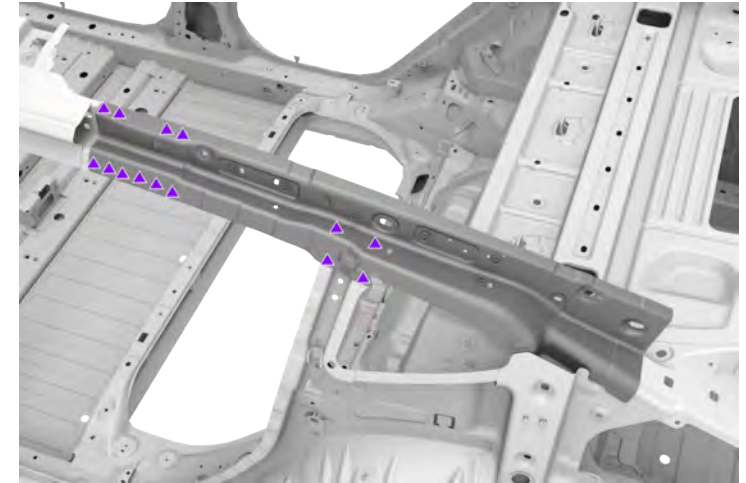
CAUTION: Do not weld on a Tesla vehicle with an energized high voltage or 12V system. Welding on a Tesla vehicle with an energized high voltage or 12V system might damage vehicle components.



CAUTION: Use only insulated clamps within 200 mm of resistance spot weld locations. Do not perform resistance spot welding when there is an uninsulated clamp within 200 mm of the spot weld location.

F

Clamp all bonded areas that are not secured with a fastener.





Replacement

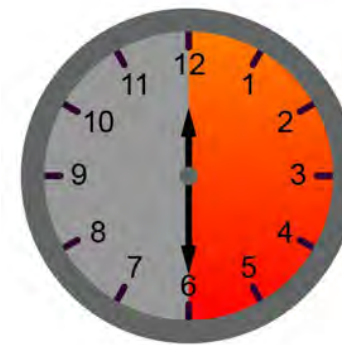
4 Install the new component (continued).

G Wipe off any excess adhesive.

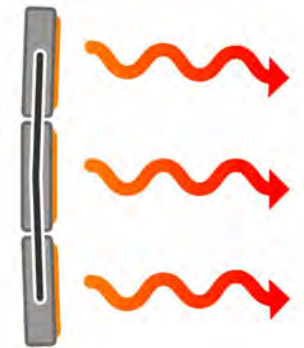
H Bake the structural adhesive so that the bonded panels reach a temperature of 60°C–80°C (140°F–176°F) for at least 30 minutes to achieve full strength.



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+

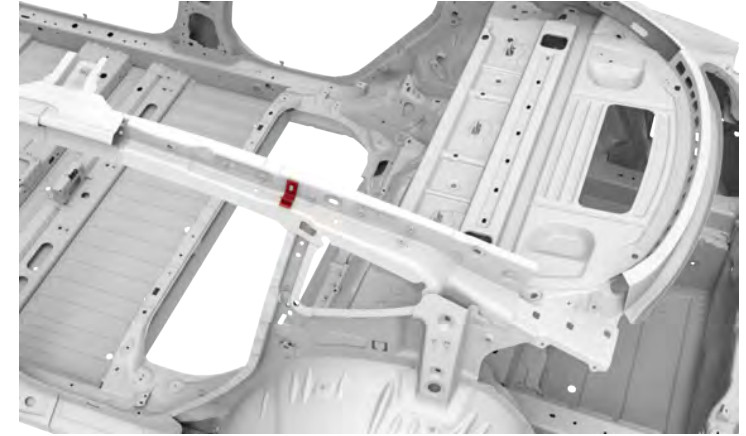


60°C–80°C



Replacement

- 4 Install the new component (continued).
 - I Use urethane sealant to reinstall the Foam Dam removed in a previous step.
 - J Seal the seams in the factory locations, and as necessary.

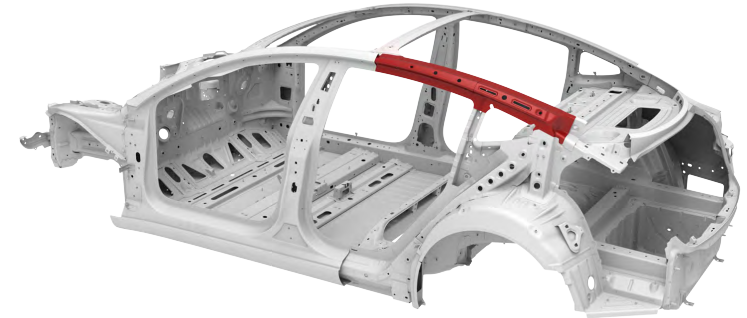




Replacement

5

Install the Roof Rail Extension.



6

Install the Quarter Outer Complete.

When performing the Quarter Outer Complete procedure, [install the Flow Form rivet listed in a previous step.](#)

★ Flow Form Rivet S38

