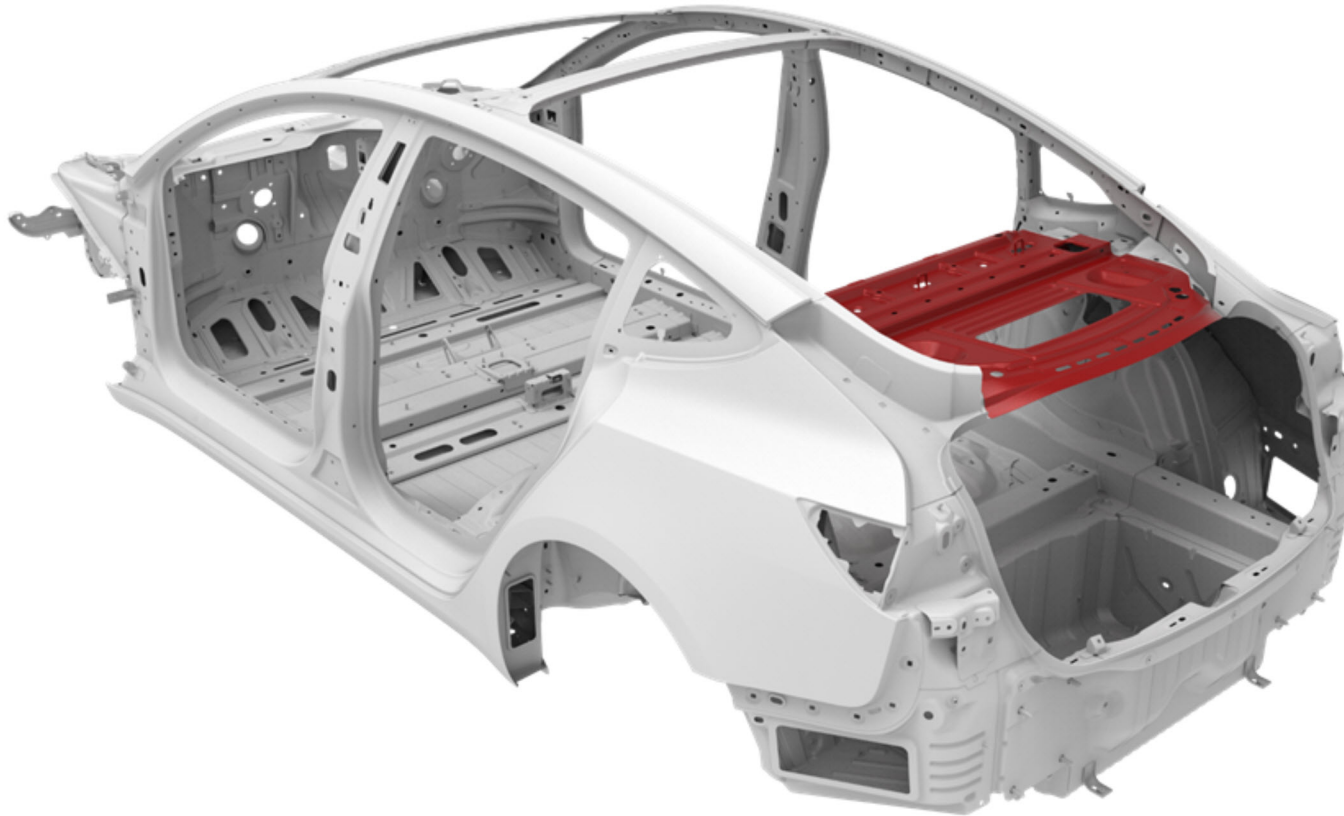





Parcel Shelf Crossmember Assembly





Parts List

Quantity	Part Number	Description	Image / Notes
1	1078439-S0-A	M3 ASY, PARCEL SHELF CROSSMEMBER	
36 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.
1 rivet 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.
4 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.
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
—	<p>⚠ WARNING: Wear the appropriate personal protective equipment (PPE) when performing this procedure.</p>	<p>The special tools listed below are required to perform this procedure:</p> <ul style="list-style-type: none">• Microstop Countersink kit• Flow form rivet installation tool <p>Use only approved fastener installation tools for structural repairs. Refer to BR-16-92-001, "Approved Fasteners and Fastener Installation Tools for Structural Repairs" for a list of current approved fastener installation tools.</p>



Prerequisites

Remove the [Rear Center Trough](#).





Removal

1 Remove the original component.

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.

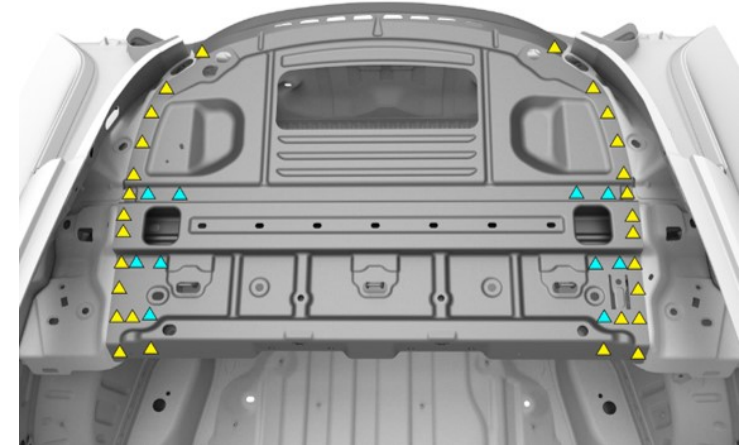
- ▲ Factory Spot Weld
- ▲ Factory Spot Weld (2 layers)



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

B From below the parcel shelf, use a drill with a 6.7 mm (17/64 in) bit to drill completely through the factory spot welds on the LH and RH side of the parcel shelf crossmember.

- ▲ Factory Spot Weld (x8)





Removal

1 Remove the original component (continued).

C Use a heat gun to heat the adhesive joints, and then use a hammer and chisel to separate the adhesive joints, and then remove the 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.

2 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.

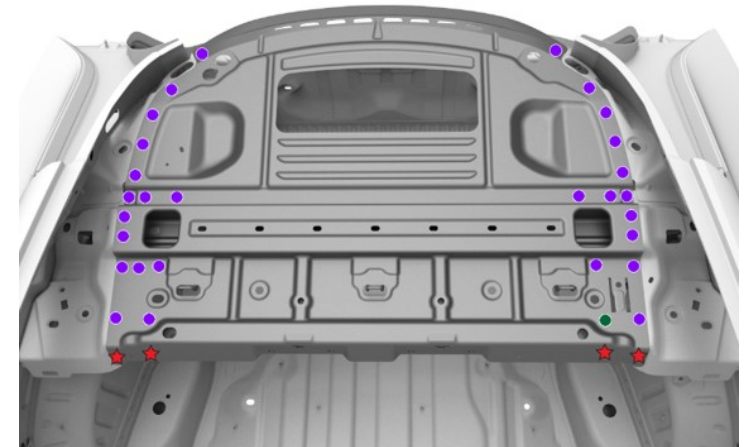


B Mark the fastener locations on the new component.

- Structural Bulb Rivet, 6.5 mm (x28)
- ★ Flow Form Rivet S18 (x4)
- Countersunk Rivet, 4.8 mm Short (x1)



NOTE: The countersunk rivet is for the LH side only to avoid interference with the TPMS module.



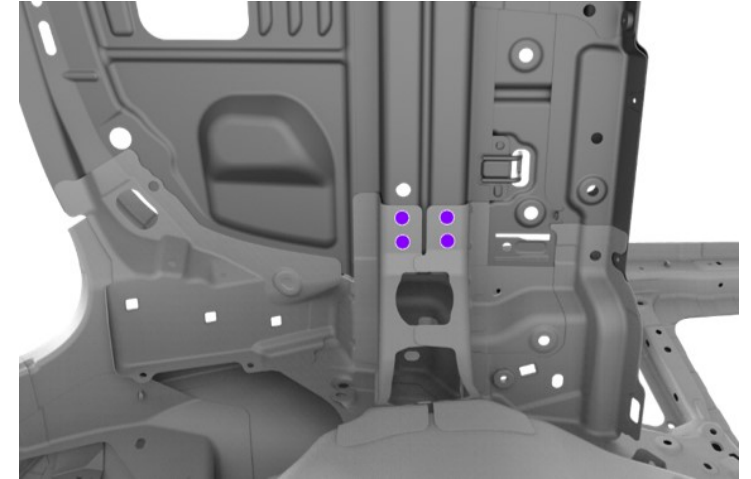


Replacement

1 Prepare for installation (continued).

C From below the parcel shelf, mark the fastener locations on the LH and RH sides of the parcel shelf crossmember.

● Structural Bulb Rivet, 6.5 mm (x8)



D Create 8 mm holes for flow form rivets.

★ Flow Form Rivet S18 (x4)





Replacement

1 Prepare for installation (continued).

E Use a drill with a 6.7 mm bit to drill holes for structural bulb rivets.

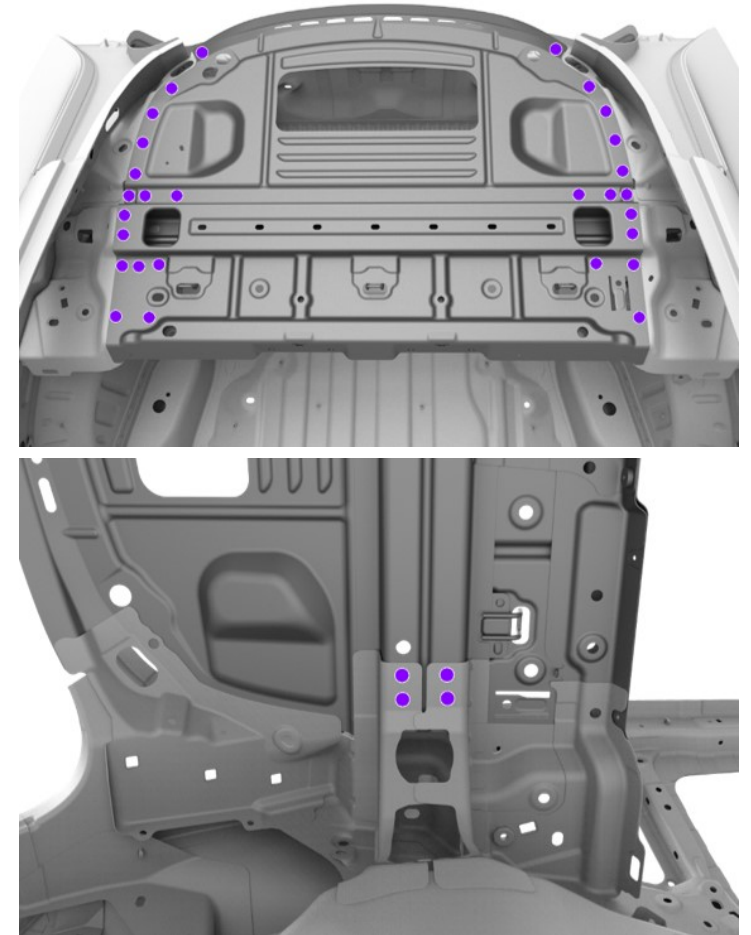
● Structural Bulb Rivet, 6.5 mm (x36)



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



NOTE: Drill holes in the new component through any existing holes on the vehicle created during removal.



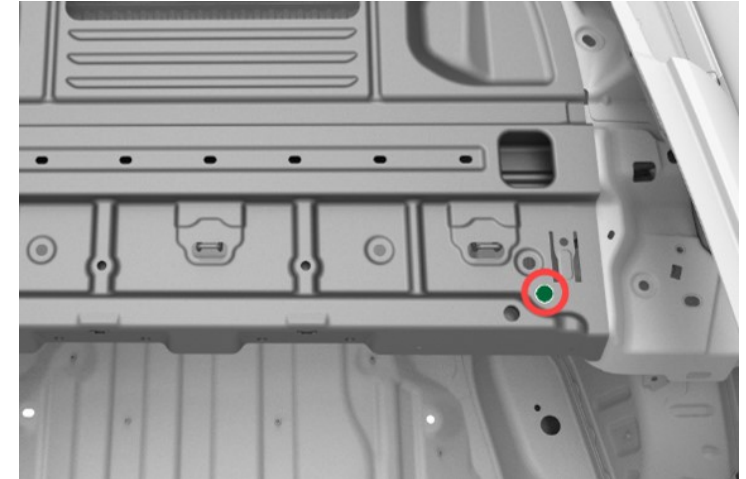


Replacement

1 Prepare for installation (continued).

F Use a drill with a 4.8 mm bit to drill a hole for a countersunk rivet.

- Countersunk Rivet, 4.8 mm Short (x1)



G Use a drill with the Microstop countersink cage assembly and the appropriate-sized countersink bit to countersink the hole (Microstop Countersink Kit, Tesla p/n 1133101-00-A).



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.



Replacement

1

Prepare for installation (continued).

H

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

I

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 clamp it into place.

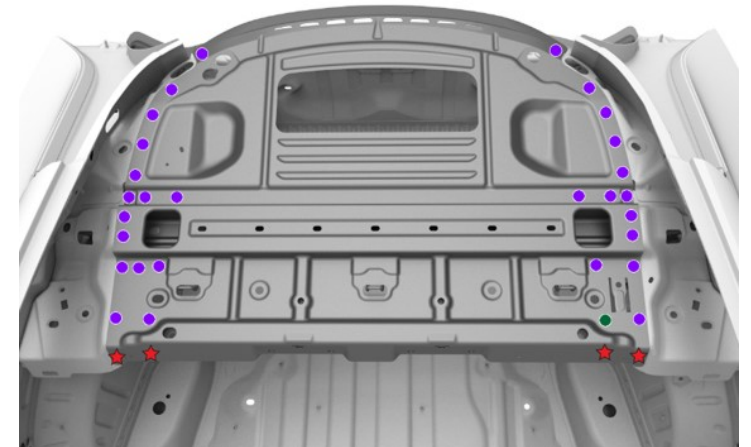


B Insert all structural, countersunk, and flow form rivets.

● Structural Bulb Rivet, 6.5 mm (x28)

★ Flow Form Rivet S18 (x4)

● Countersunk Rivet, 4.8 mm Short (x1)





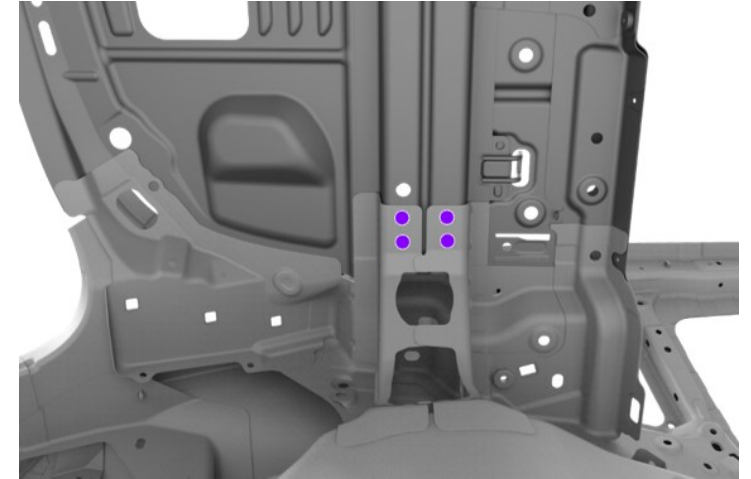
Replacement

4 Install the new component (continued).

C Insert the structural bulb rivets in the LH and RH sides of the parcel shelf crossmember.

● Structural Bulb Rivet, 6.5 mm (x8)

D Install all structural, countersunk, and flow form rivets.





Replacement

- 4 Install the new component (continued).
- E Clamp all bonded areas that are not secured with a fastener.
- F Wipe off any excess adhesive.



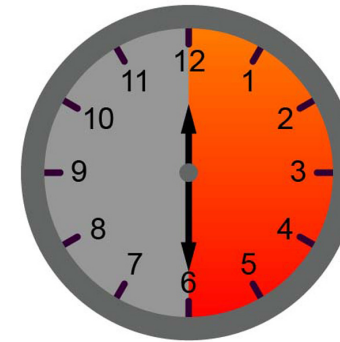
Replacement

4 Install the new component (continued).

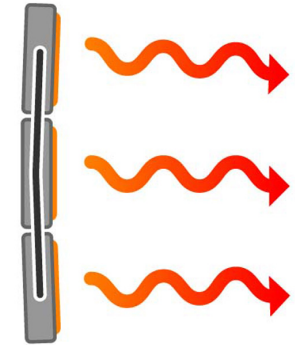
G Bake the structural adhesive so that the bonded panels reach a temperature of 60°C–80°C (140°F–176°F) for at least 30 minutes to achieve full strength.



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.



00:30:00+



60°C–80°C

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



Replacement

6

Install the [Rear Center Trough](#).

