

Roof Side Rail - Crew Cab

Special Tool(s) / General Equipment

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

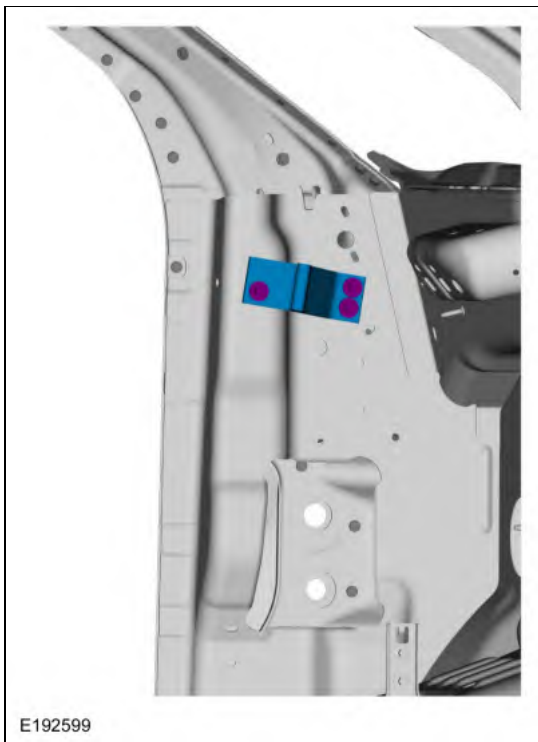
Materials

Name	Specification
Metal Bonding Adhesive TA-1, TA-1-B, 3M [®] , 08115, LORD Fusor [®] 108B	-
Seam Sealer TA-2-B, 3M [®] , 08308, LORD Fusor [®] 805DTM	-

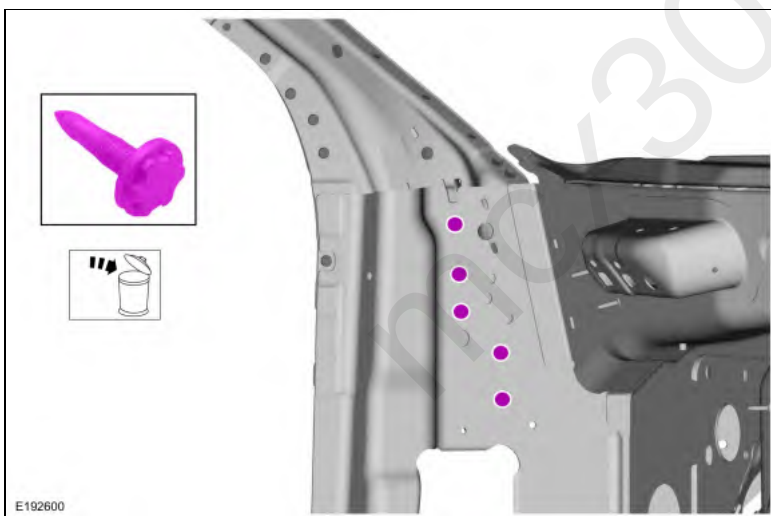
Removal

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.

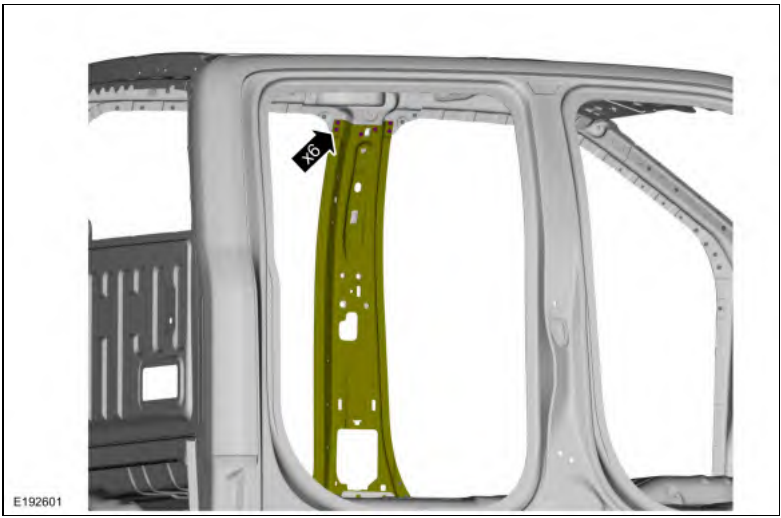
1. Depower the SRS.
Refer to: Supplemental Restraint System (SRS) Depowering (501-20B Supplemental Restraint System, General Procedures).
2. Remove the front fender and splash shield.
Refer to: Fender Splash Shield (501-02 Front End Body Panels, Removal and Installation).
Refer to: Fender (501-02 Front End Body Panels, Removal and Installation).
3. Remove the doors.
Refer to: Front Door - Crew Cab/Regular Cab (501-03 Body Closures, Removal and Installation).
Refer to: Rear Door - Crew Cab (501-03 Body Closures, Removal and Installation).
4. Remove the instrument panel.
Refer to: Instrument Panel (501-12 Instrument Panel and Console, Removal and Installation).
5. Make sure the vehicle is dimensionally correct.
Refer to: Body and Frame (501-26 Body Repairs - Vehicle Specific Information and Tolerance Checks, Description and Operation).
6. Remove the roof outer panel.
Refer to: Roof Panel - Crew Cab (501-28 Roof Sheet Metal Repairs, Removal and Installation).
Refer to: Roof Panel - Crew Cab, Vehicles With: Roof Opening Panel (501-28 Roof Sheet Metal Repairs, Removal and Installation).
7. Remove the body side outer sheet metal in the repair area.
Refer to: Body Panel Sectioning (501-26 Body Repairs - Vehicle Specific Information and Tolerance Checks, General Procedures).
8. Remove the bolts and the cross-car beam bracket.



9. Remove and discard the FDS fasteners.
Use the General Equipment: Polydrive Bit Socket



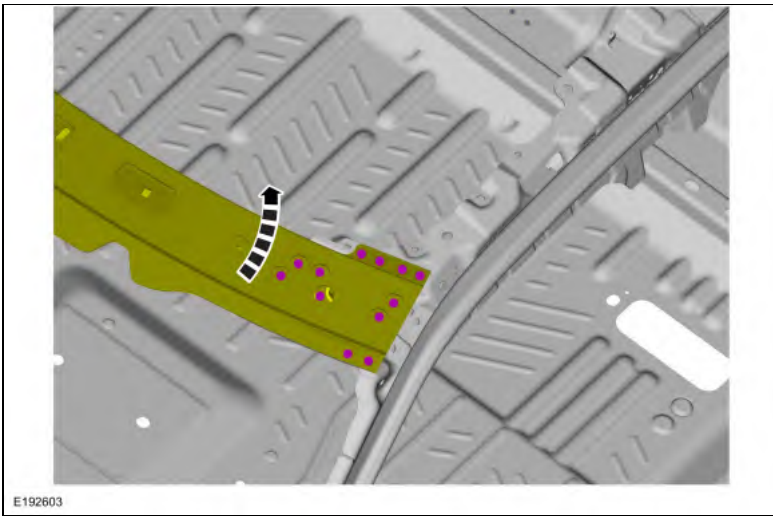
10. Remove A-pillar reinforcement.
Refer to: A-Pillar Outer Panel Section and Reinforcement (501-29 Side Panel Sheet Metal Repairs, Removal and Installation).
11. Remove B-pillar reinforcement.
Refer to: B-Pillar and Reinforcement - Crew Cab (501-29 Side Panel Sheet Metal Repairs, Removal and Installation).
12. Remove the SPR fasteners and position aside the B-pillar inner panel.
Use the General Equipment: Self-Piercing Rivet (SPR) Remover/Installer
Use the General Equipment: Belt Sander



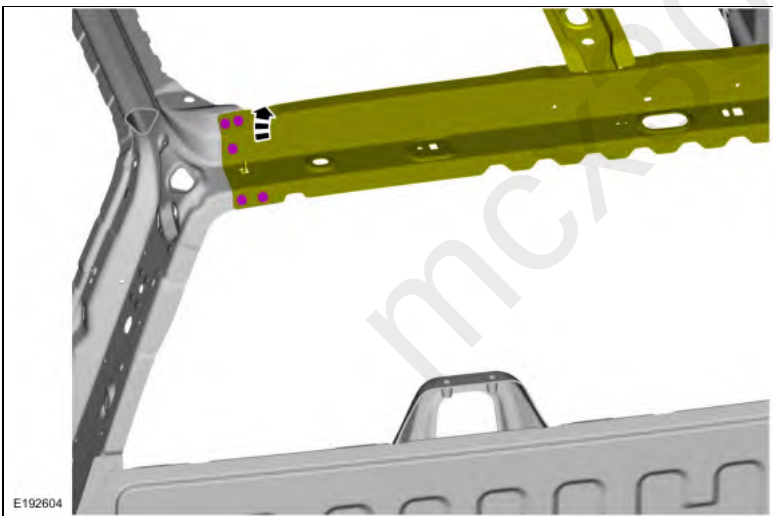
13. Remove the SPR fasteners and position aside the roof panel reinforcement.
Use the General Equipment: Self-Piercing Rivet (SPR) Remover/Installer
Use the General Equipment: Belt Sander



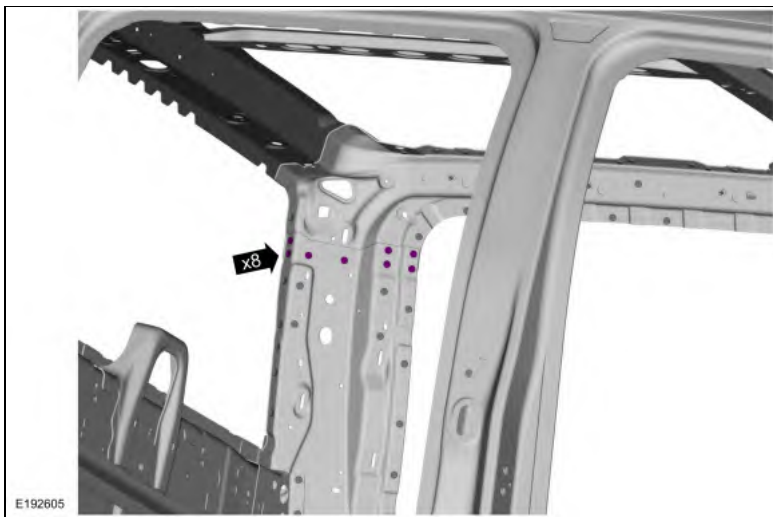
14. Remove the SPR fasteners and position aside the windshield header panel.
Use the General Equipment: Self-Piercing Rivet (SPR) Remover/Installer
Use the General Equipment: Belt Sander



15. Remove the SPR fasteners and position aside the rear window glass header panel.
Use the General Equipment: Self-Piercing Rivet (SPR) Remover/Installer
Use the General Equipment: Belt Sander

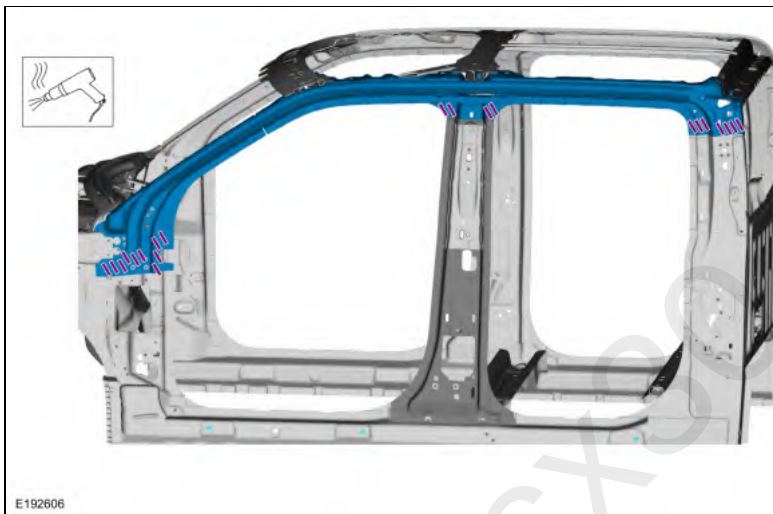


16. Remove the SPR fasteners on the C-pillar inner panel.
Use the General Equipment: Self-Piercing Rivet (SPR) Remover/Installer
Use the General Equipment: Belt Sander



17. **NOTE:** The use of heat may aide in the removal of the roof side rail. Do not exceed 425^o F.

Remove the roof side rail reinforcement.

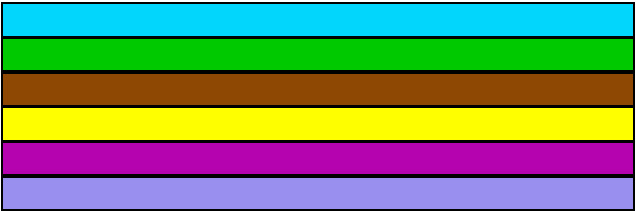
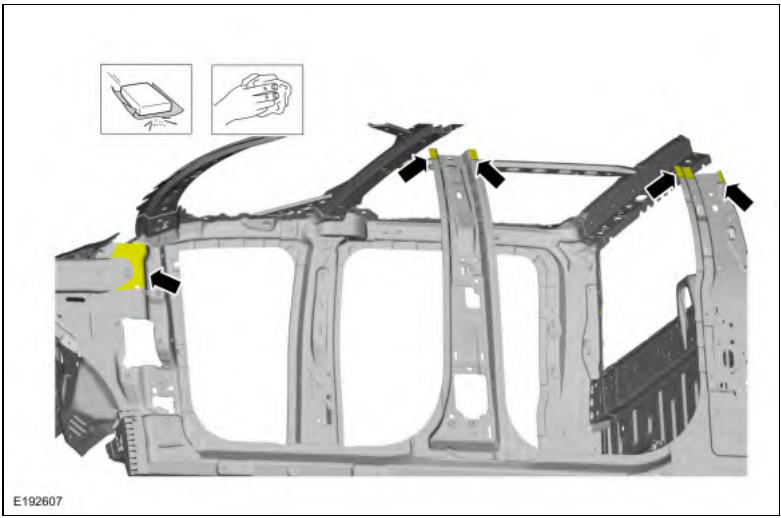


Installation

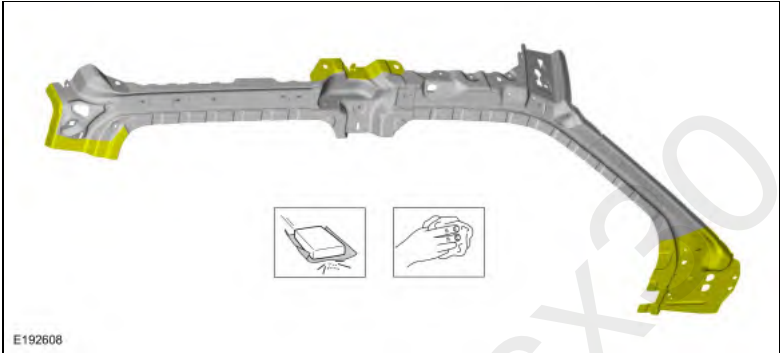
NOTE: SPR fasteners may not be placed directly over original SPR location. They must be placed adjacent to original location matching original quantity.

NOTE: Solid rivets or blind rivet fasteners may be used in place of SPR in the original SPR location after enlarging hole to 6.5 mm.

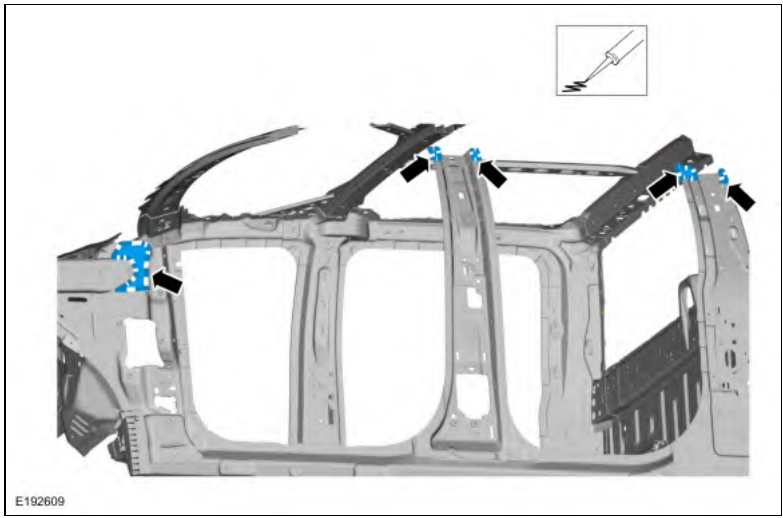
1. 80-120 grit sand paper.
Sand to remove all remaining adhesive on the body side to roof mating surfaces and clean.



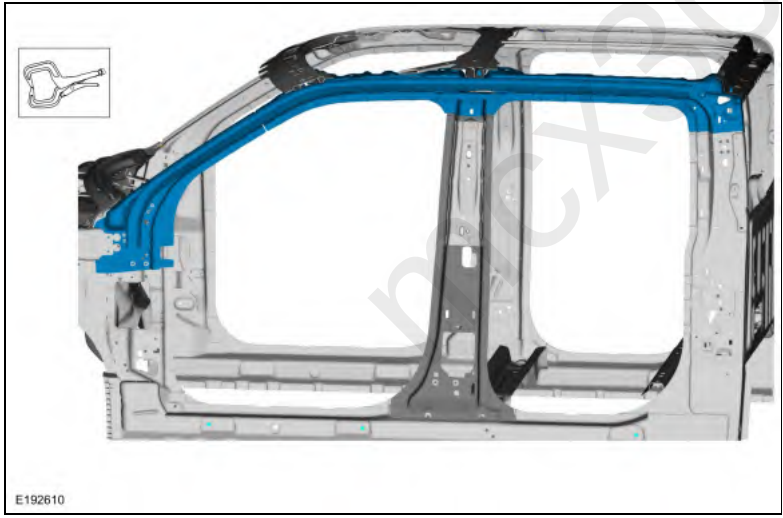
2. 80-120 grit sand paper.
Sand to remove e-coat on the roof rail to body side roof mating surfaces and clean.



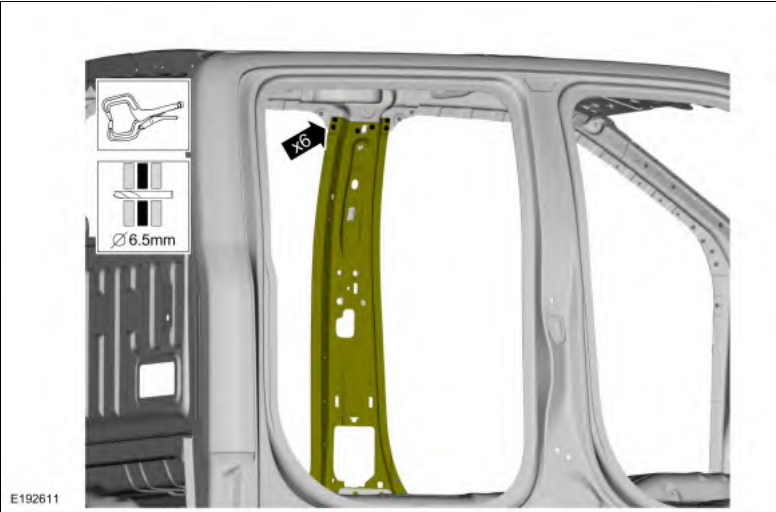
3. Apply adhesive.
Material: Metal Bonding Adhesive / TA-1, TA-1-B, 3M, 08115, LORD Fusor® 108B



4. Install, properly position and clamp the roof side.
Use the General Equipment: Locking Pliers



5. Reposition the B-pillar inner panel, clamp and drill for blind fasteners.
Use the General Equipment: 6.5 mm Drill Bit



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

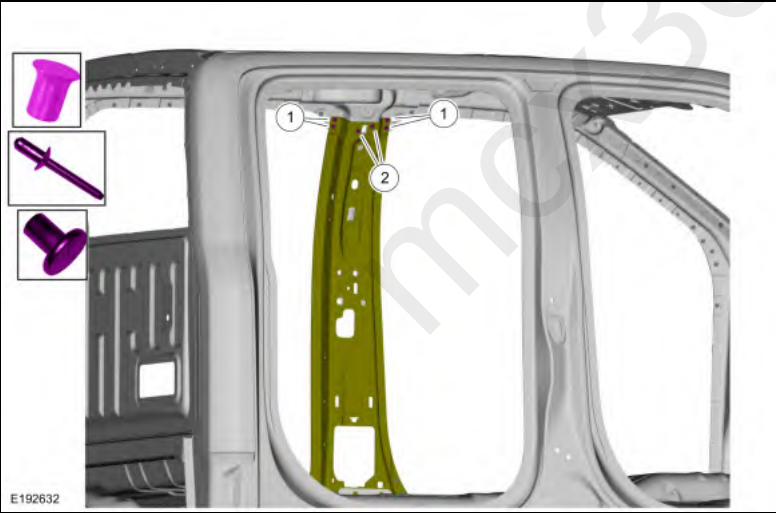
NOTE: Solid rivets or blind fastener rivets may be used in place of SPR fasteners providing the existing rivet hole is enlarged to 6.5 mm.

Install fasteners.

Item	SPR Number	SPR Code	Henrob® Mandrel	Pro-Spot® Mandrel	Blind Rivet	Solid Rivet	Rivnut®
1	W717186-S900	EN	DG11-200/H	SA-0400/SA-0401	-	W790376-S900	-
2	-	-		-	W708777-S900C	-	-

Use the General Equipment: Self-Piercing Rivet (SPR) Remover/Installer

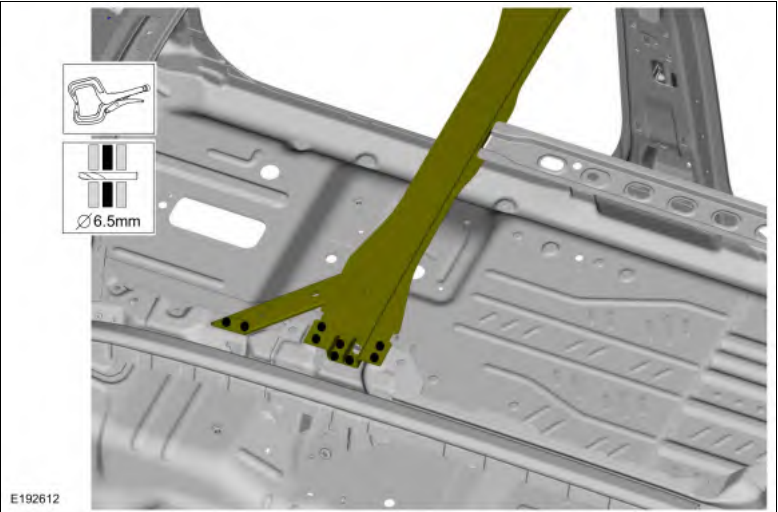
Use the General Equipment: Blind Rivet Gun



7. Position, clamp and drill the roof reinforcement assembly.

Use the General Equipment: Locking Pliers

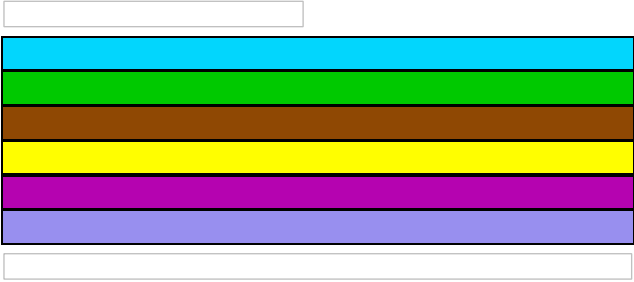
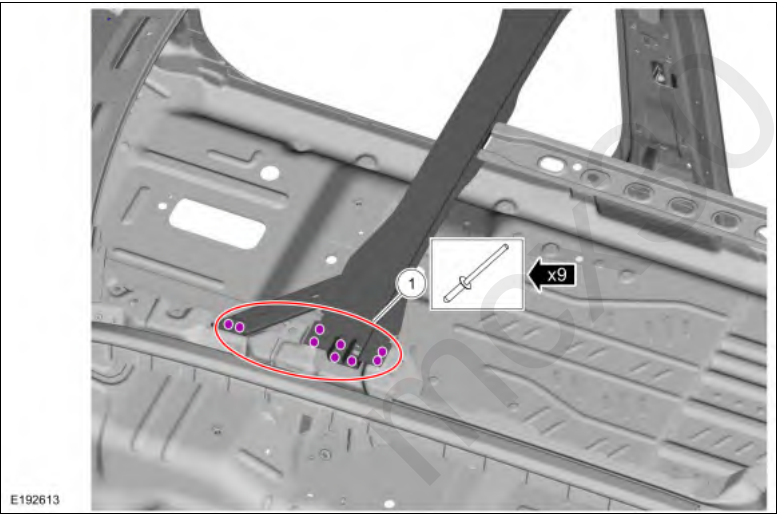
Use the General Equipment: 6.5 mm Drill Bit



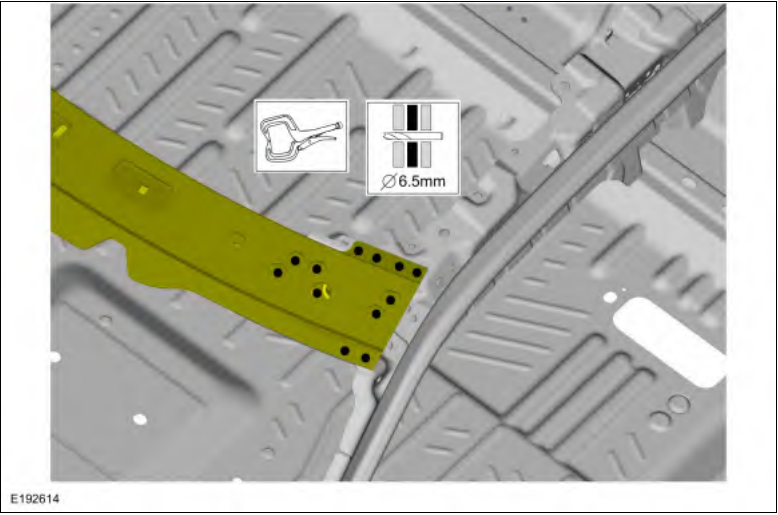
8. **NOTE:** *SPR fasteners may not be placed directly over original SPR location. They must be placed adjacent to original location matching original quantity.*
- NOTE:** *Solid rivets or blind fastener rivets may be used in place of SPR fasteners providing the existing rivet hole is enlarged to 6.5 mm.*
- Install fasteners.

Item	SPR Number	SPR Code	Henrob® Mandrel	Pro-Spot® Mandrel	Blind Rivet	Solid Rivet	Rivnut®
1	-	-	-	-	W708777-S900C	-	-

Use the General Equipment: Blind Rivet Gun



9. Position the windshield header panel, clamp and drill as indicated.
- Use the General Equipment: Locking Pliers
- Use the General Equipment: 6.5 mm Drill Bit



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

NOTE: Solid rivets or blind fastener rivets may be used in place of SPR fasteners providing the existing rivet hole is enlarged to 6.5 mm.

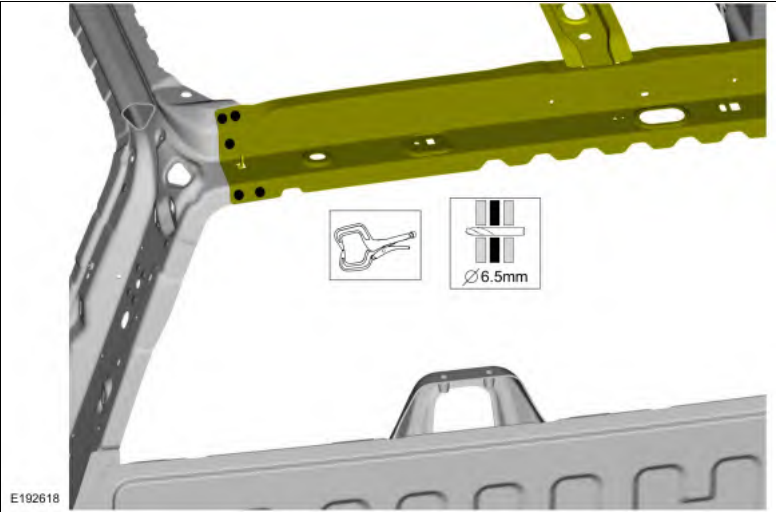
Install fasteners.

Item	SPR Number	SPR Code	Henrob® Mandrel	Pro-Spot® Mandrel	Blind Rivet	Solid Rivet	Rivnut®
1	-	-	-	-	W708777-S900C	-	-
2	W710246-S900	BN	DP10-200/H	SA-0400/SA-0402	-	W790377-S900	-

Use the General Equipment: Self-Piercing Rivet (SPR) Remover/Installer
Use the General Equipment: Blind Rivet Gun



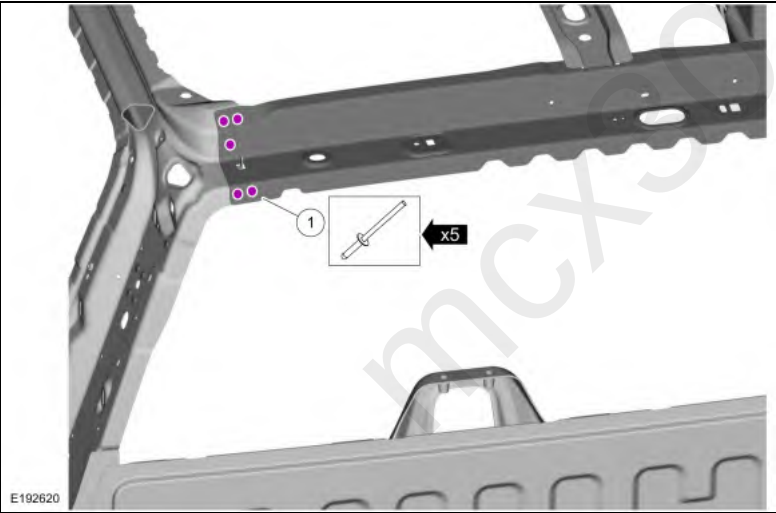
11. Position, clamp and drill the C-pillar inner panel as indicated.
Use the General Equipment: Locking Pliers
Use the General Equipment: 6.5 mm Drill Bit



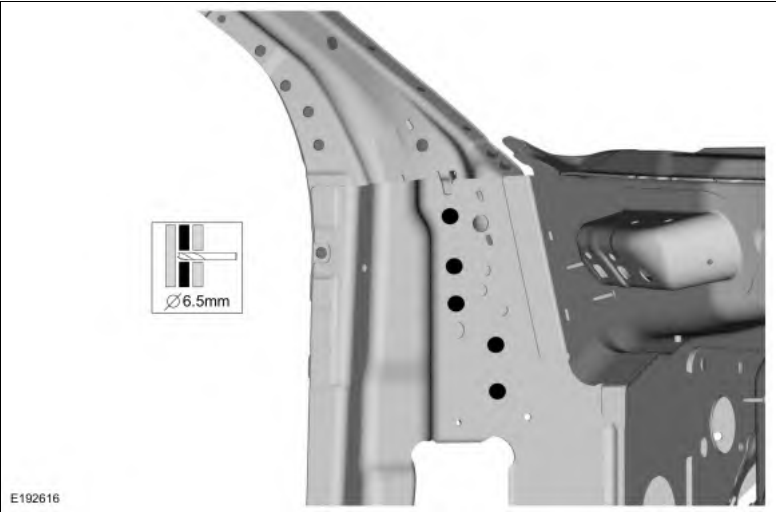
14. **NOTE:** SPR fasteners may not be placed directly over original SPR location. They must be placed adjacent to original location matching original quantity.
- NOTE:** Solid rivets or blind fastener rivets may be used in place of SPR fasteners providing the existing rivet hole is enlarged to 6.5 mm.
- Install fasteners.

Item	SPR Number	SPR Code	Henrob® Mandrel	Pro-Spot® Mandrel	Blind Rivet	Solid Rivet	Rivnut®
1	-	-	-	-	W707638-S900C	-	-

Use the General Equipment: Blind Rivet Gun



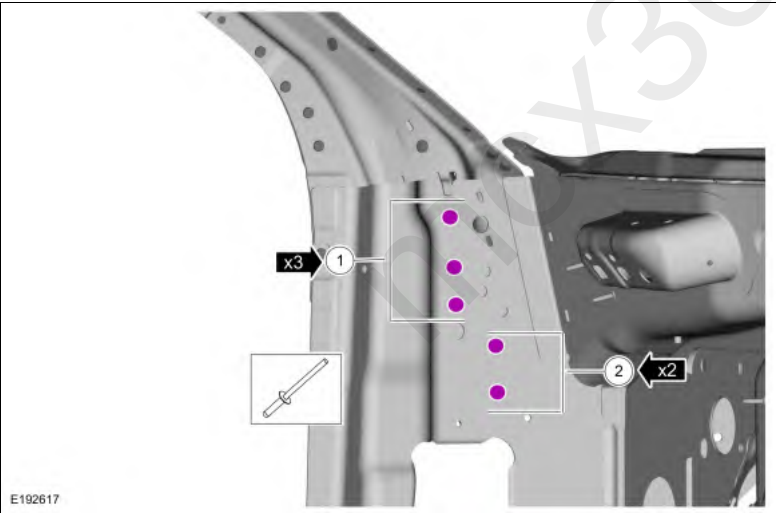
15. Enlarge FDS holes as indicated.
- Use the General Equipment: 6.5 mm Drill Bit



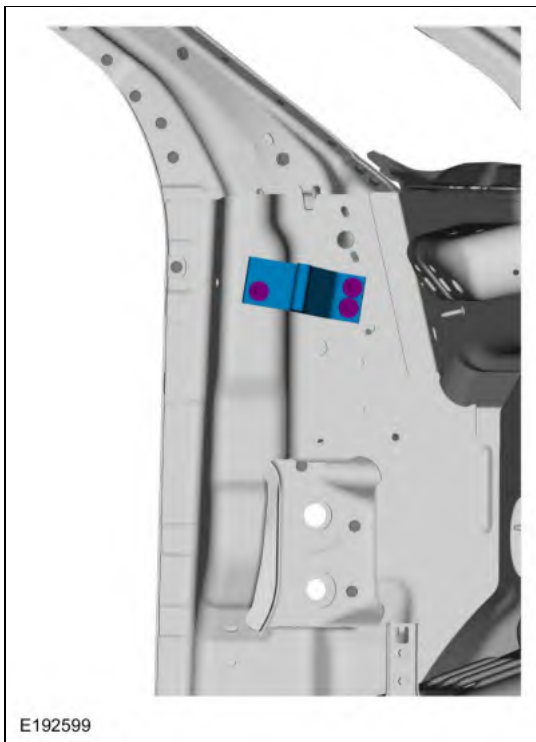
16. **NOTE:** SPR fasteners may not be placed directly over original SPR location. They must be placed adjacent to original location matching original quantity.
- NOTE:** Solid rivets or blind fastener rivets may be used in place of SPR fasteners providing the existing rivet hole is enlarged to 6.5 mm.
- Install fasteners.

Item	SPR Number	SPR Code	Henrob® Mandrel	Pro-Spot® Mandrel	Blind Rivet	Solid Rivet	Rivnut®
1	-	-	-	-	W702512-S900C	-	-
2	-	-		-	W708777-S900C	-	-

Use the General Equipment: Blind Rivet Gun



17. Install the cross-car beam bracket and bolts.
Torque: 18 lb.ft (25 Nm)



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18. Install the B-pillar reinforcement.
Refer to: B-Pillar and Reinforcement - Crew Cab (501-29 Side Panel Sheet Metal Repairs, Removal and Installation).
19. Install the A-pillar reinforcement.
Refer to: A-Pillar Outer Panel Section and Reinforcement (501-29 Side Panel Sheet Metal Repairs, Removal and Installation).
20. Install the body side outer panel.
Refer to: Body Panel Sectioning (501-26 Body Repairs - Vehicle Specific Information and Tolerance Checks, General Procedures).
Refer to: Joining Techniques (501-25 Body Repairs - General Information, General Procedures).
21. Install the roof outer panel.
Refer to: Roof Panel - Crew Cab (501-28 Roof Sheet Metal Repairs, Removal and Installation).
Refer to: Roof Panel - Crew Cab, Vehicles With: Roof Opening Panel (501-28 Roof Sheet Metal Repairs, Removal and Installation).
22. Metal finish using typical repair techniques.
23. **Seam Sealing:** All seams must be sealed to production level.
Material: Seam Sealer / TA-2-B, 3M, 08308, LORD Fusor® 805DTM
24. Refinish the repair area using a Ford approved paint system.
25. Install the instrument panel.
Refer to: Instrument Panel (501-12 Instrument Panel and Console, Removal and Installation).
26. Install the doors.
Refer to: Front Door - Crew Cab/Regular Cab (501-03 Body Closures, Removal and Installation).
Refer to: Rear Door - Crew Cab (501-03 Body Closures, Removal and Installation).
27. Install the fender and splash shield.
Refer to: Fender (501-02 Front End Body Panels, Removal and Installation).
Refer to: Fender Splash Shield (501-02 Front End Body Panels, Removal and Installation).
28. Adjust the doors.
Refer to: Front Door Alignment - Crew Cab/Regular Cab (501-03 Body Closures, General Procedures).
Refer to: Rear Door Alignment - Crew Cab (501-03 Body Closures, General Procedures).
29. Repower the SRS.
Refer to: Supplemental Restraint System (SRS) Repowering (501-20B Supplemental Restraint System, General Procedures).

