





## Sill Insert (Front Section)





## Parts List

| Quantity | Part Number                            | Description                           | Image / Notes  |
|----------|--|---------------------------------------|--|
| 1        | 1115819-SO-D (LH)<br>1115820-SO-D (RH) | Sill Insert                           |   |
| 2        | 1082361-SO-C                           | Sill Insert Mounting Bracket          |   |
| 1        | 1467695-00-B                           | Model 3 Front Sill Insert Section Kit | <p>Kit contents:</p> <ul style="list-style-type: none"> <li>• Cell 1 Reinforcement Insert, part number 1467691-00-A (x1)</li> <li>• Cell 2 Reinforcement Insert, part number 1467693-00-A (x1)</li> <li>• Cell 3 Reinforcement Insert Plates, part number 1467694-00-A (x2)</li> <li>• Bolt, hex-head, part number 2007113 (x6)</li> <li>• SPAC Nut, part number 1071915-00-A (x6)</li> <li>• High Strength Structural Rivet, 6.5 mm, part number 1454538-00-A (x10)</li> <li>• Weld nut, part number 1077796-00-B (x1)</li> </ul> |
| 1        | —                                      | Structural Adhesive                   | <p><b>⚠ WARNING:</b> Use only Tesla-approved structural adhesive; refer to <a href="#">BR-15-92-008</a>, "Approved Structural Adhesive and Urethane Sealants" for a list of current approved structural adhesives.</p> <p>Refer to <a href="#">BR-17-92-002</a>, "Obtaining Adhesives, Coolant, and Other Chemicals" for information on how to obtain approved structural adhesive.</p>  |





## Parts List

| Quantity | Part Number | Description      | Image / Notes   |
|----------|-------------|------------------|---|
| 1        | —           | Urethane Sealant | Refer to <a href="#">BR-17-92-002</a> , "Obtaining Adhesives, Coolant, and Other Chemicals" for information on how to obtain approved urethane sealant. |

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



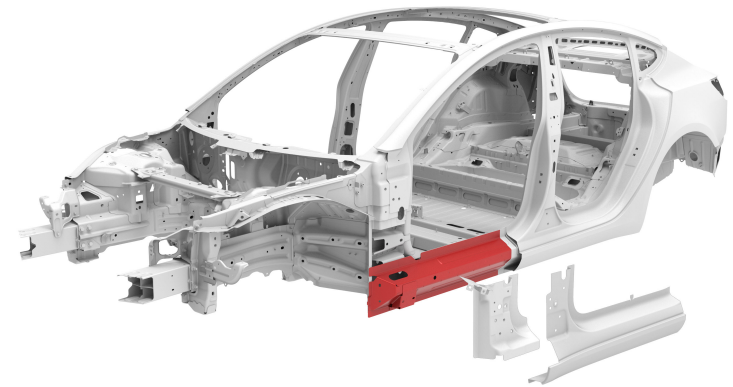
## Repair Information

| Repair Information   | Warnings and Cautions   | Special Tools   |
|--|---|---|
| <p>This procedure is for the right-hand component; the procedure is identical for the left-hand component.</p> | <p> <b>WARNING:</b> Wear the appropriate personal protective equipment (PPE) when performing this procedure.</p> <p> <b>CAUTION:</b> This procedure involves both steel and aluminum components. Use the appropriate tools at each step to avoid cross-contamination. Refer to <a href="#">BR-17-10-005</a>, “Model 3 Body Structure Materials and Allowed Operations”, for more information.</p> | <p>No special tools are required to perform this procedure.</p> |



## Prerequisites

Remove the [Sill Outer \(Front Section\)](#).





## Removal

1 Remove the front section of the original Sill Insert.

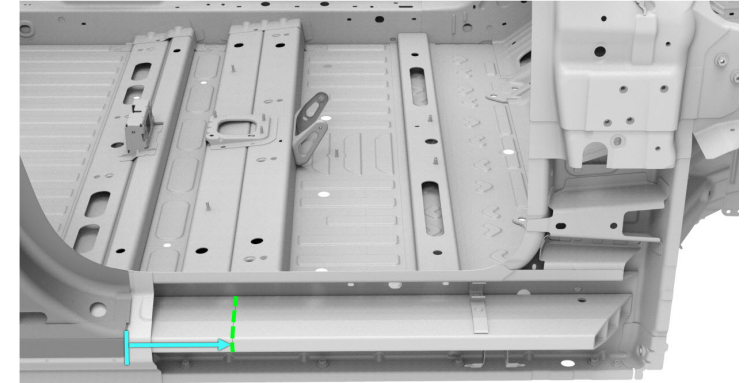
A

Mark a cut line 185 mm from the forward edge of the B-Pillar Outer.

 Cut Line



**NOTE:** In this figure the Body Side Outer panel has been removed for clarity.



185 mm

B

Cut the component on the cut line marked in the previous substep.



**CAUTION:** Do not damage the surrounding components.



## Removal

- 1 Remove the front section of the original Sill Insert (continued).
- C Remove the front section of the original Sill Reinforcement.

- D Remove the foam dam.



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





## Removal

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.





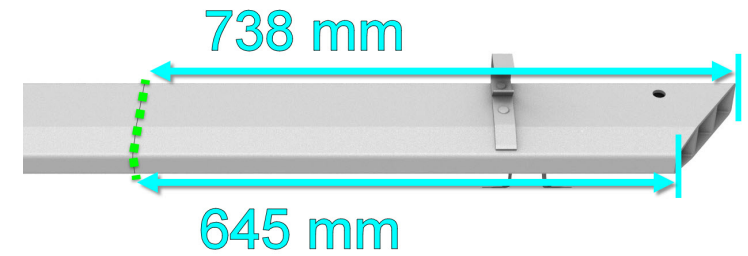


## Replacement

1 Prepare the new Sill Reinforcement front section for installation.

A Mark a cut line 738 mm from the long end and 645 mm from the short end of the new Sill Reinforcement.

-  Cut Line
-  Reference Line/Point




B Cut the new Sill Reinforcement on the cut line marked in the previous step.



## Replacement

2 Prepare the new Sill Insert for installation.


A Mark an alignment line for the front Sill Insert Mounting Bracket on the new Sill Insert.

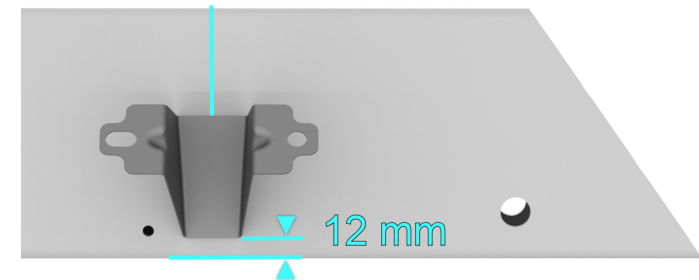
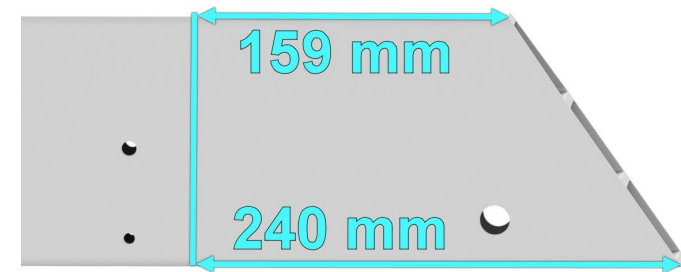
 Reference Line/Point



**NOTE:** This alignment line will be used to install the new Sill Insert Mounting Bracket in the correct position in a later step.

B Position the Sill Insert Mounting bracket on the Sill Insert 12 mm from the long edge of the Sill Insert section and centered on the alignment line made in the previous step and clamp it in place.

 Reference Line/Point





## Replacement

2 Prepare the new Sill Insert for installation (continued).

C Mark holes for structural rivets on the front and the rear Sill Insert Mounting Bracket.

● High Strength Structural Rivet, 6.5 mm (x2)

■ Reference Line/Point

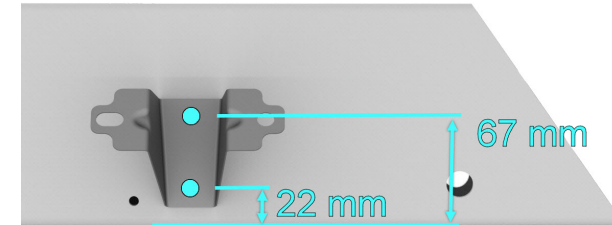


**WARNING:** Use the indicated measurements so that rivet holes are placed to prevent the rivets from being installed through internal walls of the Sill Insert.

D With the Sill Insert Mounting Bracket still clamped in position, use a drill with a 6.7 mm bit to drill holes through the Sill Insert Mounting Bracket and into the Sill Insert.



**NOTE:** Until both rivet holes have been drilled, keep the Sill Insert Mounting Bracket securely clamped to the Sill Insert to ensure it remains properly aligned.





## Replacement

2

Prepare the new Sill Insert for installation (continued).

E

Remove the Sill Insert Mounting Bracket from the Sill Insert.

F

Use a red Scotch-Brite pad or equivalent to scuff the e-coat in the mating surface areas of the new Sill Insert section and the Sill Insert Mounting Bracket.



## Replacement

2 Prepare the new Sill Insert for installation (continued).

**G** Clean all the mating surfaces on the new Sill Insert and the new Sill Insert Mounting Bracket 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.

**H**

Spread a thin coating of structural adhesive as a primer layer on the mating surfaces on the new Sill Insert and the new Sill Insert Mounting Bracket.



**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

- 2 Prepare the new Sill Insert for installation (continued).
  - I While the primer layer is still wet, apply a bead of structural adhesive on top of the primer layer on the new Sill Insert section.
  - J Position the Sill Insert Mounting Bracket on the new Sill Insert section.



## Replacement

2 Prepare the new Sill Insert for installation (continued).

K Insert the structural rivets.  
● High Strength Structural Rivet, 6.5 mm (x2)



L Install the structural rivets.



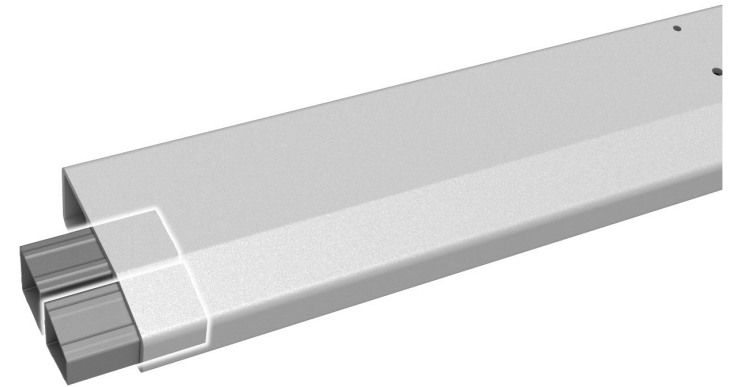
## Replacement

**2** Prepare the new Sill Insert for installation (continued).

**M** Wipe off any excess adhesive.

**3** Prepare the new Sill Insert front section for installation.

**A** Insert the cell 1 and cell 2 reinforcements halfway into the cells of the new Sill Insert section and clamp them into place.





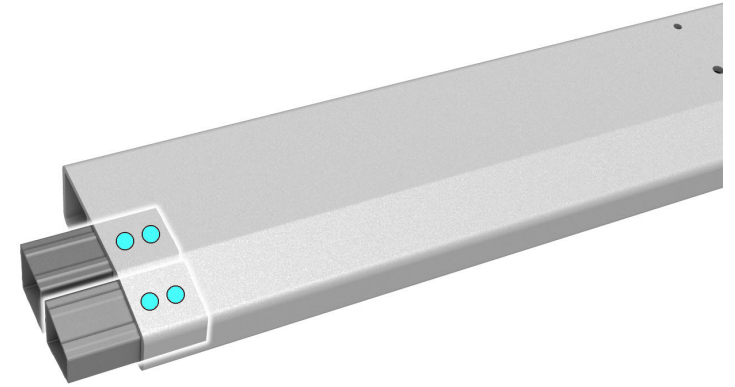


## Replacement

3 Prepare the new Sill Insert front section for installation (continued).

B Mark the locations for structural rivets.

● High Strength Structural Rivet, 6.5 mm (x4)

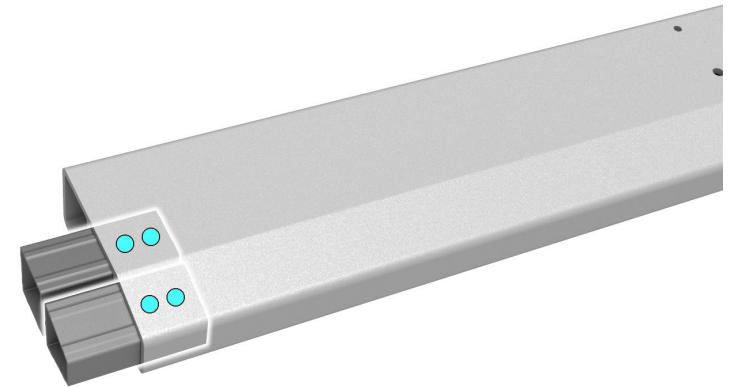


C Drill 6.7 mm holes for structural rivets.

● High Strength Structural Rivet, 6.5 mm (x4)



**NOTE:** Install a grip screw after drilling each hole.





## Replacement

**3** Prepare the new Sill Insert front section for installation (continued).

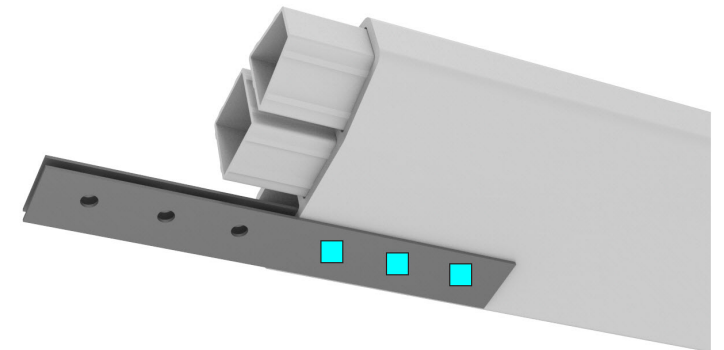
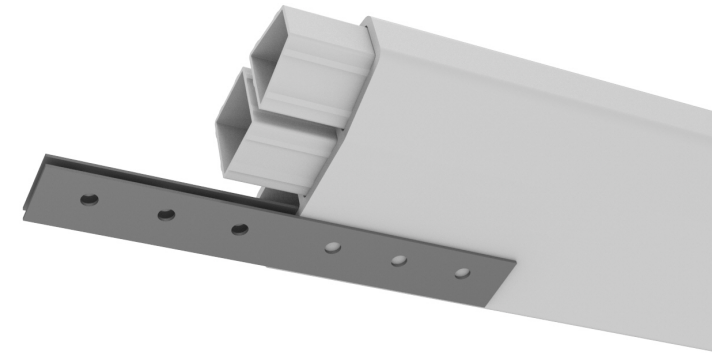
**D** Put one reinforcement plate halfway into the third cell and put the other reinforcement plate on the bottom of the outside of the third cell. Clamp the reinforcement plates into position.

**E** Use the existing holes on the reinforcement plates as a guide to drill 8 mm holes for hex-head bolts in the Sill Insert Section.

 Bolt, hex-head (x3)



**NOTE:** Install a grip screw after drilling each hole.





## Replacement

- 3 Prepare the new Sill Insert front section for installation (continued).
- F Remove the reinforcement plates.
- G Enlarge the holes in the inner reinforcement plate to 12 mm to allow for SPAC nut installation.



## Replacement

**4** Prepare the reinforcement plates.

**A** Use a red Scotch-Brite pad or equivalent to scuff the protective coating on the mating surfaces of the SPAC nuts and the inner reinforcement plate.

**B** Clean the SPAC nuts and the inner reinforcement plate with isopropyl alcohol (IPA).



## Replacement

4 Prepare the reinforcement plates (continued).

C Apply a small bead of structural adhesive to the mating surface of 3 SPAC nuts.



**CAUTION:** Avoid getting structural adhesive on the threads of the nuts.



**NOTE:** Set the remaining 3 SPAC nuts aside for use in a [later step](#).

D Position the 3 SPAC nuts on the inner reinforcement plate and clamp them into place.

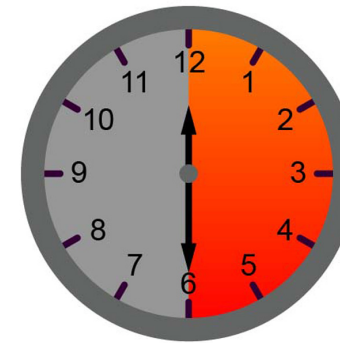




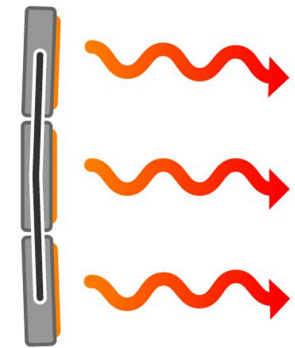
## Replacement

- 4** Prepare the reinforcement plates (continued).
- E** Wipe off any excess adhesive.

- 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.



00:30:00+



60°C–80°C

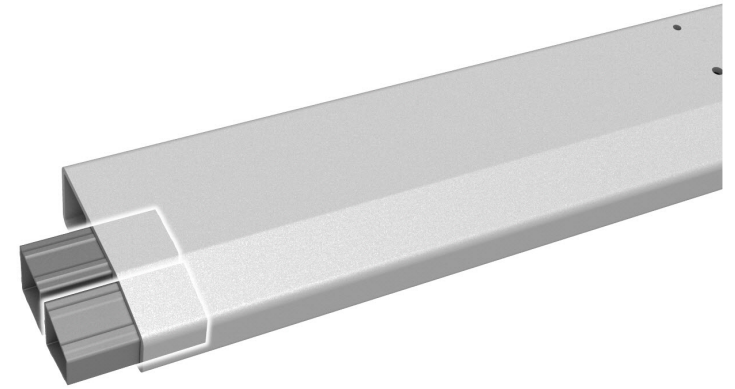


## Replacement

5 Prepare for installation.

A Insert the cell 1 and cell 2 reinforcements halfway into the cells of the new Sill Insert section and secure them with grip screws.

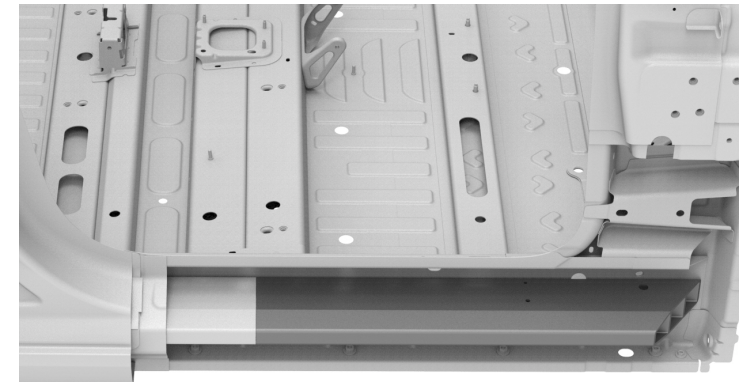
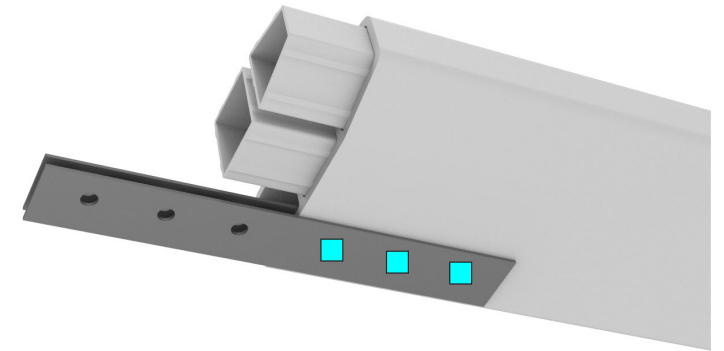
B Inspect the threads of the SPAC nuts on the inner reinforcement plate and use a thread chaser to remove any dried adhesive.





## Replacement

- 5 Prepare for installation (continued).
  - C Position the inner and outer reinforcement plates in the new Sill Insert front section and loosely install the bolts.
  - D Position the new Sill Insert front section on the vehicle and clamp it into place.








## Replacement

5 Prepare for installation (continued).

E Adjust the front of the new Sill Insert front section so that it is 114 mm from the bottom edge of the Sill Inner lower flange.

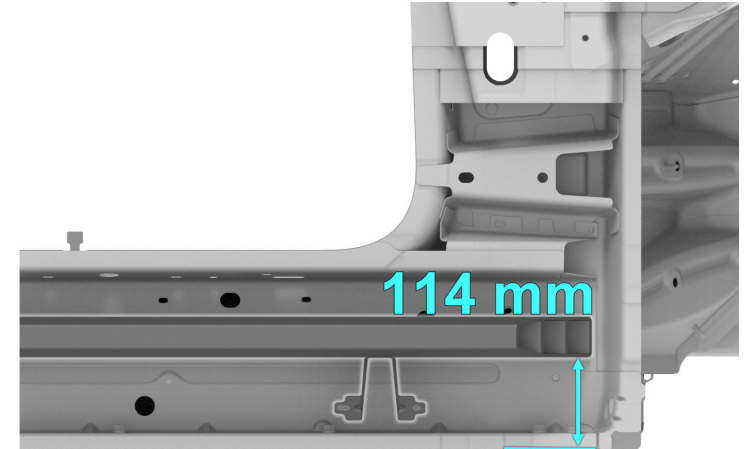
 Reference Line/Point

F Drill 6.7 mm holes for structural rivets.

 High Strength Structural Rivet, 6.5 mm (x4)



**NOTE:** Install a grip screw after drilling each hole.






## Replacement

5 Prepare for installation (continued).

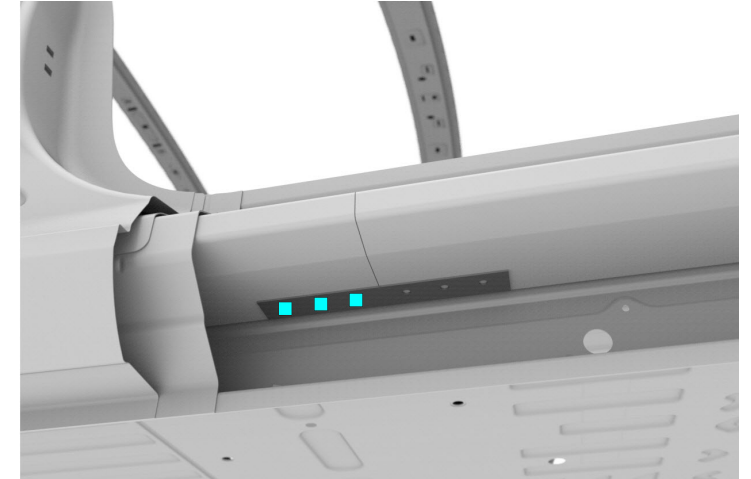
G Using the existing holes in the outer reinforcement plate as guides, use a right-angle drill with an 8 mm bit to drill holes through the Sill Insert section for bolts.

 Bolt, hex-head (x3)



**NOTE:** If necessary to allow clearance for the drill, remove the weld nut on the top side of the Sill Inner.

H If it was necessary to remove the weld nut on the top side of the Sill Inner, weld on a new weld nut..





## Replacement

5

Prepare for installation (continued).

I

Remove the new Sill Reinforcement front section.

J

Remove the reinforcement inserts and the reinforcement plates from the new Sill Insert front section.



## Replacement

- 5 Prepare for installation (continued).
  - K Mark the mating surfaces on the new Sill Reinforcement front section, the reinforcement plates, and the vehicle.
  
- 6 Install the remaining SPAC nuts.
  - A Clean the inner reinforcement plate and the remaining SPAC nuts with isopropyl alcohol (IPA).



## Replacement

6 Install the remaining SPAC nuts (continued).

B Apply a small bead of structural adhesive to the mating surface of the remaining 3 nuts.



**NOTE:** Avoid getting structural adhesive on the threads of the nuts.

C Position the SPAC nuts and clamp them into place.

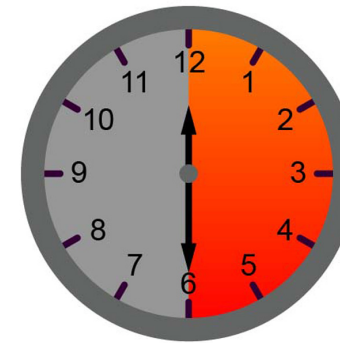




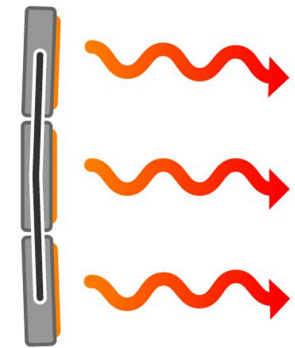
## Replacement

- 6** Install the remaining SPAC nuts (continued).
- D** Wipe off any excess adhesive.

- E** 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.



00:30:00+



60°C–80°C



## Replacement

7 Prepare the surfaces.

**A** Use a red Scotch-Brite pad or equivalent to scuff the e-coat on the mating surfaces of the reinforcement plates, the new Sill Insert front section, 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

8 Apply structural adhesive.

**A** Spread a thin coating of structural adhesive as a primer layer on the mating surfaces of the reinforcement plates, the reinforcement inserts, the new Sill Insert front section, and the vehicle.



**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 Sill Insert front section.



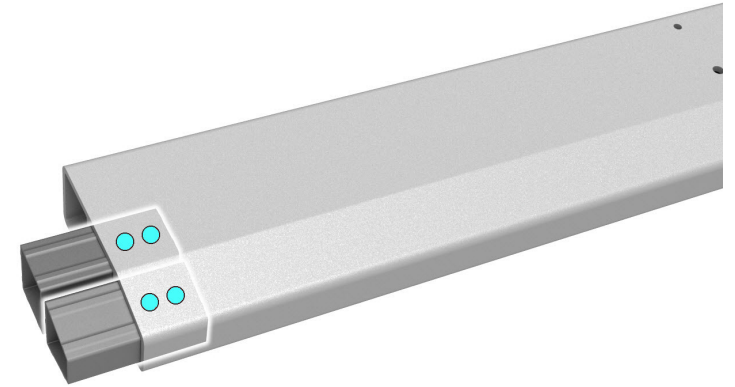


## Replacement

9 Install the new Sill Insert front section.

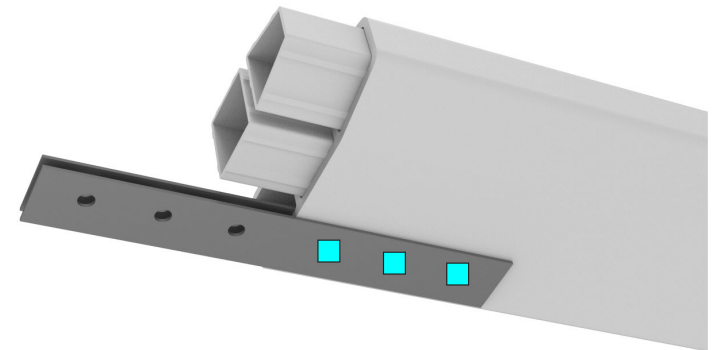
A Position the reinforcement inserts in the new Sill Insert front section and insert the structural rivets to hold them in place.

● High Strength Structural Rivet, 6.5 mm (x4)



B Position inner and outer reinforcement plates on the new Sill Insert front section and loosely install the bolts to hold it in place.

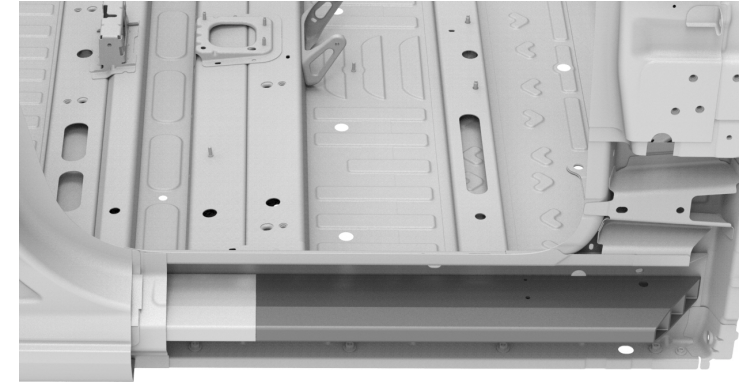
■ Bolt, hex-head (x3)




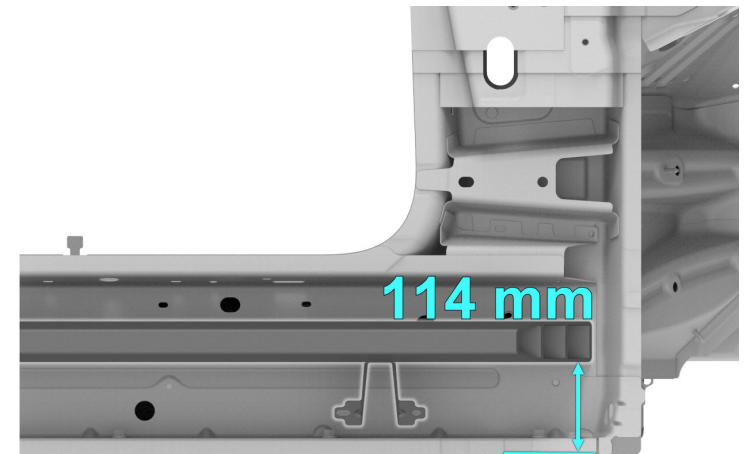


## Replacement

- 9 Install the new Sill Insert front section (continued).
- C Position the new Sill Insert front section and clamp it into place.



- D Adjust the front of the new Sill Insert front section so that it is 114 mm from the bottom edge of the Sill Inner lower flange.
-  Reference Line/Point





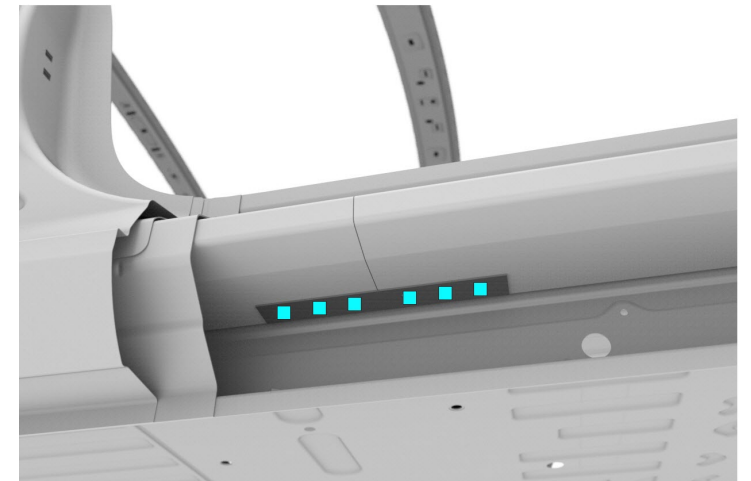
## Replacement

9 Install the new Sill Insert front section (continued).

E Insert the remaining structural rivets.  
● High Strength Structural Rivet, 6.5 mm (x4)



F Install the remaining bolts but do not torque them at this time.  
■ Bolt, hex-head (x3)





## Replacement

**9** Install the new Sill Insert front section (continued).

**G** Install the structural rivets.

**H** Brush the structural adhesive into the seam between the original Sill Insert and the new Sill Insert front section.

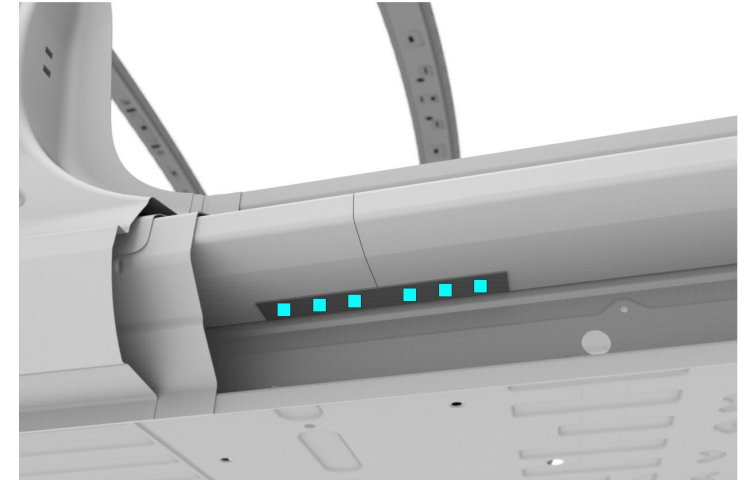


## Replacement

9 Install the new Sill Insert front section (continued).

I Tighten the bolts, and then torque them to 25 Nm.

J Wipe off any excess adhesive.





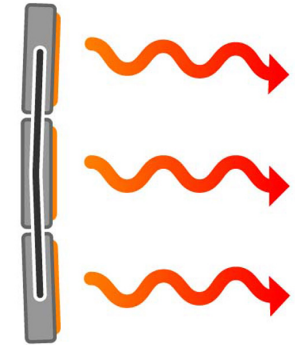
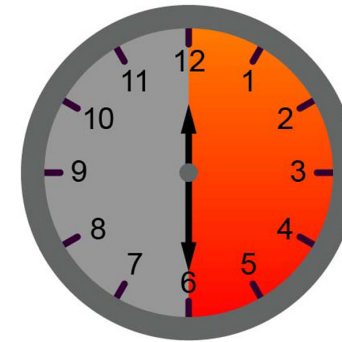
## Replacement

9 Install the new Sill Insert front section (continued).

K 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.



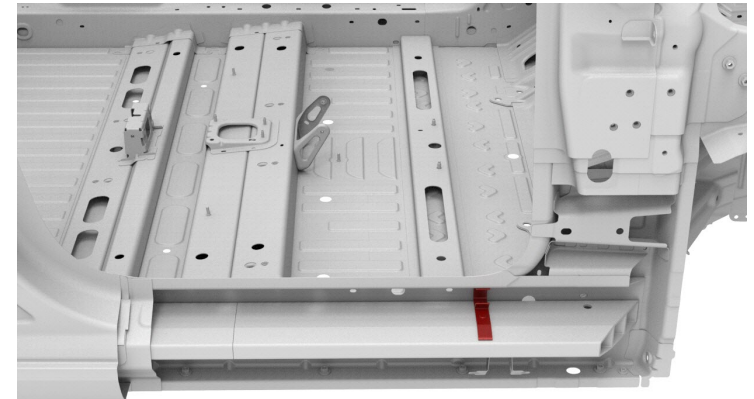
**WARNING:** Do not allow the High Voltage Battery to reach a temperature above 74°C (165°F). Heating the High Voltage Battery above 74°C (165°F) for an extended period could result in injury to personnel and/or damage to the battery.



00:30:00+

60°C-80°C

10 Apply urethane sealant to the foam dam that was removed in an [earlier step](#) and install it.





## Replacement

11

Install the new [Sill Outer \(Front Section\)](#).

