

501-30 Rear End Sheet Metal Repairs
Removal and Installation

2021 F-150

Procedure revision date: 09/25/2020

Rear Wheelhouse


Special Tool(s) / General Equipment

6.5 mm Drill Bit
Self-Piercing Rivet (SPR) Remover/Installer
Belt Sander
Blind Rivet Gun
Locking Pliers

Materials

Name	Specification
Metal Bonding Adhesive TA-1, TA-1-B, 3M™ 08115, LORD Fusor® 108B	-
Seam Sealer TA-2-B, 3M™ 08308, LORD Fusor® 803DTM	-
Flexible Foam Repair 3M™ 08463, LORD Fusor® 121	-

Removal


 **WARNING:** Electric vehicles damaged by a crash may have compromised high voltage safety systems and present a potential high voltage electrical shock hazard. Exercise caution and wear appropriate Personal Protective Equipment (PPE) safety gear, including high voltage safety gloves and boots. Remove all metallic jewelry, including watches and rings. Isolate the HV system as directed by the Ford Emergency Response Guide for the vehicle. Failure to follow these instructions may result in serious personal injury or death.

NOTICE: Battery electric vehicle (BEV), hybrid electric vehicle (HEV) and plug-in hybrid electric vehicle (PHEV) contain a high-voltage battery. Before cutting or welding near the high-voltage battery it must be removed to avoid damage.

NOTE: 6.5 foot pickup bed shown, 5.5 foot and 8 foot pickup bed similar.

NOTE: Aluminum body panels are highly receptive to heat transfer. With the extensive use of structural adhesives and non-structural sealers used in vehicle construction, the potential of heat transfer could impact adhesives and sealers in non-associated panels during the repair process. Many repairs areas that utilize structural adhesive may be separated after fastener removal by using a panel chisel along the joint/flange. Using heat not exceeding 425° F to loosen a bonded panel should only be done when all panels in the joint will be replaced and new adhesive applied.

All vehicles

1.  **WARNING:** Before beginning any service procedure in this manual, refer to health and safety warnings in section 100-00 General Information. Failure to follow this instruction may result in serious personal injury.

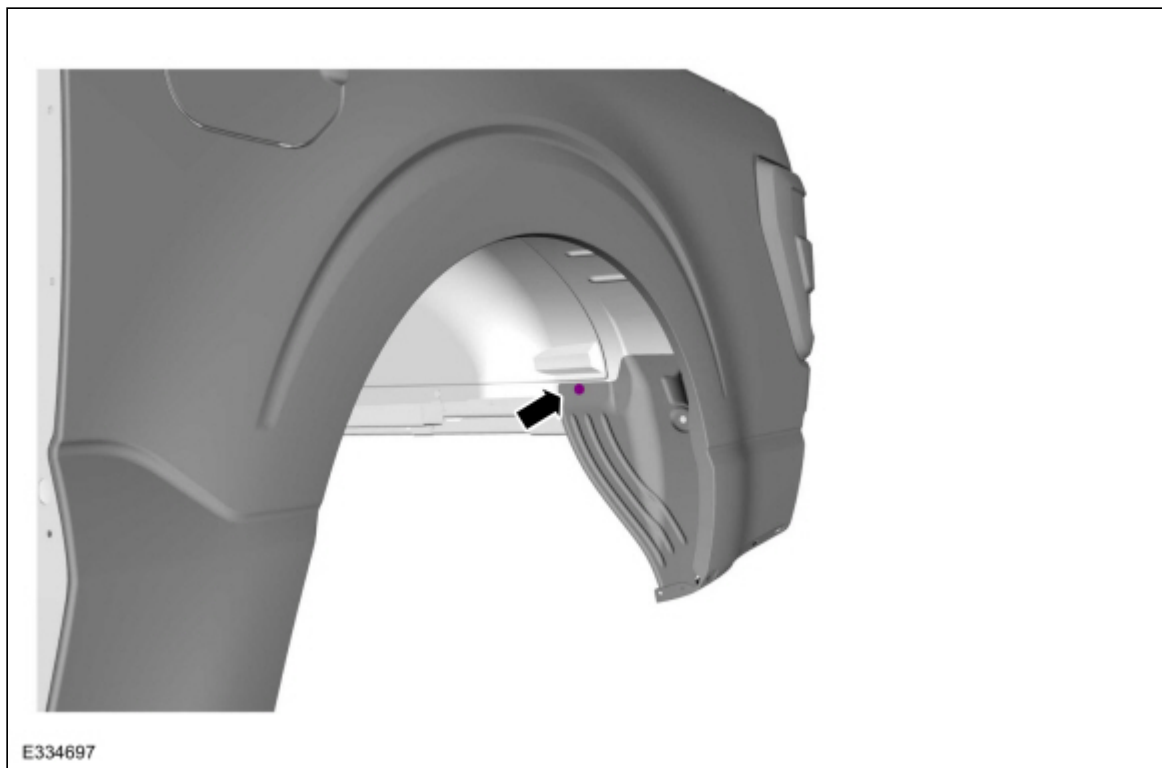
Refer to: [Health and Safety Precautions](#) (100-00 General Information, Description and Operation).

Refer to: [High Voltage System Health and Safety Precautions - Overview](#) (100-00 General Information, Description and Operation).

2. **If Equipped:** Remove the lower trim panel and wheel opening trim.

Outer Wheelhouse

3. Remove the B-brace bolt.

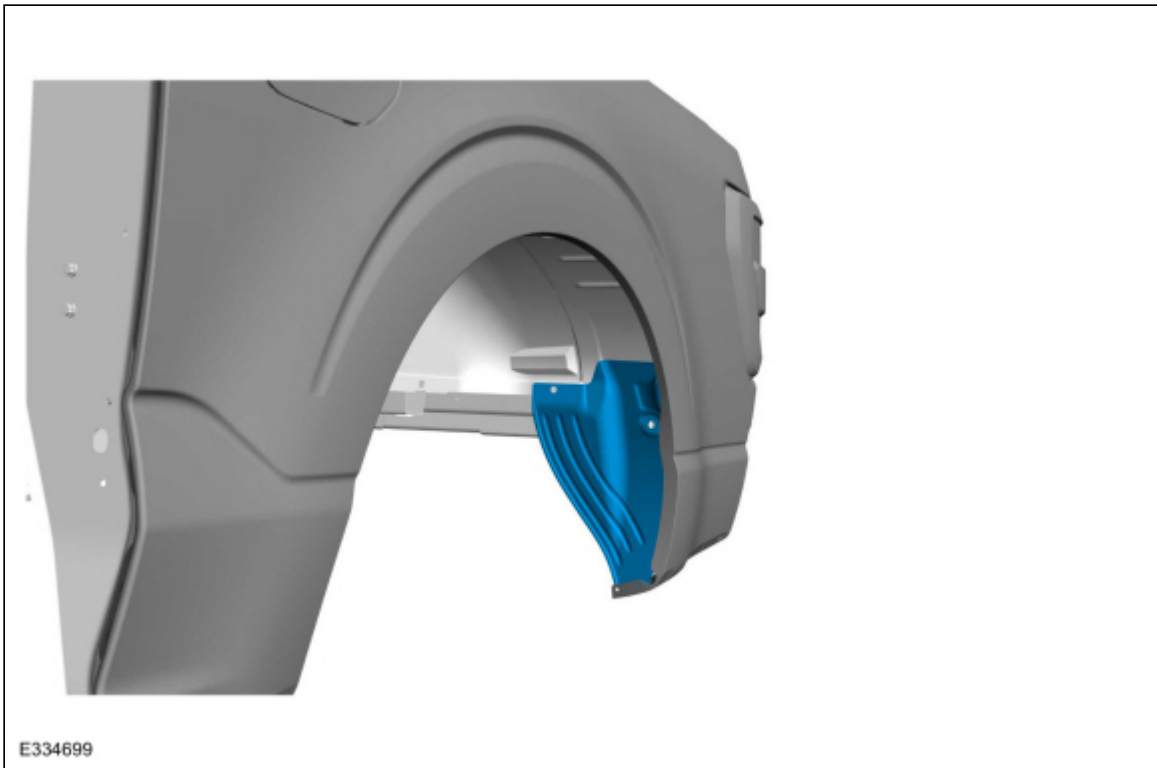


4. Remove the B-brace SPR fasteners.
Use the General Equipment: Self-Piercing Rivet (SPR) Remover/Installer
Use the General Equipment: Belt Sander



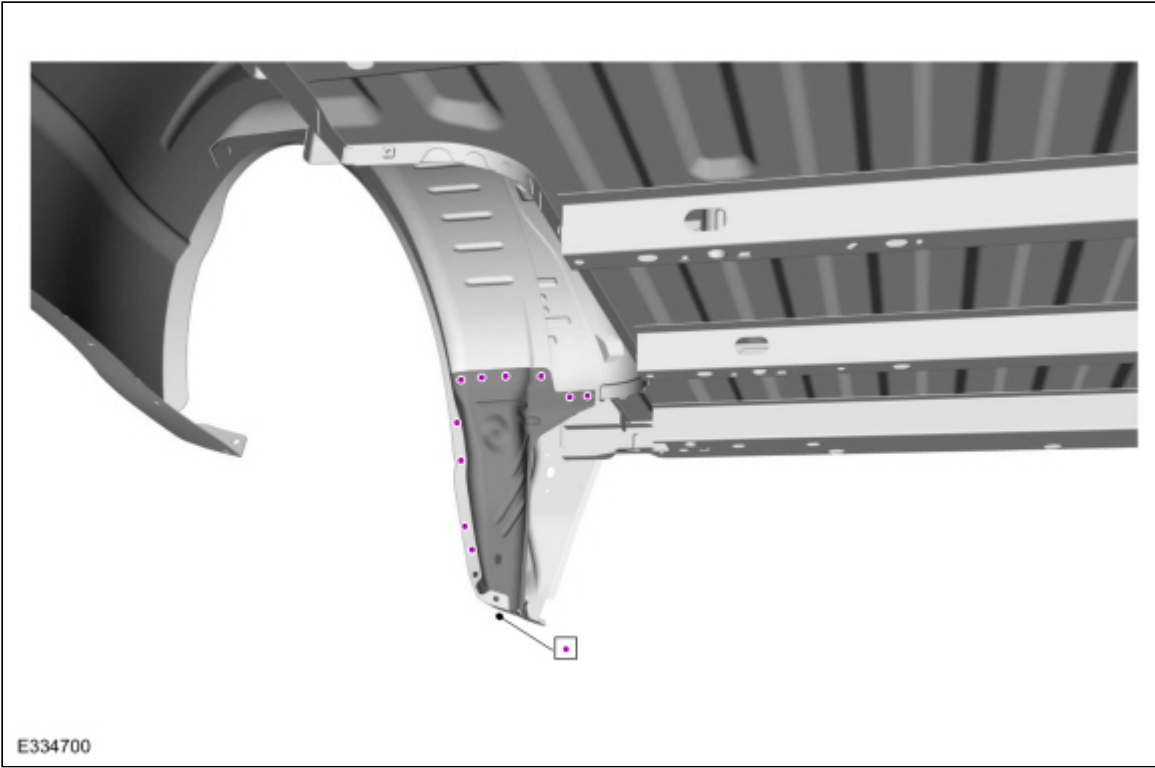
5. Remove the B-brace.





- 6. Remove the A-brace SPR fasteners.
Use the General Equipment: Self-Piercing Rivet (SPR) Remover/Installer
Use the General Equipment: Belt Sander

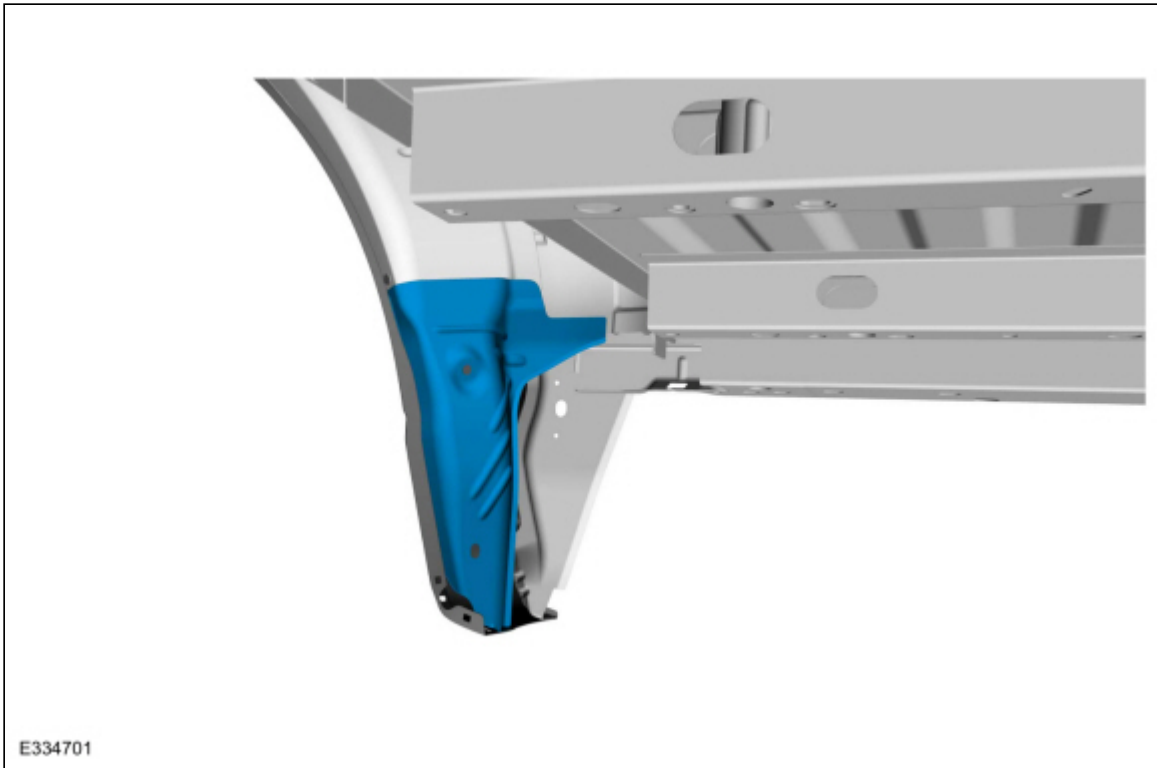




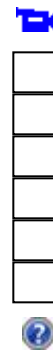
7. Remove the A-brace.

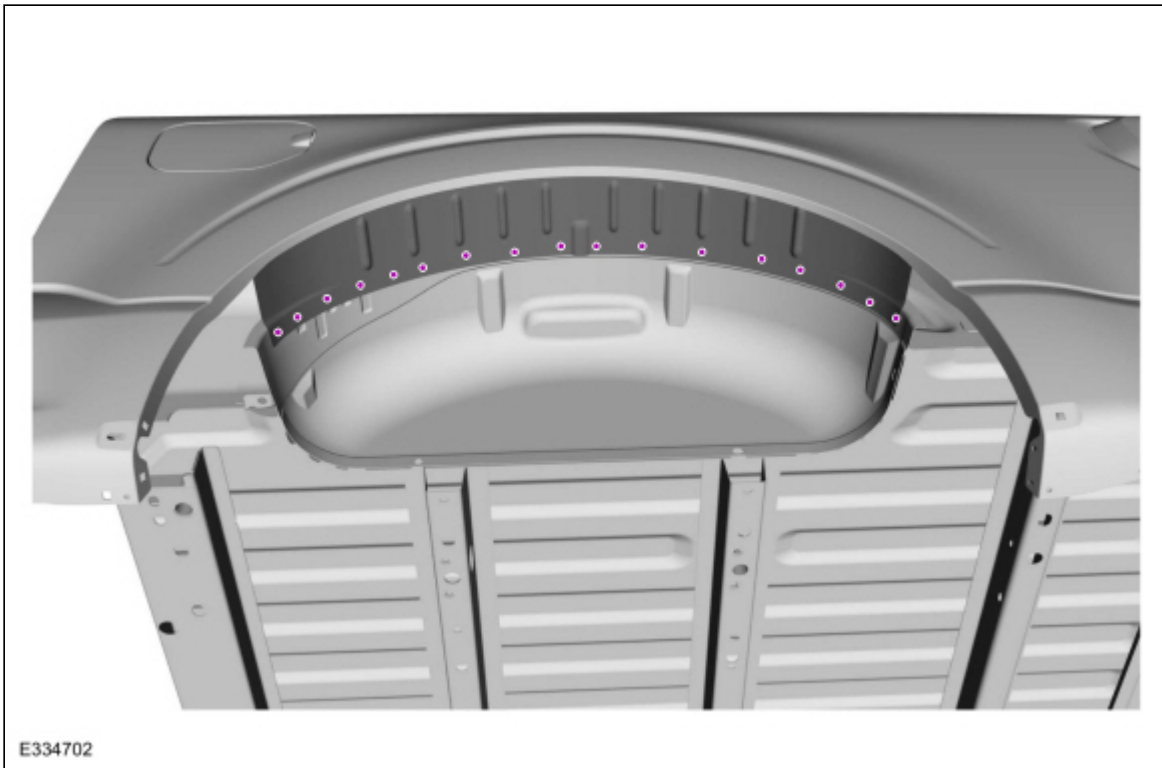
Wrench icon

Help icon



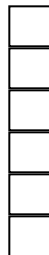
- 8. Remove the inner to outer wheelhouse SPR fasteners.
Use the General Equipment: Self-Piercing Rivet (SPR) Remover/Installer
Use the General Equipment: Belt Sander

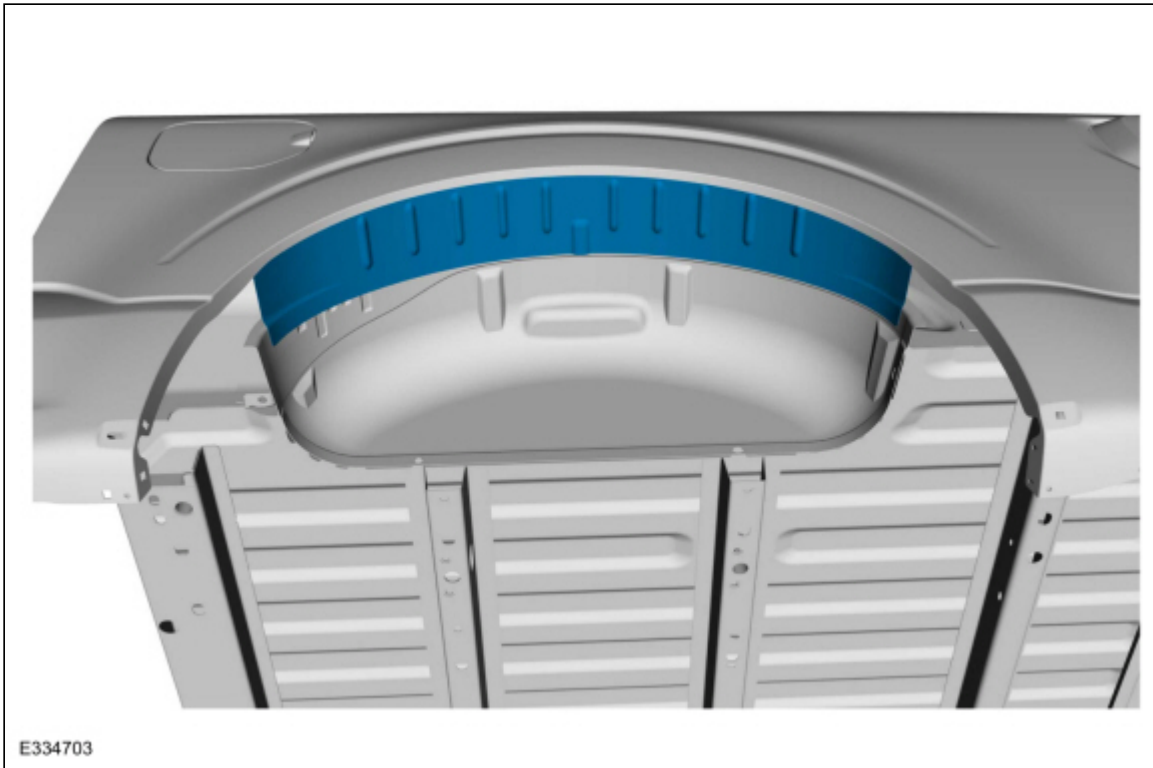




9. **NOTE:** Pay particular attention to adhesive and sealer locations to aid in installation.

Break the adhesive bond and remove the outer wheelhouse.

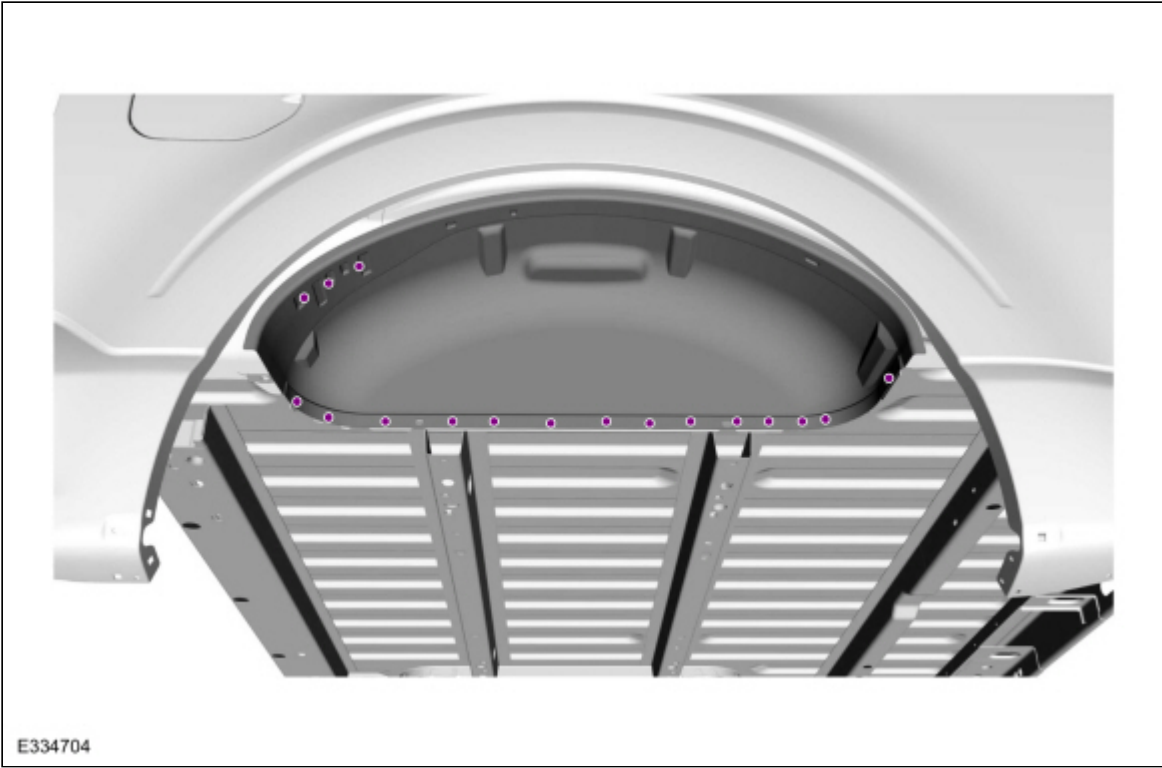




Inner Wheelhouse

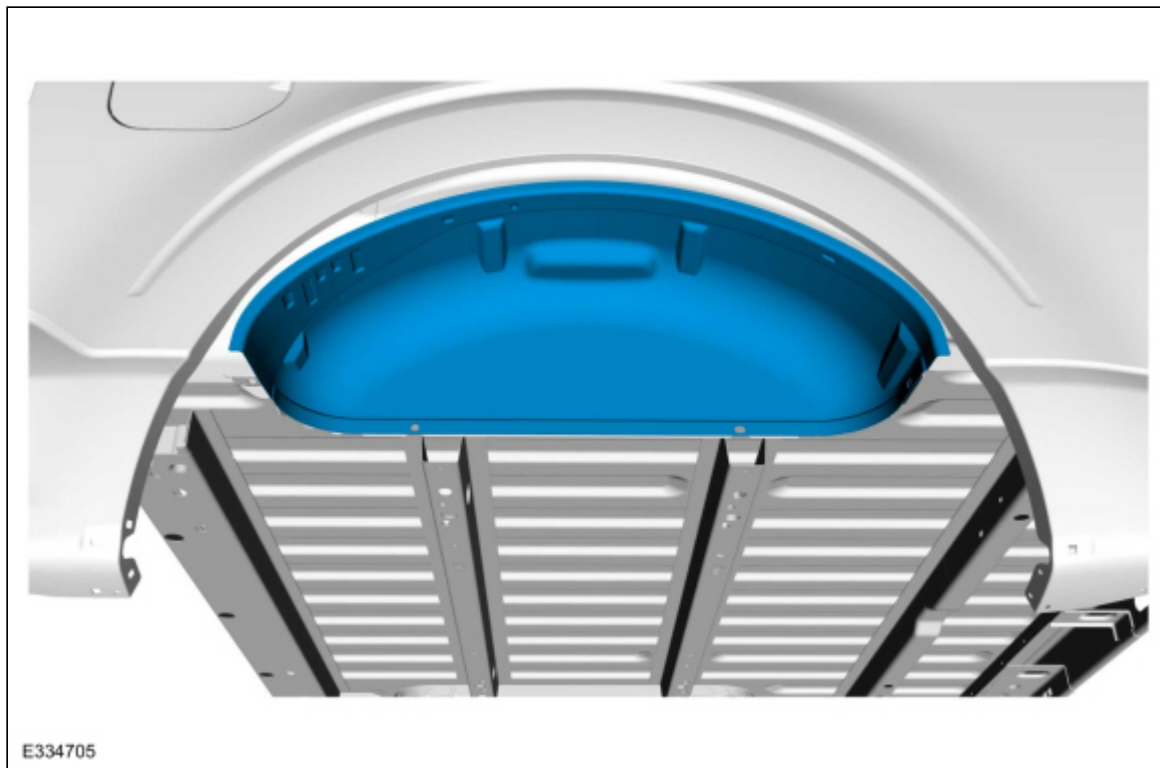
- 10. Remove the SPR fasteners.
Use the General Equipment: Self-Piercing Rivet (SPR) Remover/Installer
Use the General Equipment: Belt Sander





11. Remove the inner wheelhouse.





Installation

NOTE: 6.5 foot pickup box shown, 5.5 foot and 8 foot similar.

NOTE: SPR fasteners may not be placed directly over original SPR location. They must be placed adjacent to original location matching original quantity.

NOTE: Blind or solid rivet fasteners may be used in place of SPR fasteners after enlarging holes to 6.5 mm.

Inner Wheelhouse

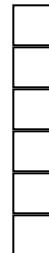
1. Install the inner wheelhouse and clamp in position.
Use the General Equipment: Locking Pliers





2. **NOTE:** *Blind or solid rivet fasteners may be used in place of SPR fasteners after enlarging holes to 6.5 mm.*

Drill for fastener installation.
Use the General Equipment: 6.5 mm Drill Bit





3. **NOTE:** SPR fasteners may not be placed directly over original SPR location. They must be placed adjacent to original location matching original quantity.

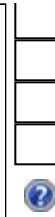
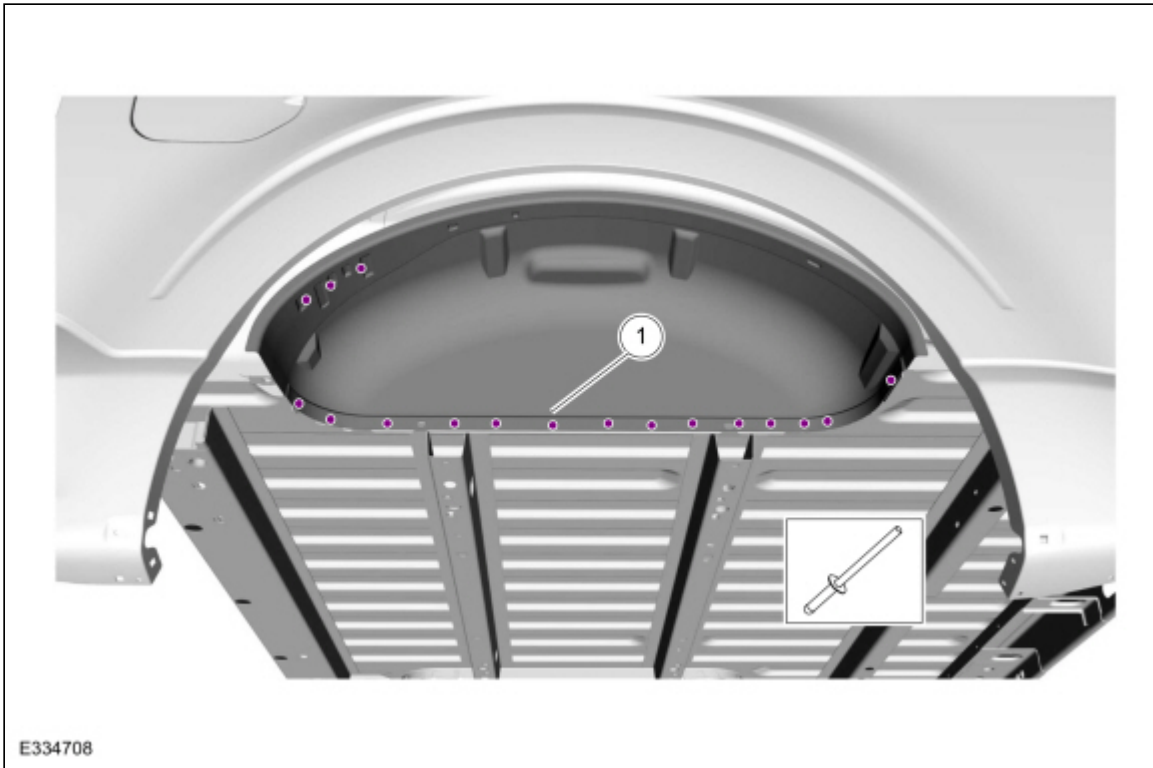
NOTE: Blind or solid rivet fasteners may be used in place of SPR fasteners after enlarging holes to 6.5 mm.

Install fasteners.

Item	SPR Number	SPR Code	Henrob®, Car-OLiner®, CMO®, Chief®, Spanesi®, Wielander and Schill® Mandrel	Pro-Spot® Mandrel	Blind Rivet	Solid Rivet	Rivnut®
1	-	-	-	-	W707638-S900C	-	-

Use the General Equipment: Blind Rivet Gun

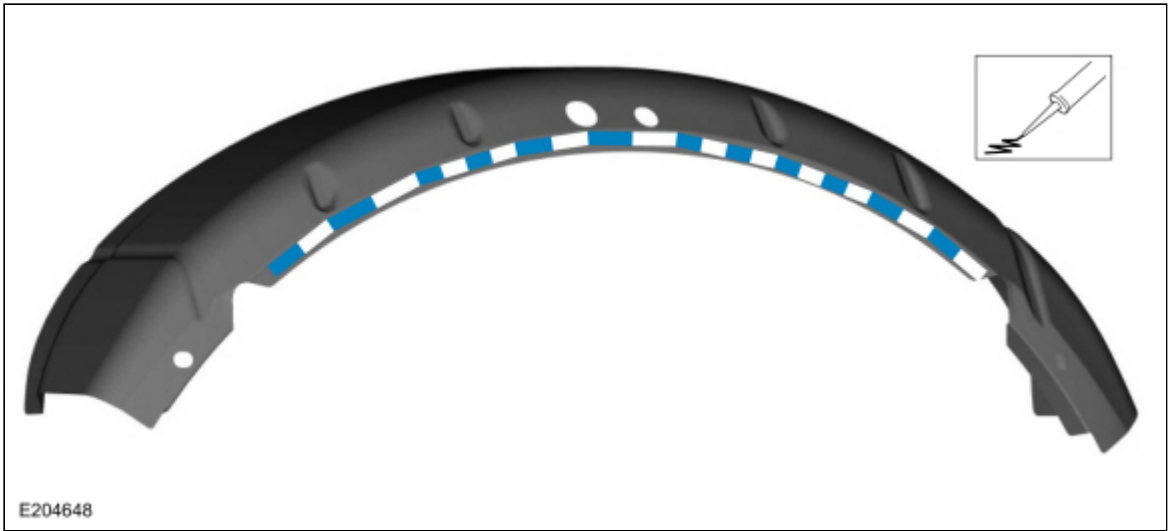




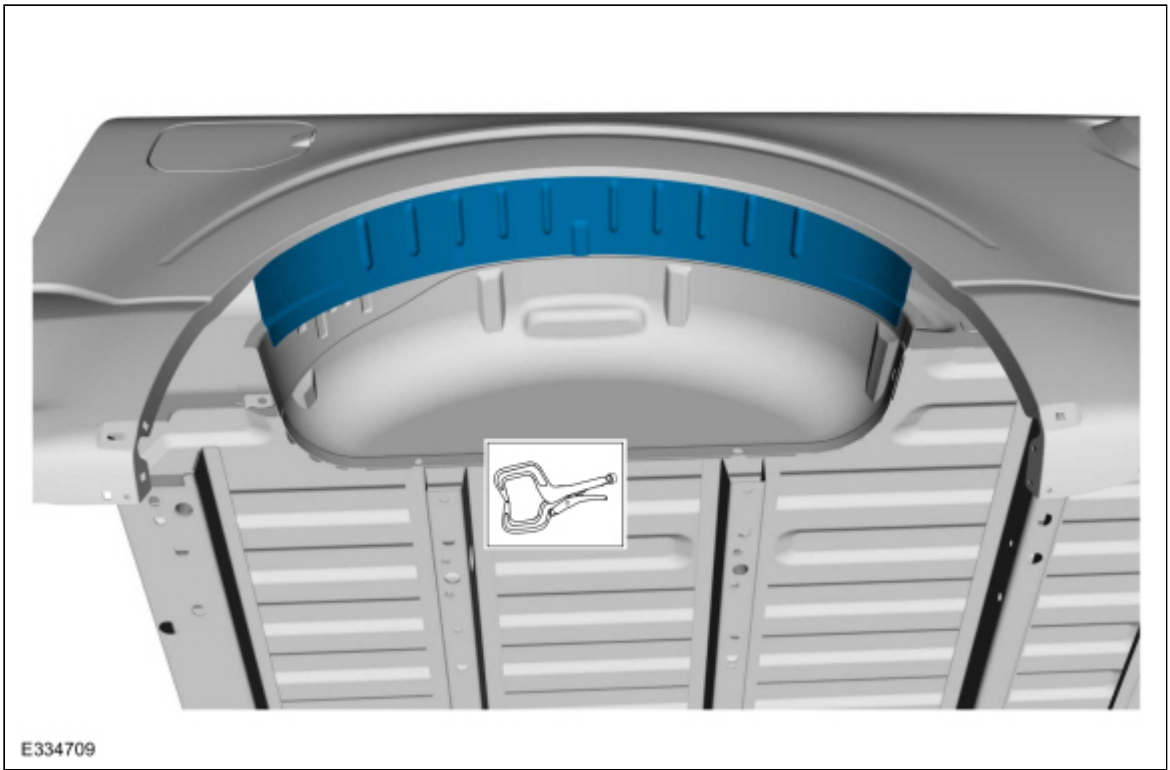
Outer Wheelhouse

- 4. Apply adhesive to the outer wheelhouse to body side mating surface.
Material: Metal Bonding Adhesive / TA-1, TA-1-B, 3M™ 08115, LORD Fusor® 108B





5. Install the outer wheelhouse and clamp in position.
Use the General Equipment: Locking Pliers



6. **NOTE:** Blind or solid rivet fasteners may be used in place of SPR fasteners after enlarging holes to 6.5 mm.

Drill for fastener installation.

Use the General Equipment: 6.5 mm Drill Bit



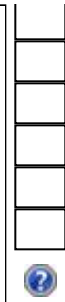
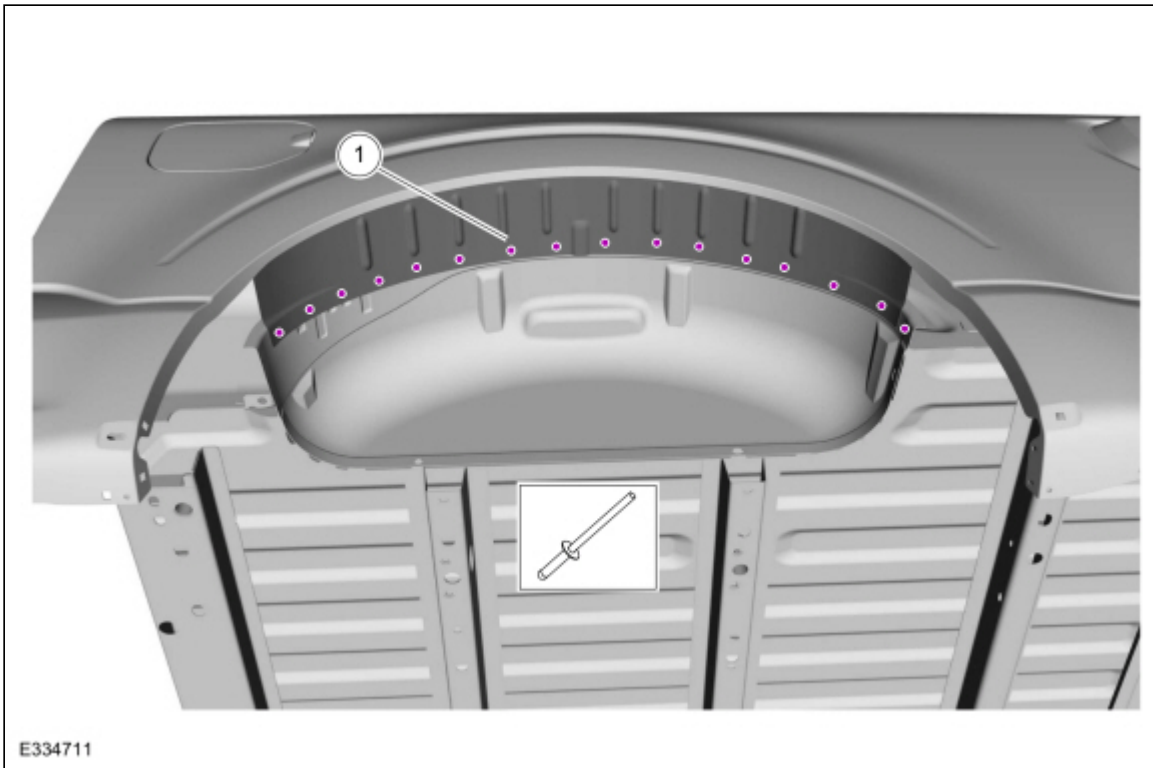
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7. **NOTE:** Blind or solid rivet fasteners may be used in place of SPR fasteners after enlarging holes to 6.5 mm.

Install outer to inner wheelhouse blind rivet fasteners.

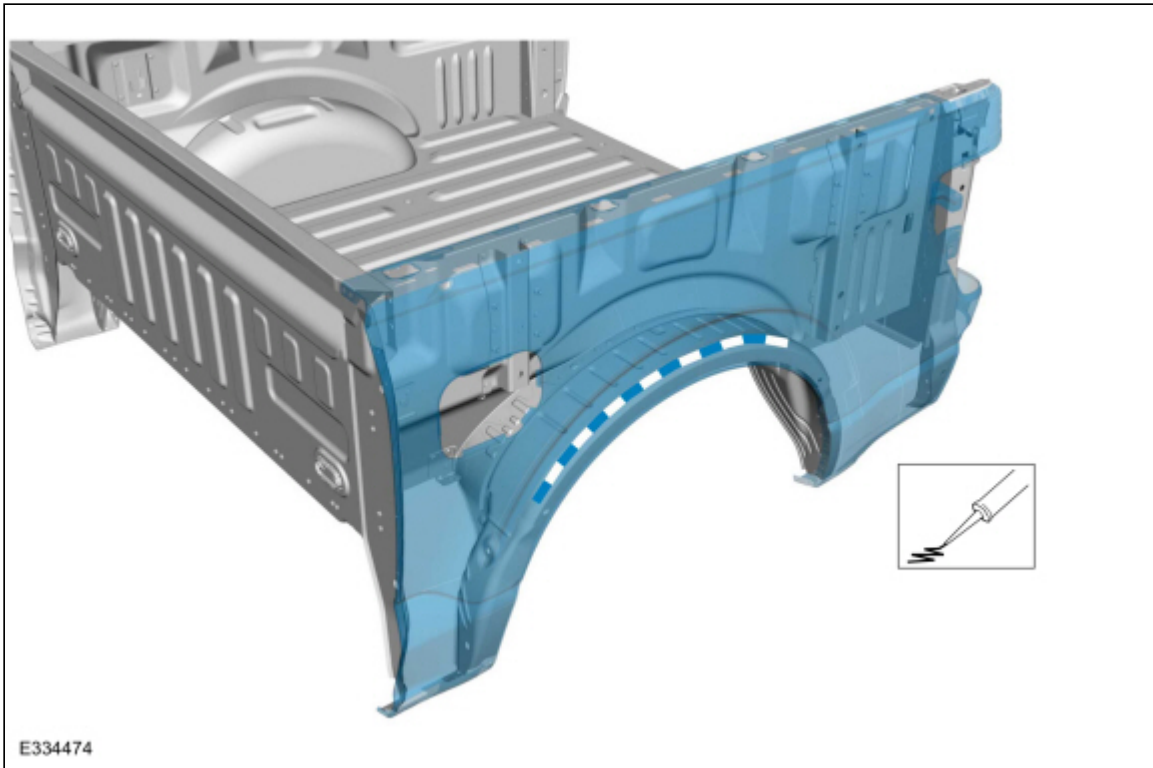
Item	SPR Number	SPR Code	Henrob®, Car-OLiner®, CMO®, Chief®, Spanesi®, Wielander and Schill® Mandrel	Pro-Spot® Mandrel	Blind Rivet	Solid Rivet	Rivnut®
1	-	-	-	-	W707638-S900C	-	-

Use the General Equipment: Blind Rivet Gun



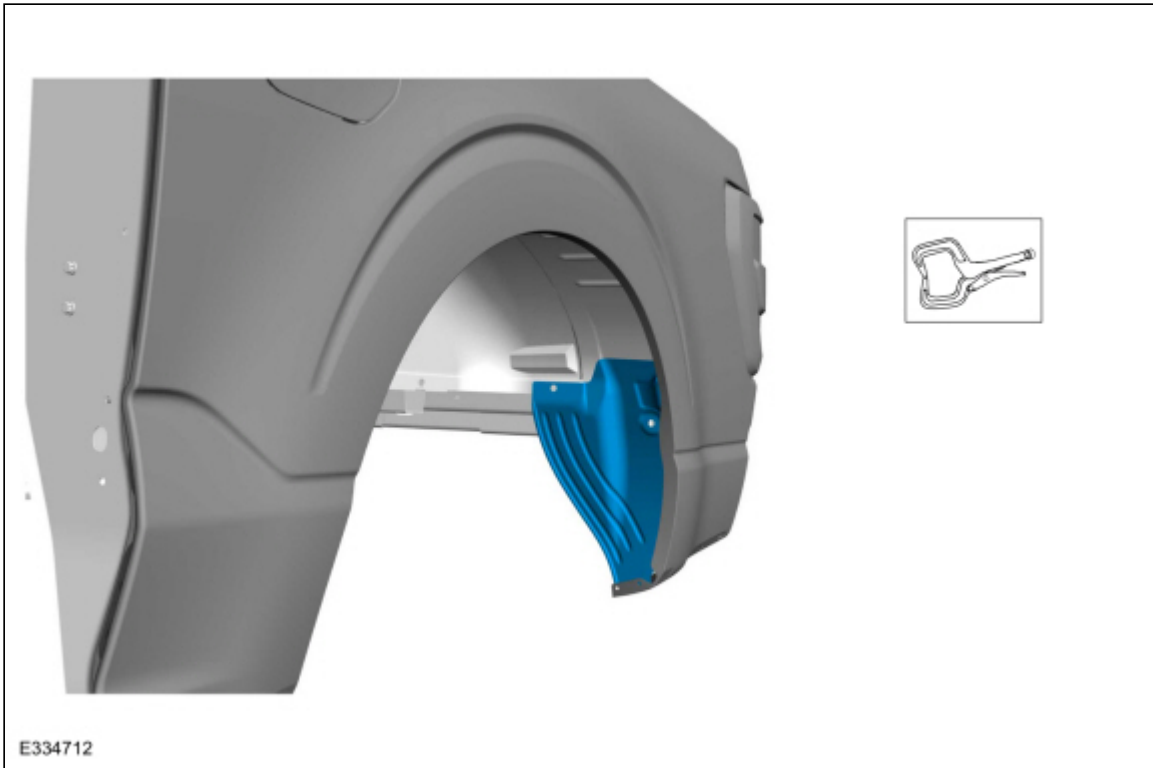
- 8. Apply NVH sealer to areas noted during removal.
Material: Flexible Foam Repair / 3M™ 08463, LORD Fusor® 121





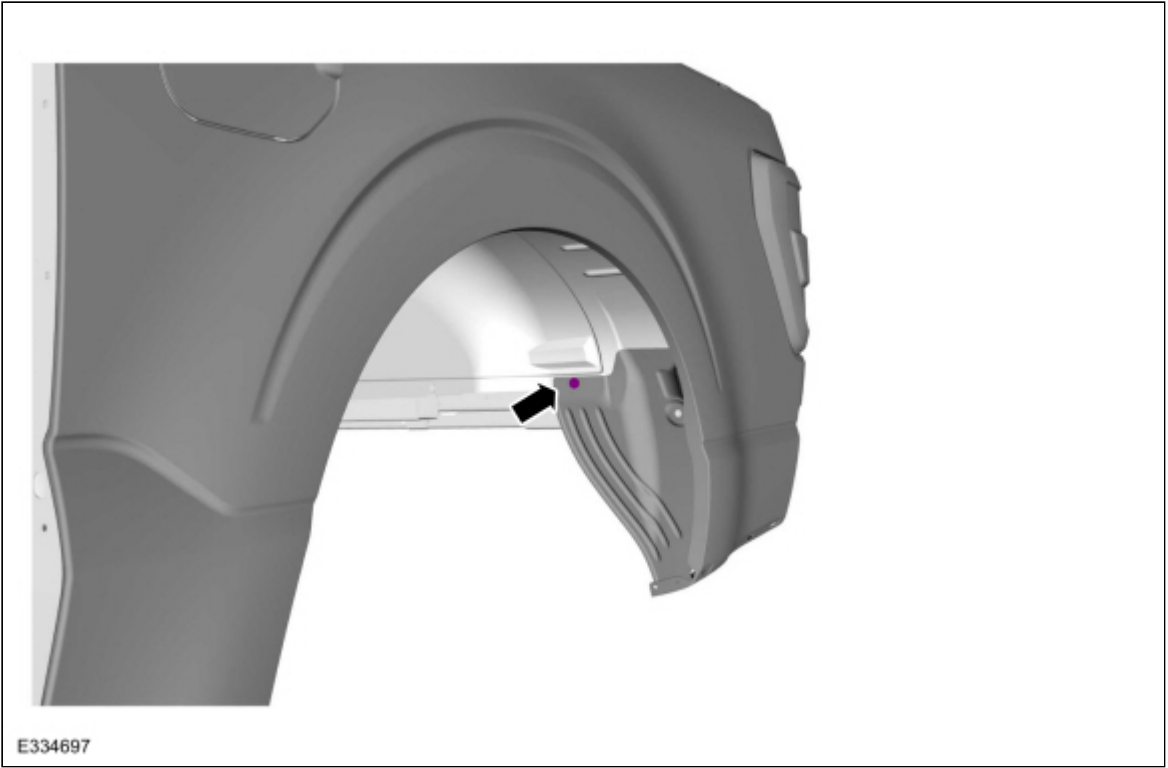
- 9. Install the B-brace and clamp in position.
Use the General Equipment: Locking Pliers





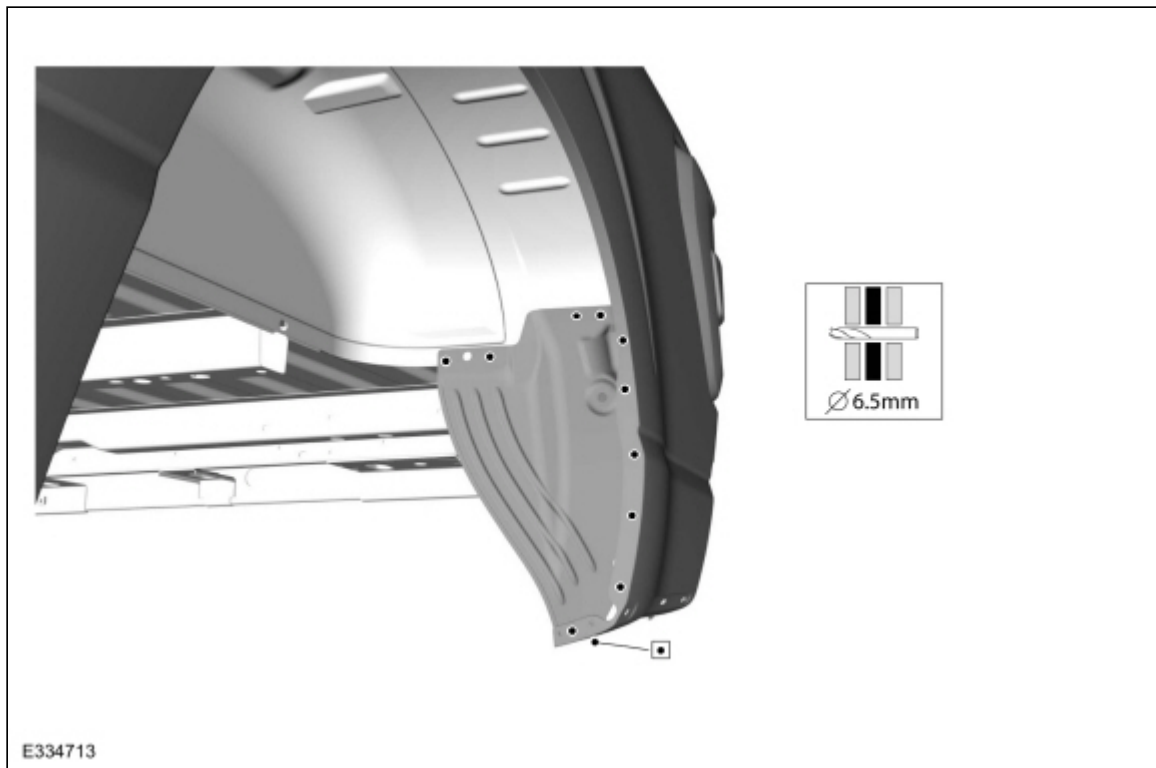
10. Install the bolt.





- 11. Drill for fastener installation.
Use the General Equipment: 6.5 mm Drill Bit





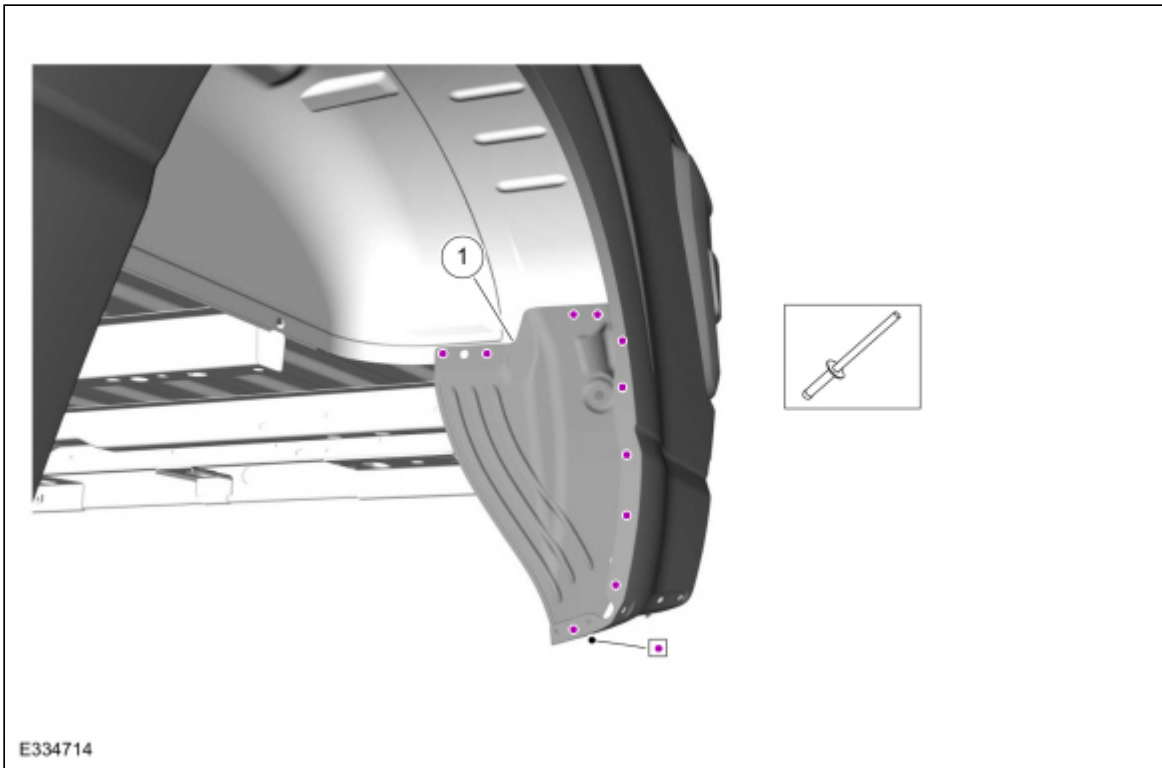
12. **NOTE:** Blind or solid rivet fasteners may be used in place of SPR fasteners after enlarging holes to 6.5 mm.

Install fasteners.

Item	SPR Number	SPR Code	Henrob®, Car-OLiner®, CMO®, Chief®, Spanesi®, Wielander and Schill® Mandrel	Pro-Spot® Mandrel	Blind Rivet	Solid Rivet	Rivnut®
1	-	-	-	-	W707638-S900C	-	-

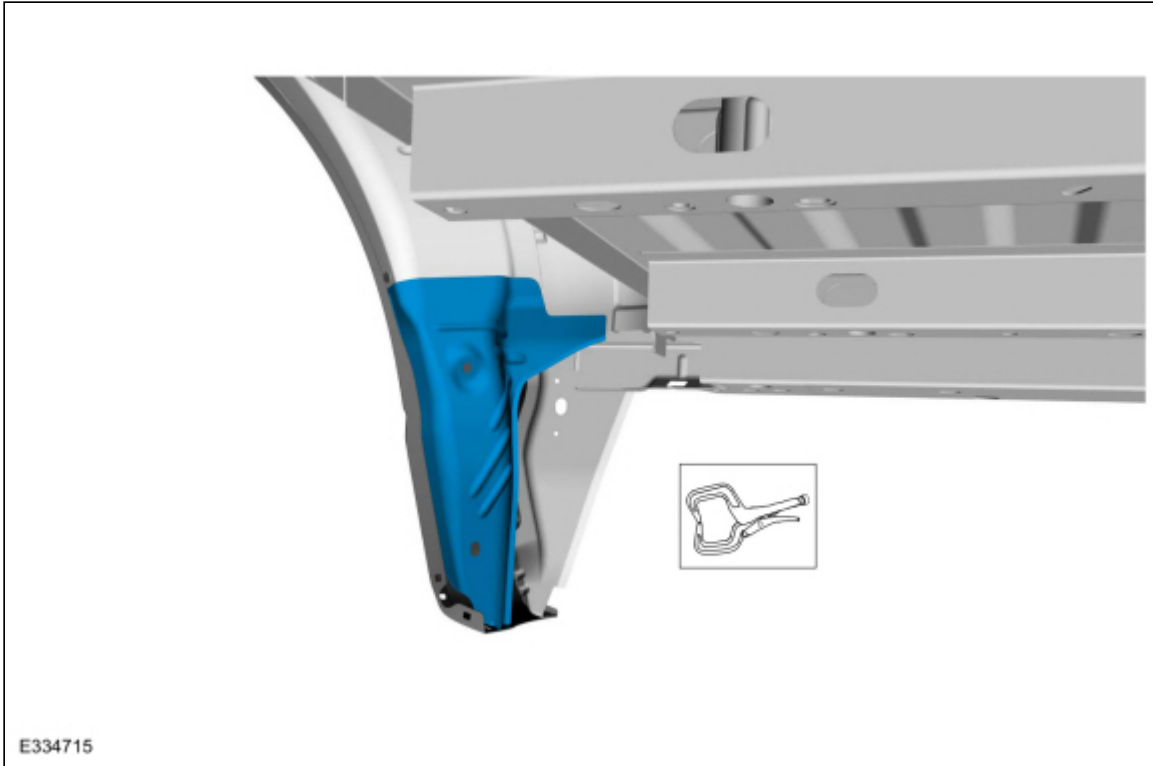
Use the General Equipment: Blind Rivet Gun





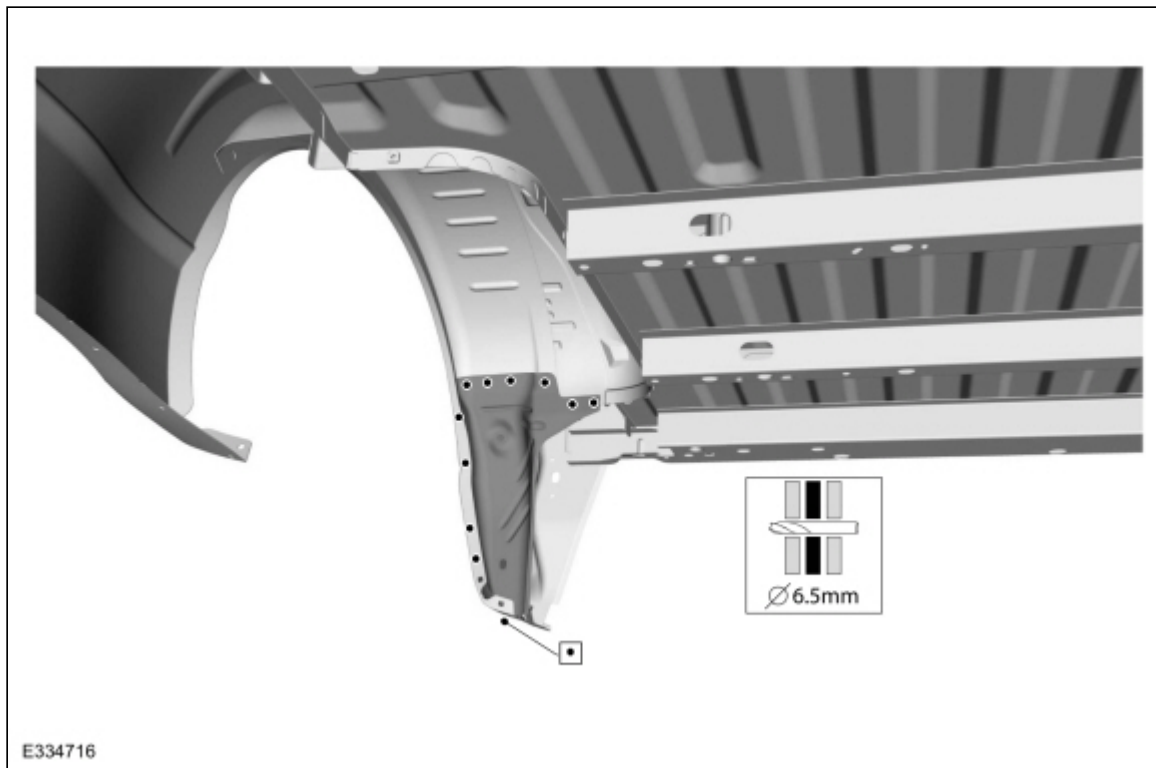
- 13. Install the A-brace and clamp in position.
Use the General Equipment: Locking Pliers





- 14. Drill for fastener installation.
Use the General Equipment: 6.5 mm Drill Bit





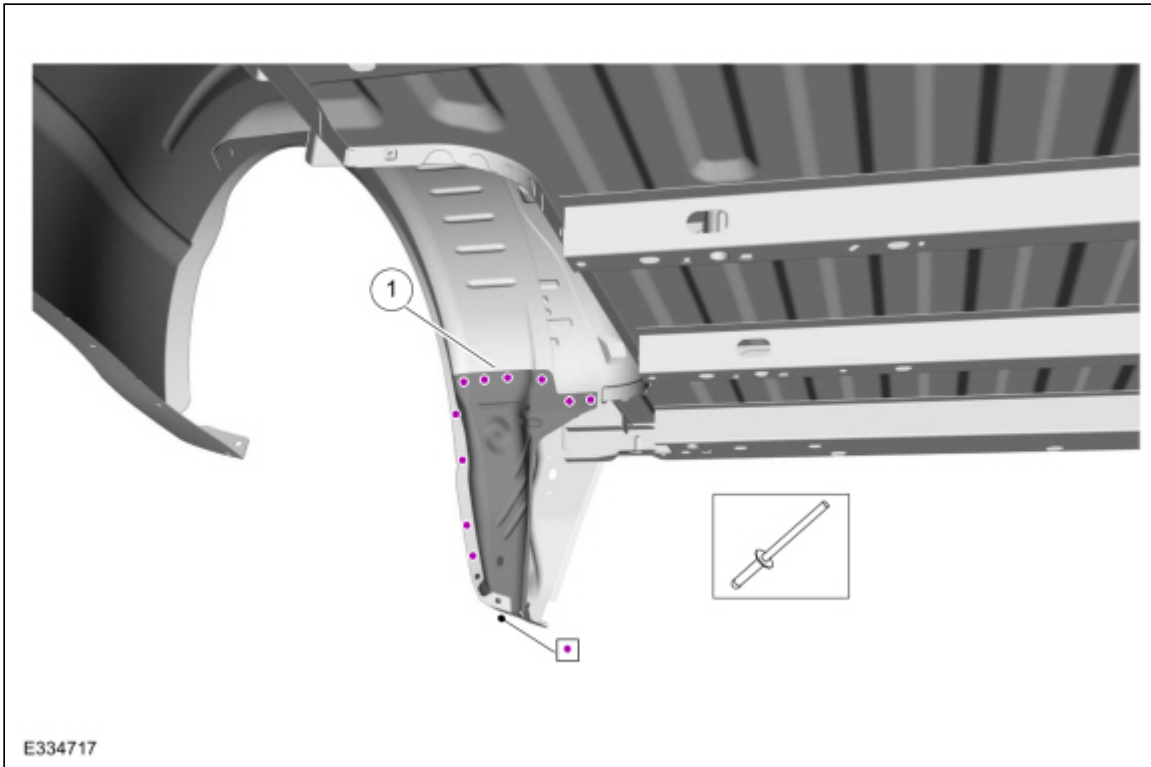
15. **NOTE:** Blind or solid rivet fasteners may be used in place of SPR fasteners after enlarging holes to 6.5 mm.

Install fasteners.

Item	SPR Number	SPR Code	Henrob®, Car-OLiner®, CMO®, Chief®, Spanesi®, Wielander and Schill® Mandrel	Pro-Spot® Mandrel	Blind Rivet	Solid Rivet	Rivnut®
1	-	-	-	-	W707638-S900C	-	-

Use the General Equipment: Blind Rivet Gun





All vehicles

16. **Seam Sealing:** All seams must be sealed to production level.
Material: Seam Sealer / TA-2-B, 3M™ 08308, LORD Fusor® 803DTM
17. **If Equipped:** Install the lower trim panel and wheel opening trim.

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