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2020.0 DEFENDER (LE), 501-30

REAR END SHEET METAL REPAIRS

QUARTER PANEL ASSEMBLY - 90 (G2452625)

mcx30.com

REMOVAL

The following step(s) applies to:

All vehicles

**NOTE:**

In this procedure the quarter panel assembly is installed in conjunction with:

- Tailgate
- Rear armature
- Tail lamp assembly
- Rear quarter window
- Second row seat
- Second row seatbelt retractor
- Fuel filler neck
- Roof panel
- Rear roof panel.

1.

 NOTE:

Additional items will be required to complete the repair.



The quarter panel assembly is serviced as indicated.

2.

Before commencing this procedure make sure that you are aware of all Health and Safety requirements. Refer to: [Health and Safety Precautions](#) (100-00 General Information, Description and Operation).

3.



NOTES:

- Where Breakstem Fastener (BSF) removal is instructed remove the fastener shaft with a 4 mm punch and remove the head with a 6.5 mm drill bit. Clean all the drilled holes to make sure they are free from debris.
- Where Self Piercing Rivet (SPR) removal is instructed use either the Jaguar Land Rover (JLR) approved SPR tool or a 5.3 mm drill bit. Clean all the drilled holes to make sure they are free from debris.
- Where Flow Form Rivet (FFR) removal is instructed, remove the head and then remove the shaft with a punch. Clean the holes to make sure they are free from debris.
- Any joints sealed as part of vehicle manufacture must be sealed as part of the repair.

When installing the quarter panel assembly make sure that you are aware of the methods, tools and fixings used in this procedure.

Refer to: [Body Repairs](#) (501-25A Body Repairs - General Information, Description and Operation).

Refer to: [Adhesives, Fixings and Consumables](#) (501-25A Body Repairs - General Information, Description and Operation).

4.

For additional information on the fixings required to complete this procedure

Refer to: [Specifications - 110](#) (501-30 Rear End Sheet Metal Repairs, Specifications).

5.

For additional removal information

Refer to: [Tailgate](#) (501-03 Body Closures, Removal and Installation).

6.

For additional removal information

Refer to: [Rear Armature](#) (501-19 Bumpers, Removal and Installation).

7.

For additional removal information

Refer to: [Tail Lamp Assembly](#) (417-01 Exterior Lighting, Removal and Installation).

8.

For additional removal information

Refer to: [Rear Quarter Window](#) (501-11 Glass, Frames and Mechanisms, Removal and Installation).

9.

For additional removal information

Refer to: [Second Row Seat - 90](#) (501-10 Seating, Removal and Installation).

10.

For additional removal information

Refer to: [Second Row Seatbelt Retractor - 90](#) (501-20A Seatbelt System, Removal and Installation).

11. For additional removal information

Refer to: [Fuel Filler Neck - INGENIUM I4 2.0L Petrol](#) (310-01A Fuel Tank and Lines - INGENIUM I4 2.0L Petrol/INGENIUM I4 2.0L Petrol - PHEV, Removal and Installation).

Refer to: [Fuel Filler Neck](#) (310-01C Fuel Tank and Lines - INGENIUM I4 2.0L Diesel, Removal and Installation).

12. For additional removal information

Refer to: [Roof Panel - 90, Vehicles Without: Roof Opening Panel](#) (501-28 Roof Sheet Metal Repairs, Removal and Installation).

13. For additional removal information

Refer to: [Rear Roof Panel - 90, Vehicles With: Roof Opening Panel](#) (501-28 Roof Sheet Metal Repairs, Removal and Installation).

14. Remove the door striker from the B-pillar.

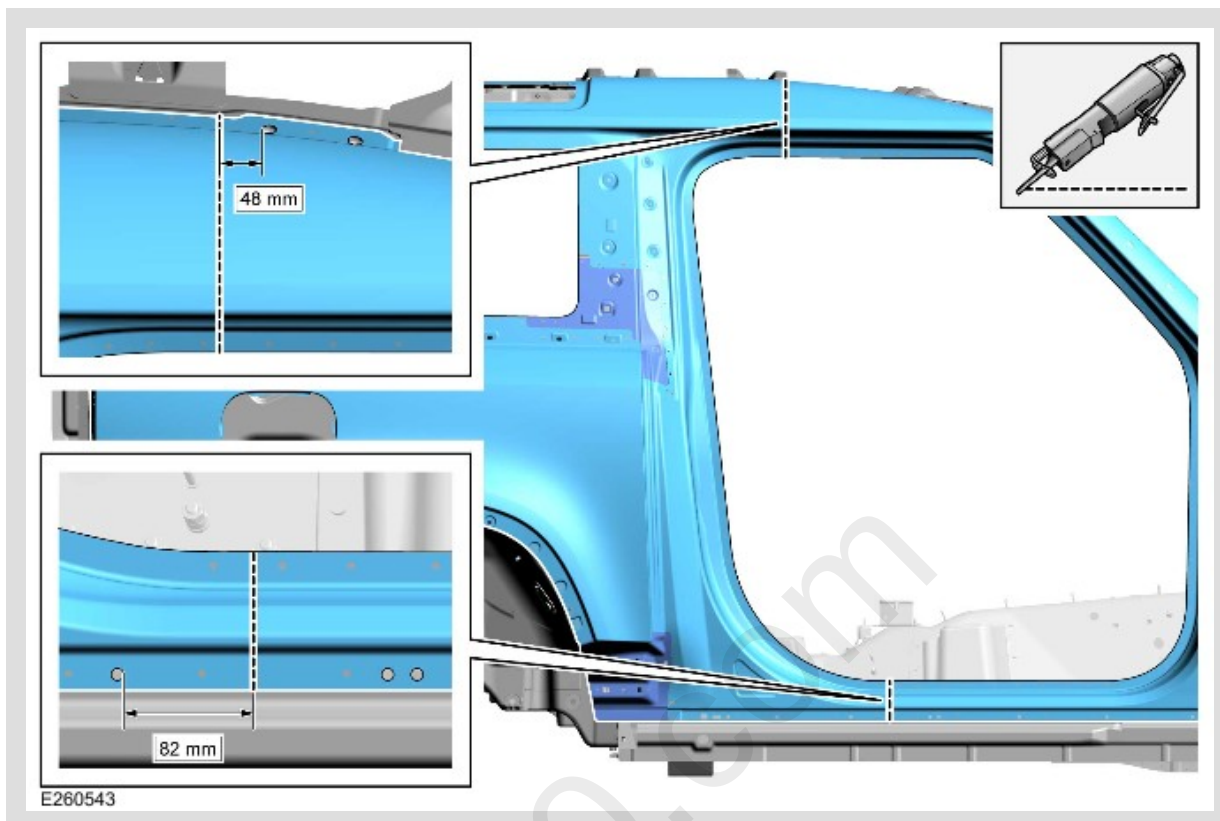
15. Release and position the floor carpet to one side.

16. Release and position the floor Noise, Vibration and Harshness (NVH) material to one side.

17. Release and position the wiring harness to one side.

⚠ CAUTION:

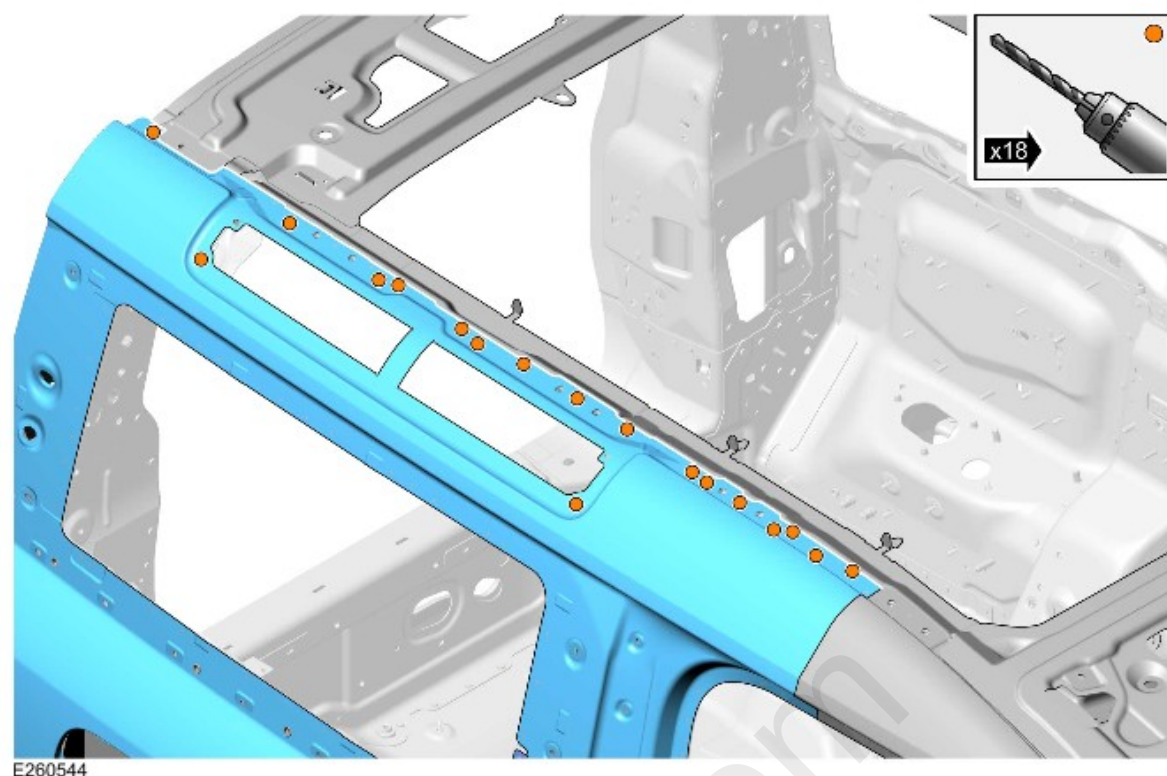
Care should be taken not to cut through into the inner reinforcements.



Measure, mark and cut the quarter panel, where the Metal Inert Gas (MIG) welded butt joints are to be made as indicated.

The following step(s) applies to:

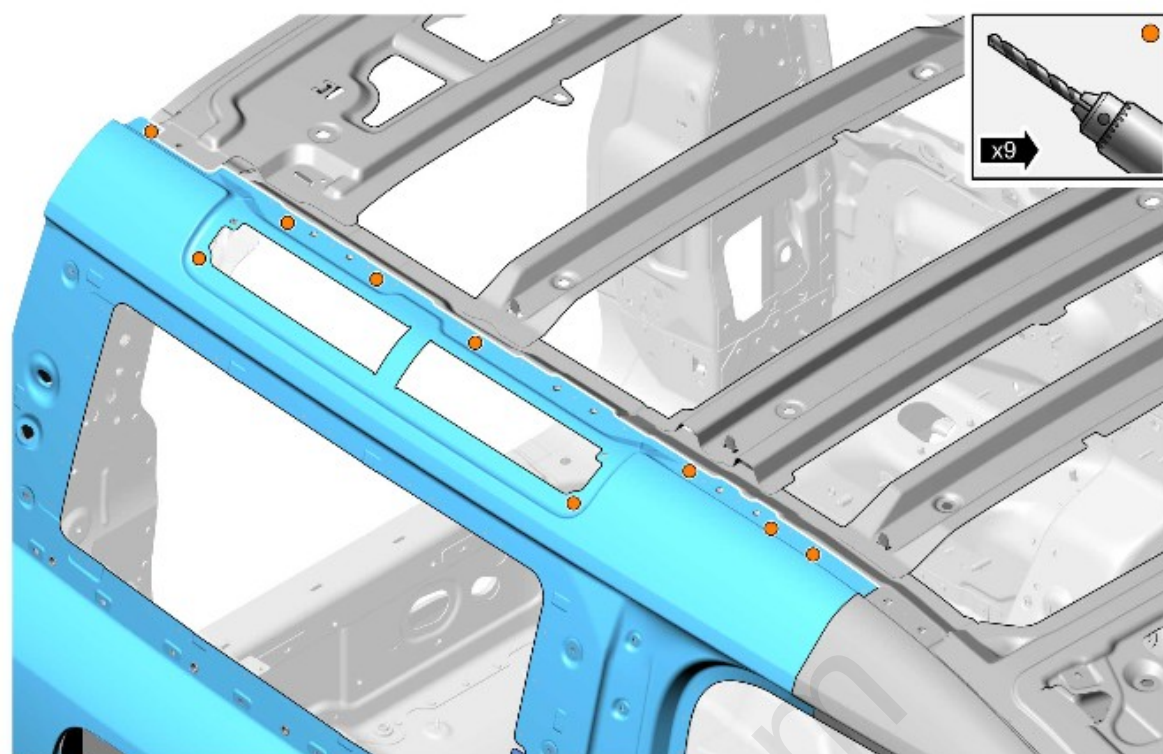
Vehicles with roof opening panel



Remove the Self Piercing Rivets (SPRs) as indicated.

The following step(s) applies to:

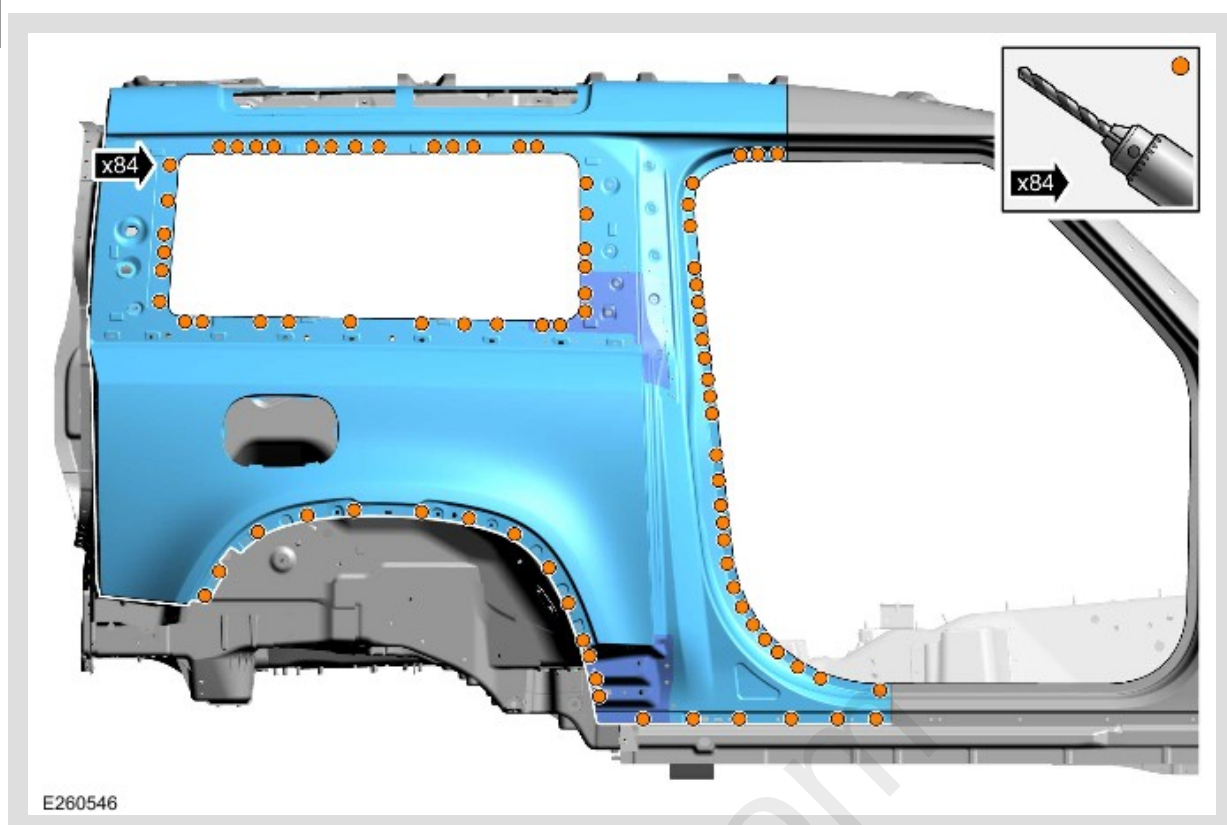
Vehicles without roof opening panel



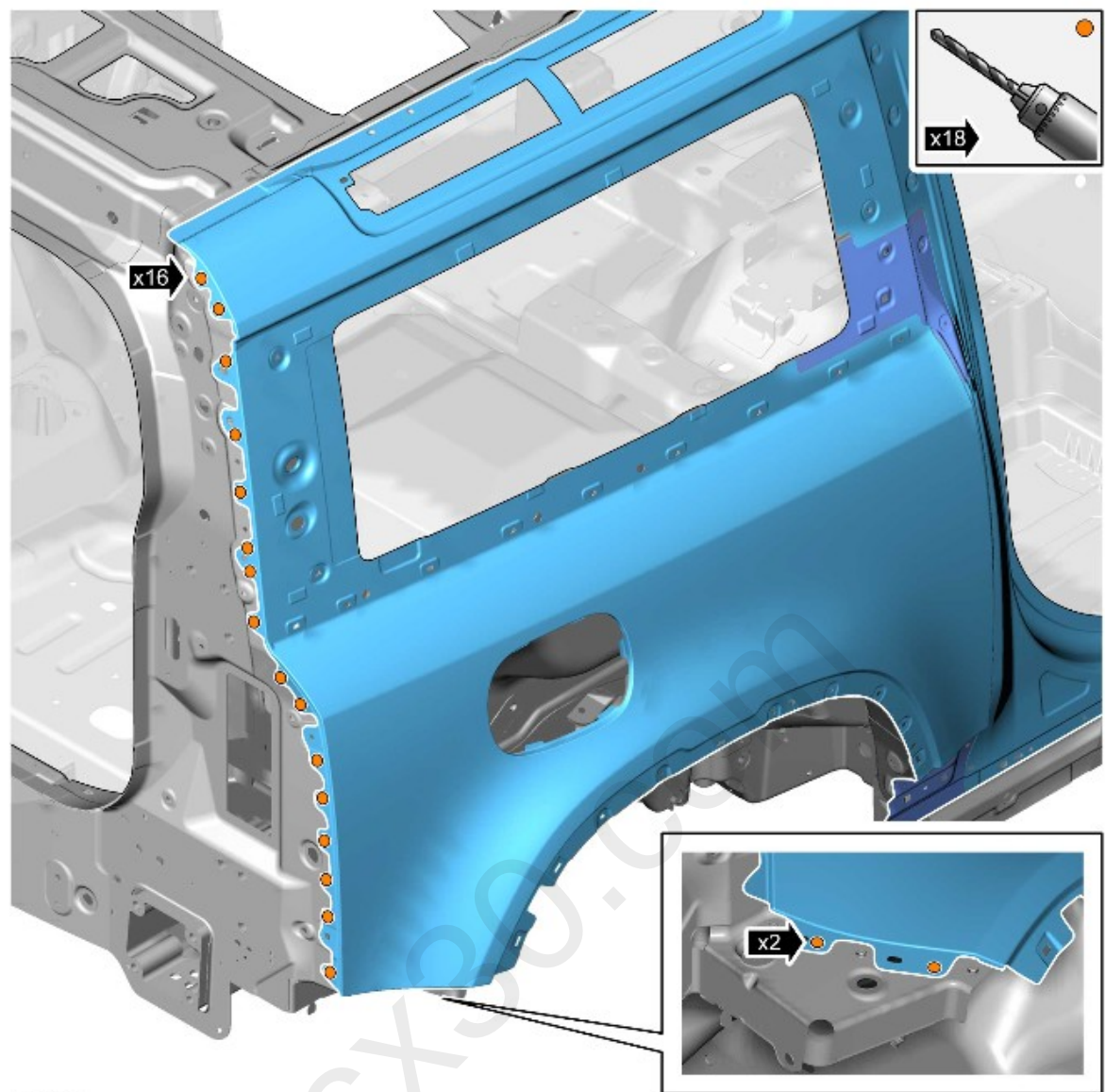
Remove the SPRs as indicated.

The following step(s) applies to:

All vehicles



Remove the SPRs as indicated.

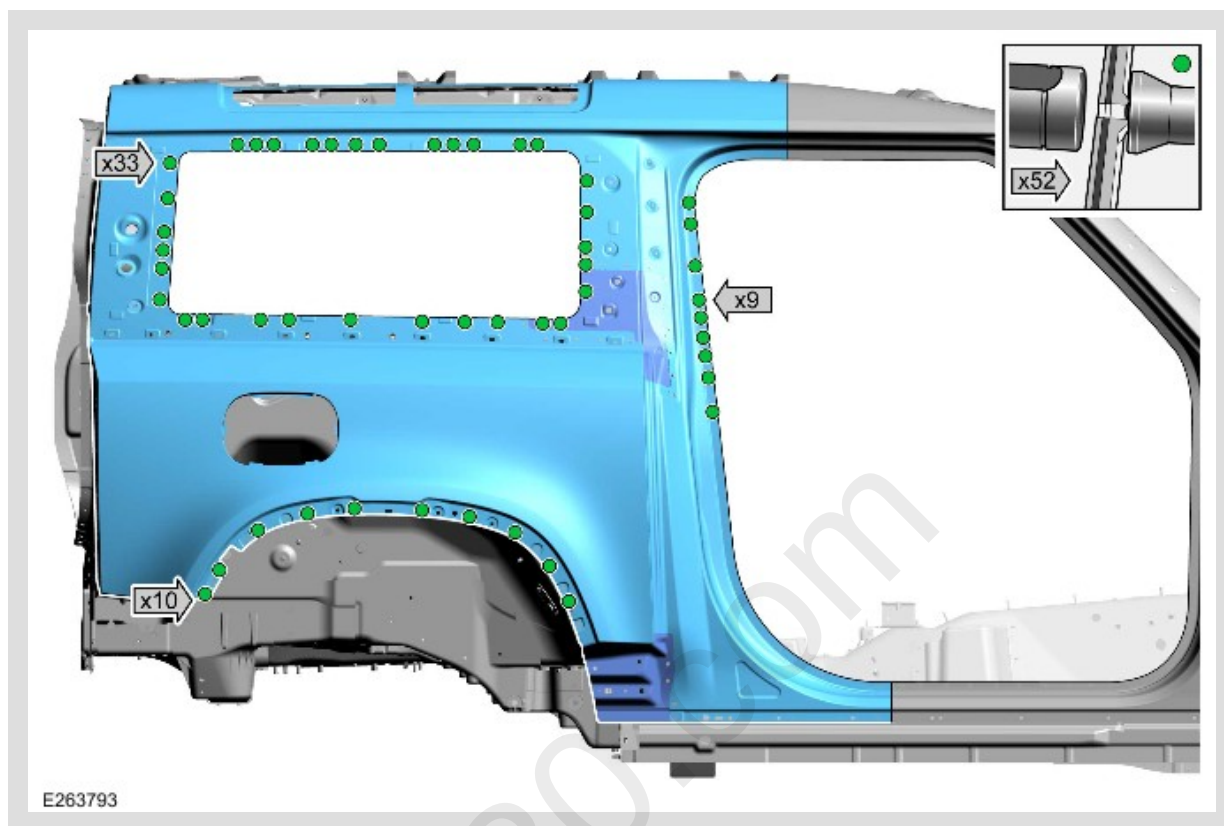


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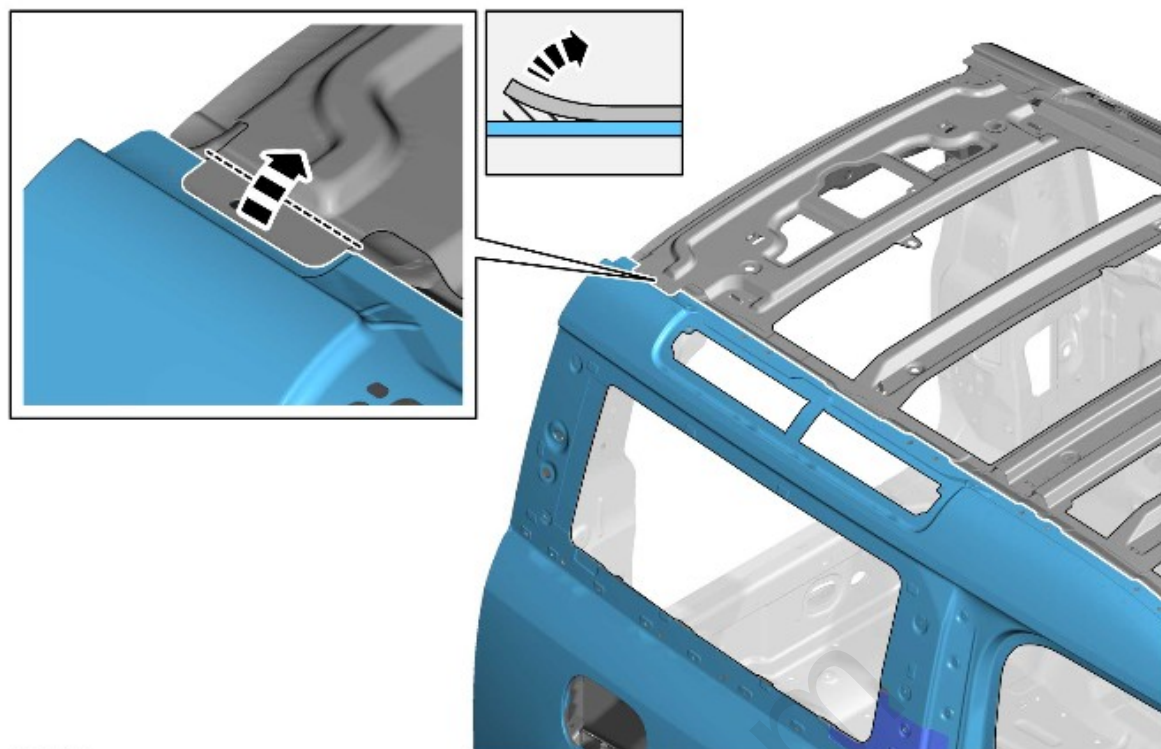
Remove the SPRs as indicated.

 NOTE:

Where Flow Form Rivet (FFR) installation is indicated. Make sure that the panel is planished before removal.



Planish the panel as indicated.

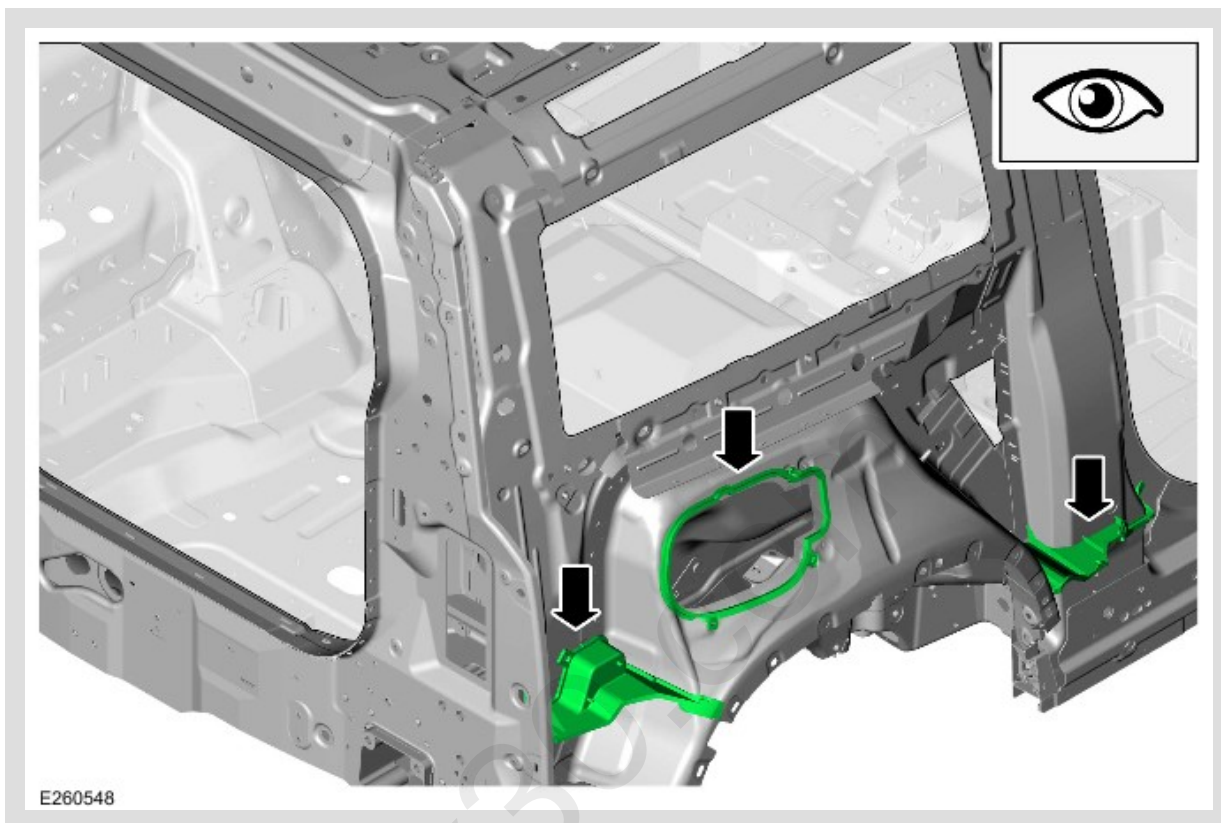


Build an expansion space as indicated.

25.

**⚠ CAUTION:**

This step will require the aid of another technician as the panel will be heavy.



Carefully separate the joints and remove the quarter panel assembly avoiding damage to the NVH material as indicated.

INSTALLATION

The following step(s) applies to:

All vehicles

⚠ CAUTION:

Where structural adhesive is to be applied between surfaces it is essential compression is applied to the joints during the curing period.

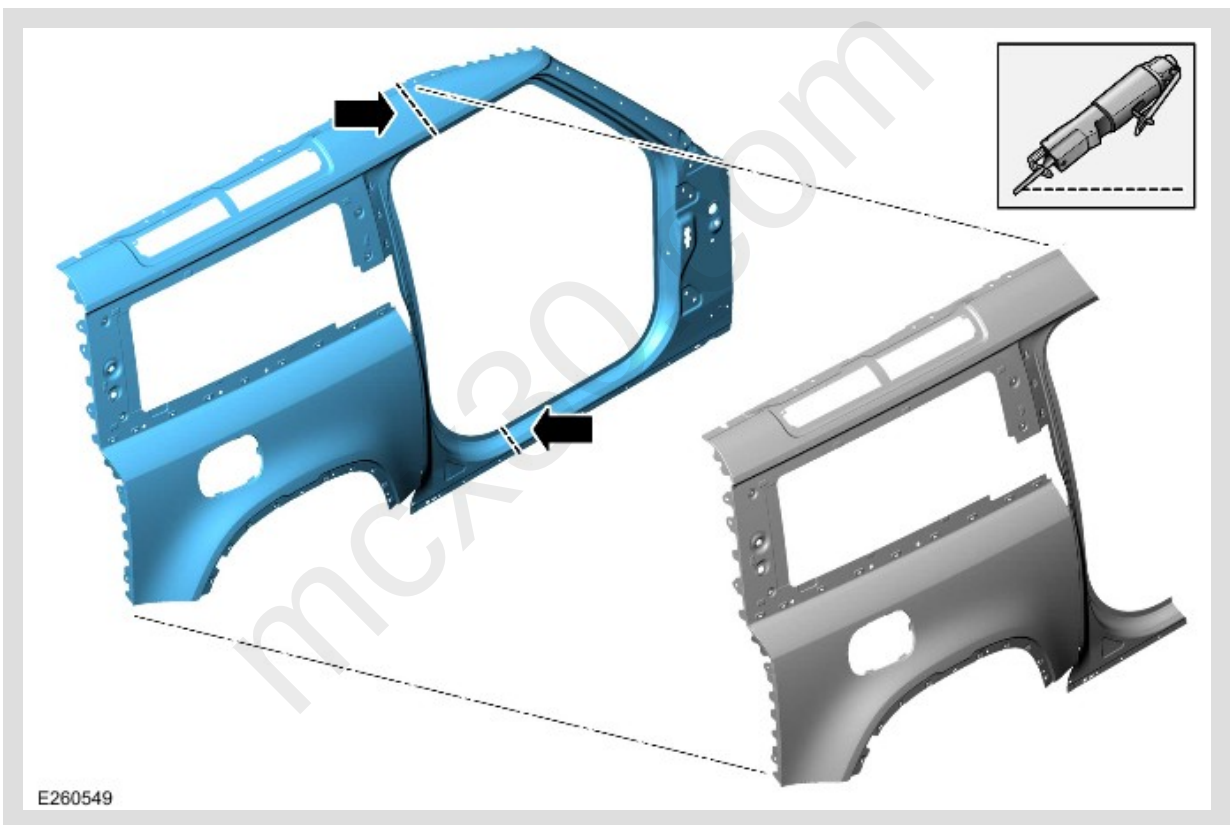
NOTES:

- Breakstem Fastener (BSF) installation involves using the JLR approved BSF installation tool and requires a hole diameter of 6.5 mm.
- Self Piercing Rivet (SPR) installation requires using the JLR approved SPR tool.
- Flow Form Rivet (FFR) installation requires using the JLR approved FFR tool.
- Refer to Adhesive, Fixings and Consumables for further information on Flow Form Rivets (FFRs).

1. Remove the rivet remnants.

2. Dress the flanges where necessary.

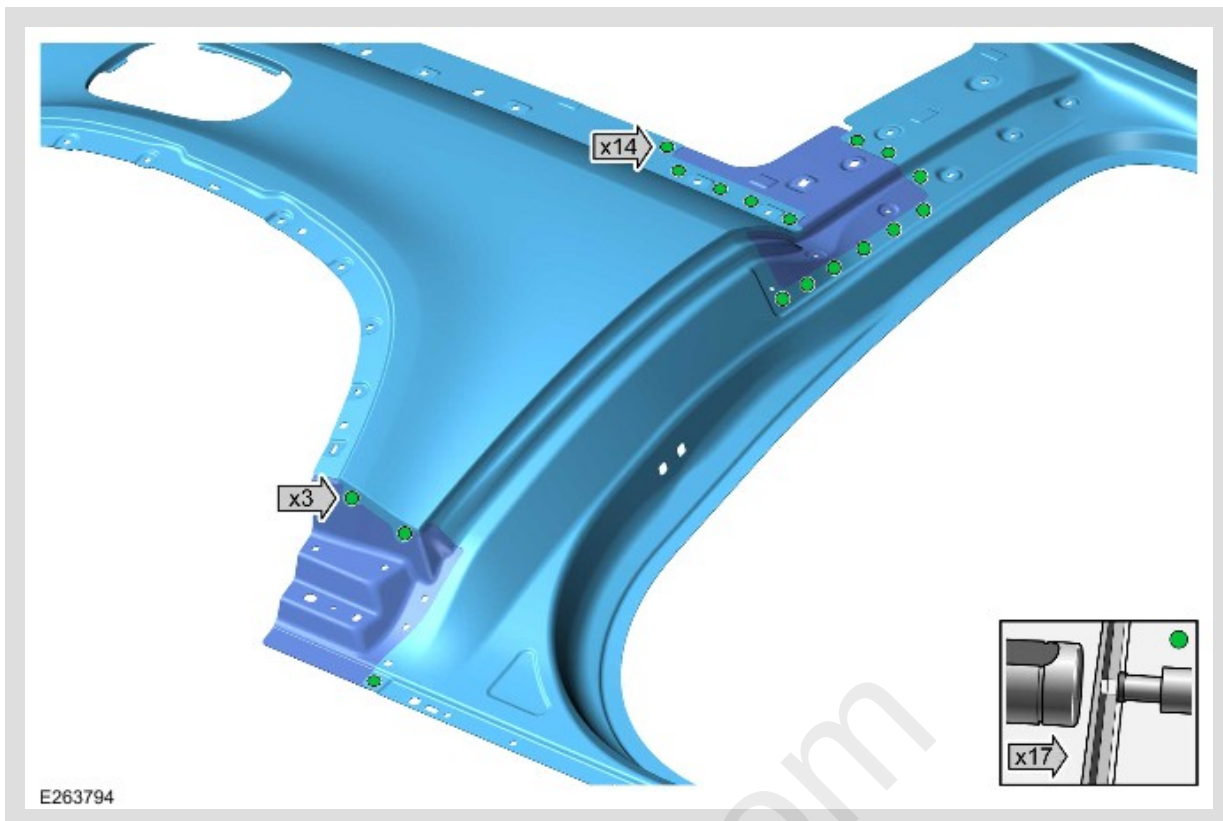
3.



Use the old quarter panel assembly as a guide. Measure, mark and cut the new side panel, where the MIG butt joints are to be made as indicated.

4. Offer up the new quarter panel upper reinforcement and lower reinforcement. Clamp into position. Check alignment, if correct proceed to next step, if not rectify and check the alignment again before proceeding.

5.



Punch calibrated holes where the Flow Form Rivets (FFRs) are to be installed as indicated.

6.

Remove the new quarter panel upper reinforcement and lower reinforcement.

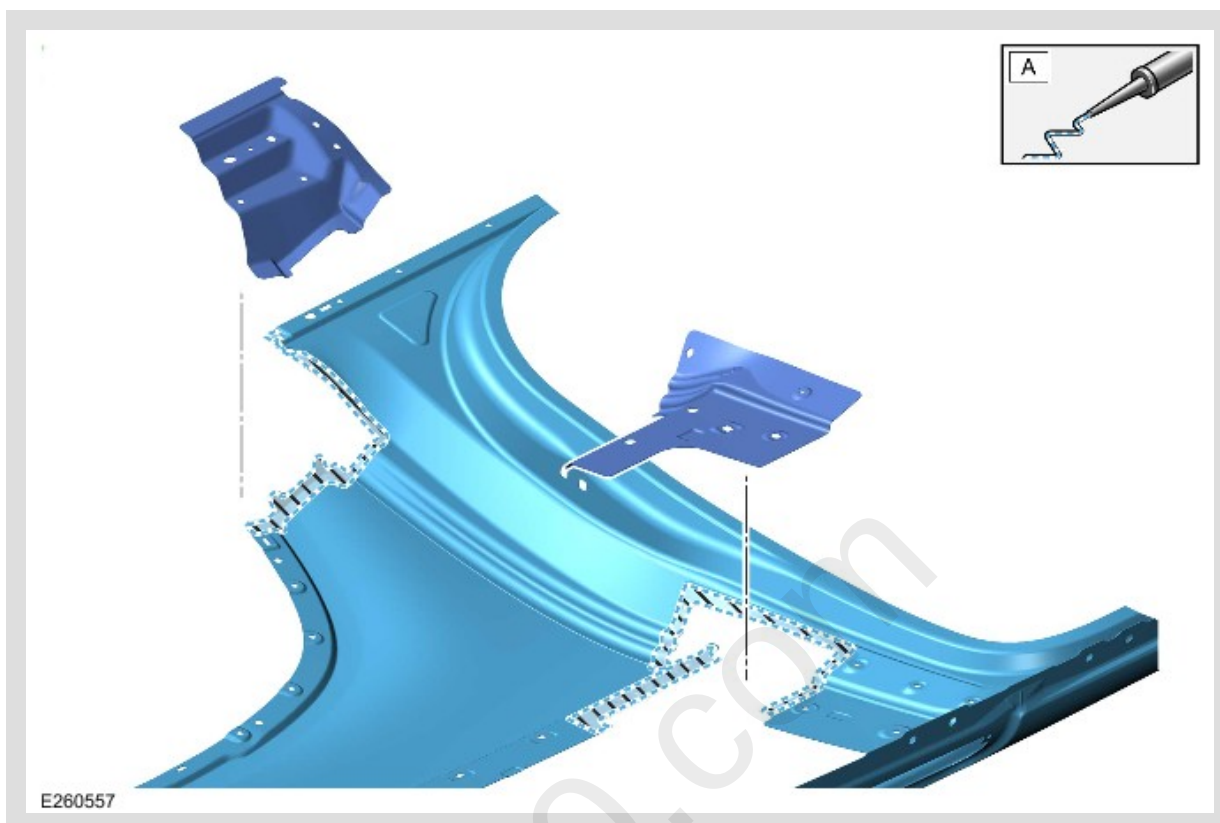
7.

Clean and prepare the panel surfaces.

8.

 NOTE:

Make sure a continuous bead of adhesive surrounds the fixing holes.

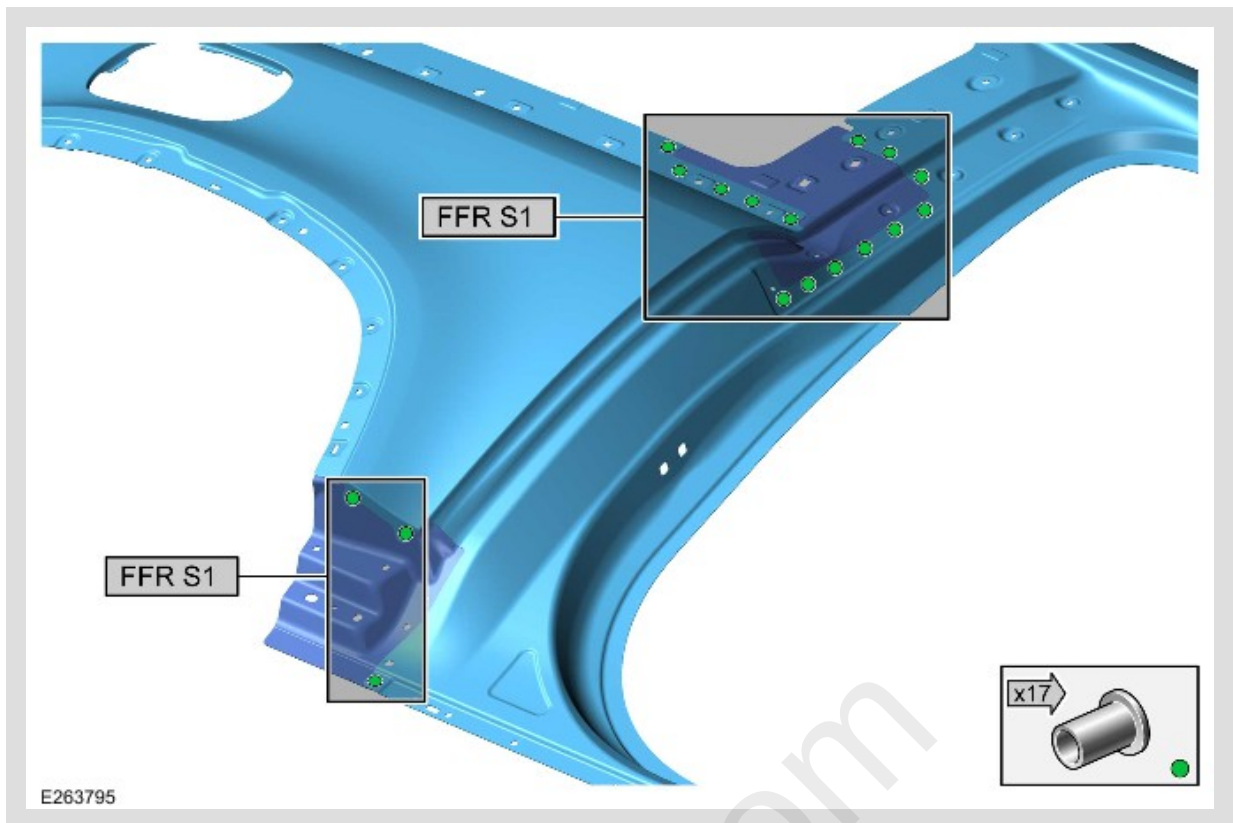


Apply a 5 mm zig zag bead of JLR recommended bonding material as indicated.

9.

Offer up the new quarter panel upper reinforcement and lower reinforcement. Clamp into position. Check alignment, if correct proceed to next step, if not rectify and check the alignment again before proceeding.

10.



Install the FFRs as indicated.

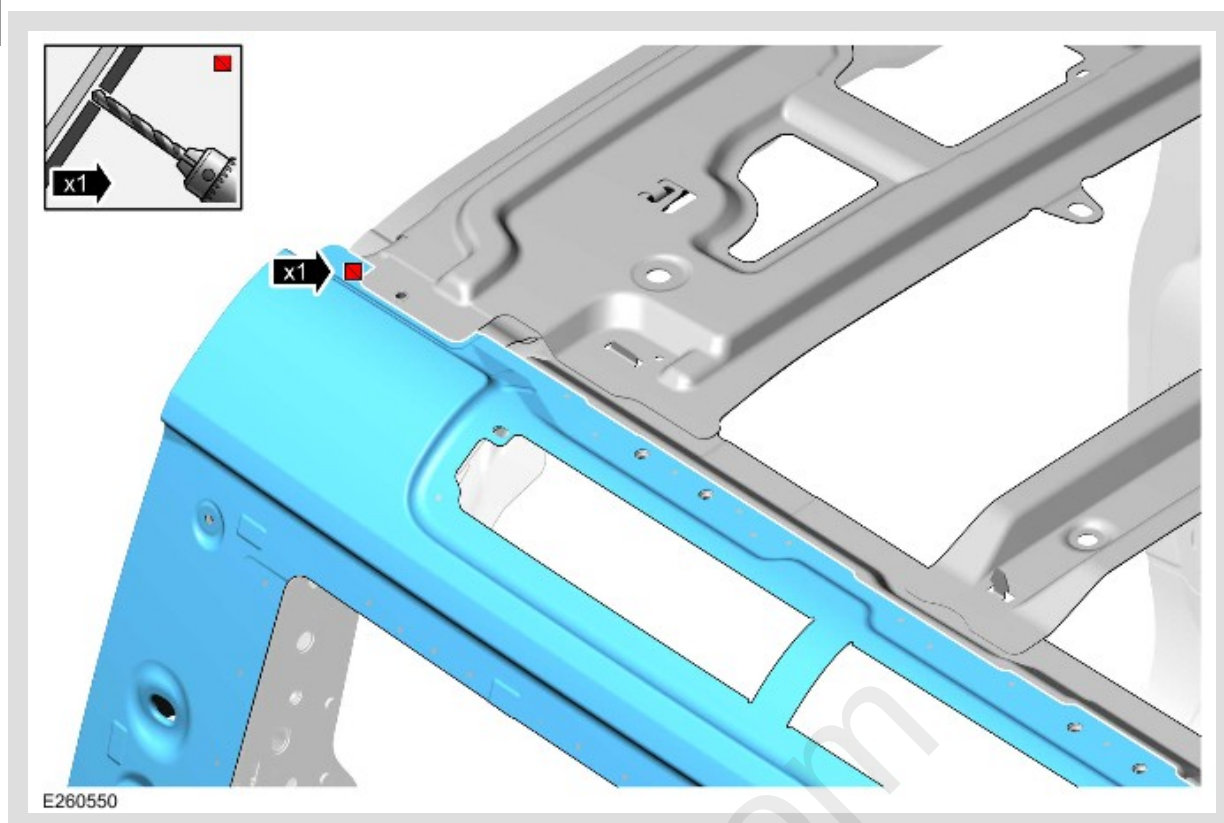
11.



⚠ CAUTION:

This step will require the aid of another technician as the panel will be heavy.

Offer up the new quarter panel assembly and clamp into position. Check alignment, if correct proceed to next step, if not rectify and check the alignment again before proceeding.



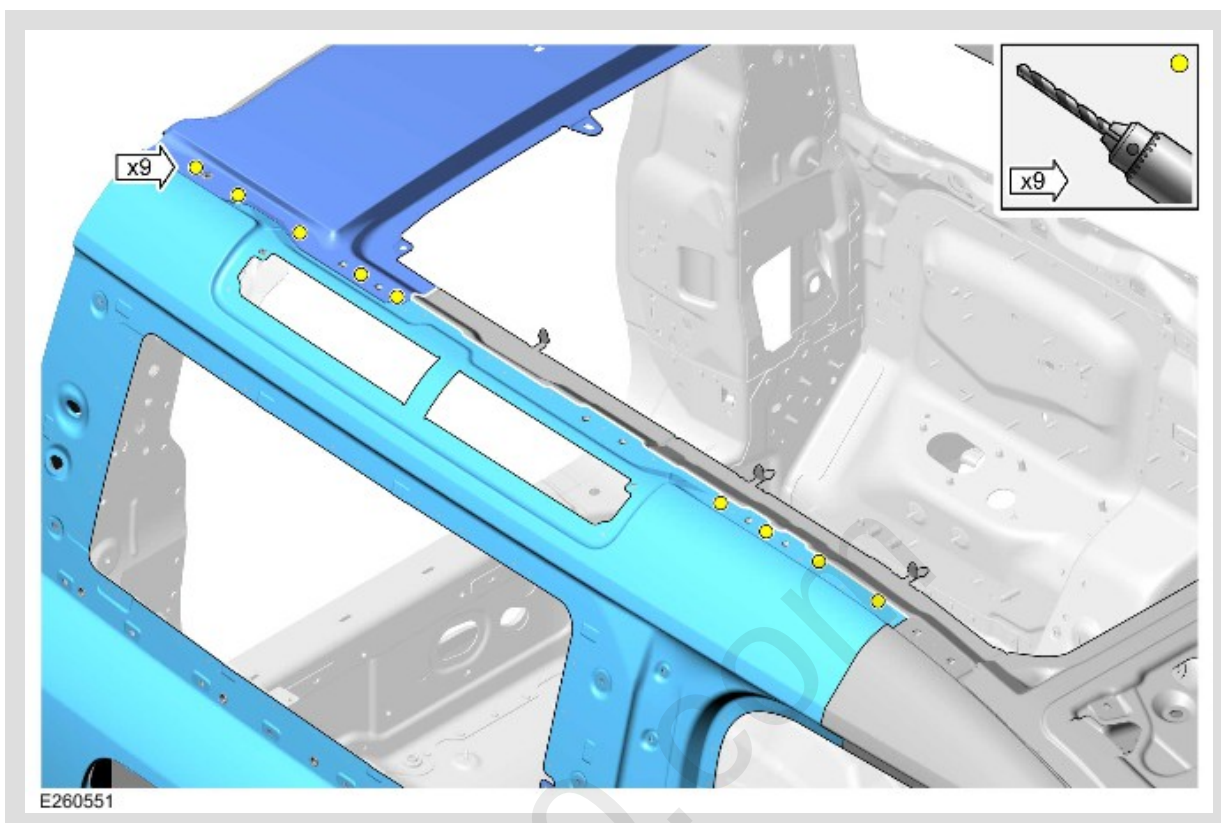
Drill a hole where the MIG plug weld is to be installed.

The following step(s) applies to:

Vehicles with roof opening panel

NOTE:

When installing the quarter panel assembly in conjunction with the Rear Roof Panel.



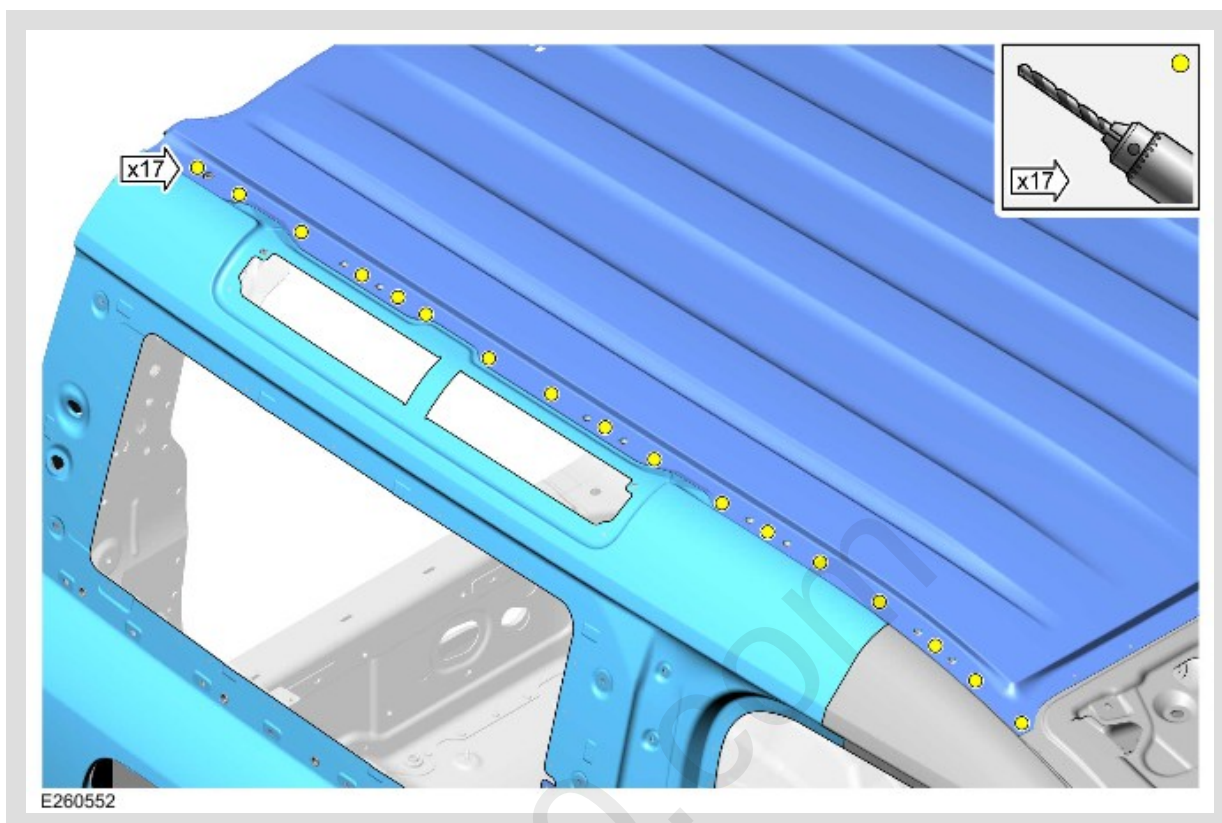
Drill holes where the Breakstem Fasteners (BSFs) are to be installed as indicated.

The following step(s) applies to:

Vehicles without roof opening panel

 NOTE:

When installing the quarter panel assembly in conjunction with the Roof Panel.

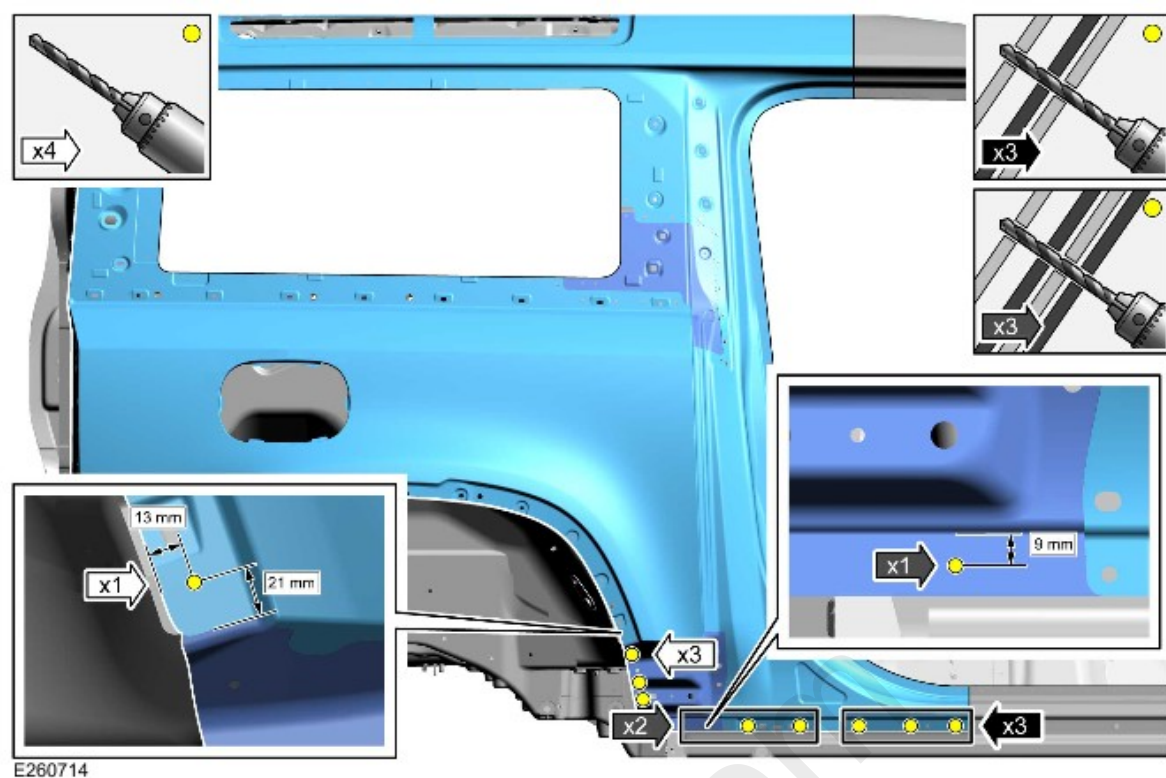


Drill holes where the BSFs are to be installed as indicated.

The following step(s) applies to:

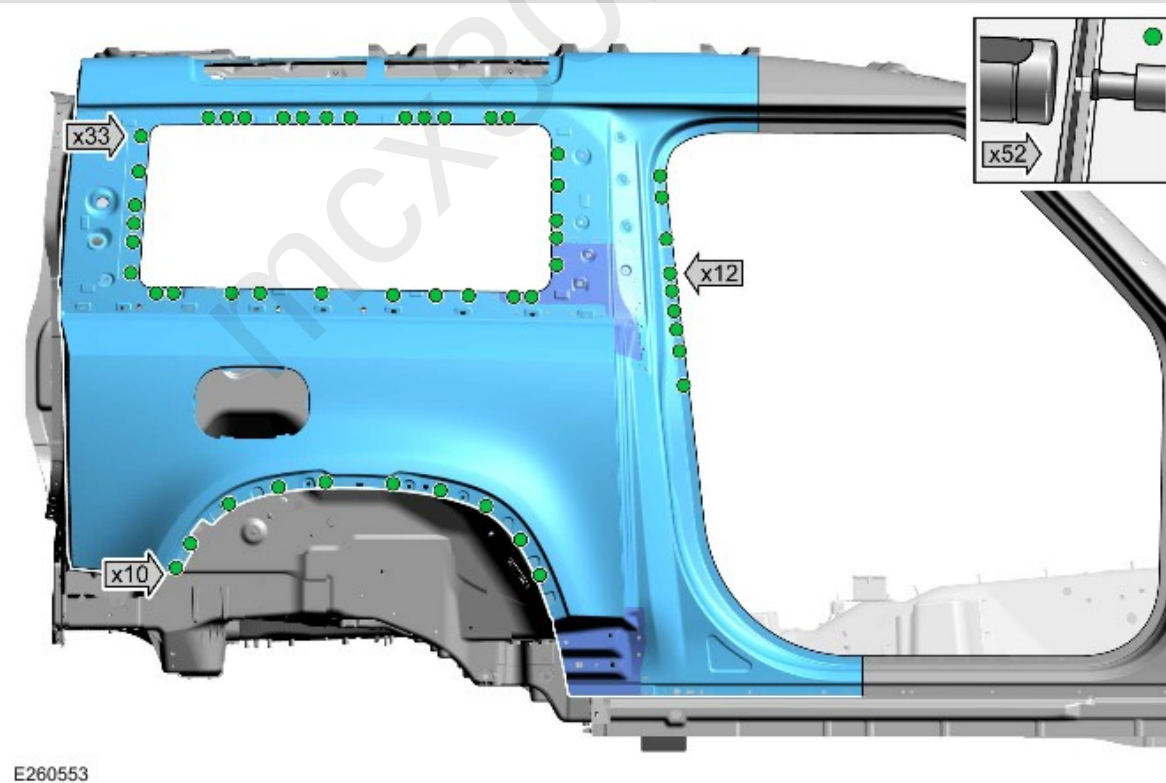
All vehicles

15.

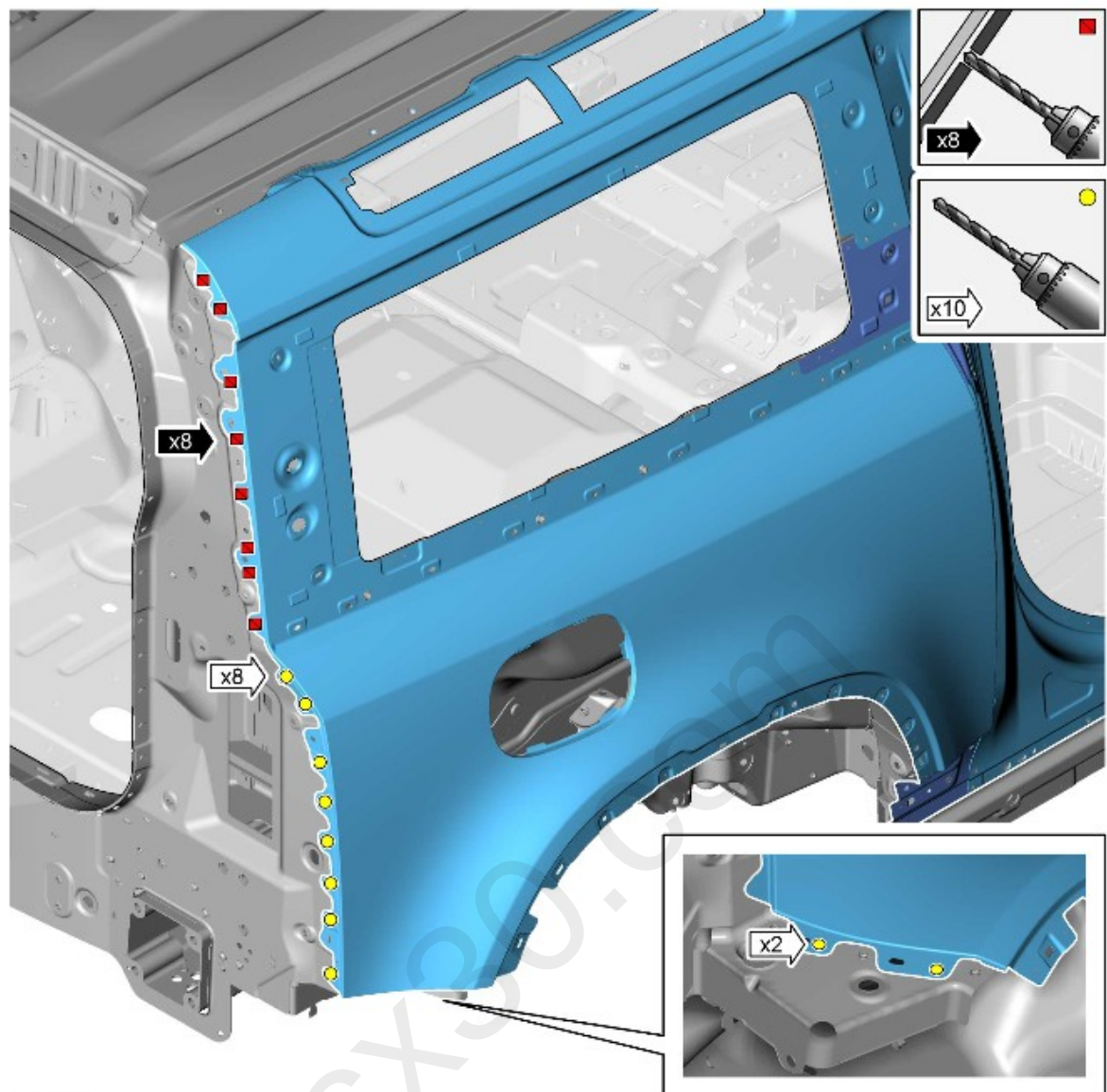


Drill holes where the BSFs are to be installed.

16.

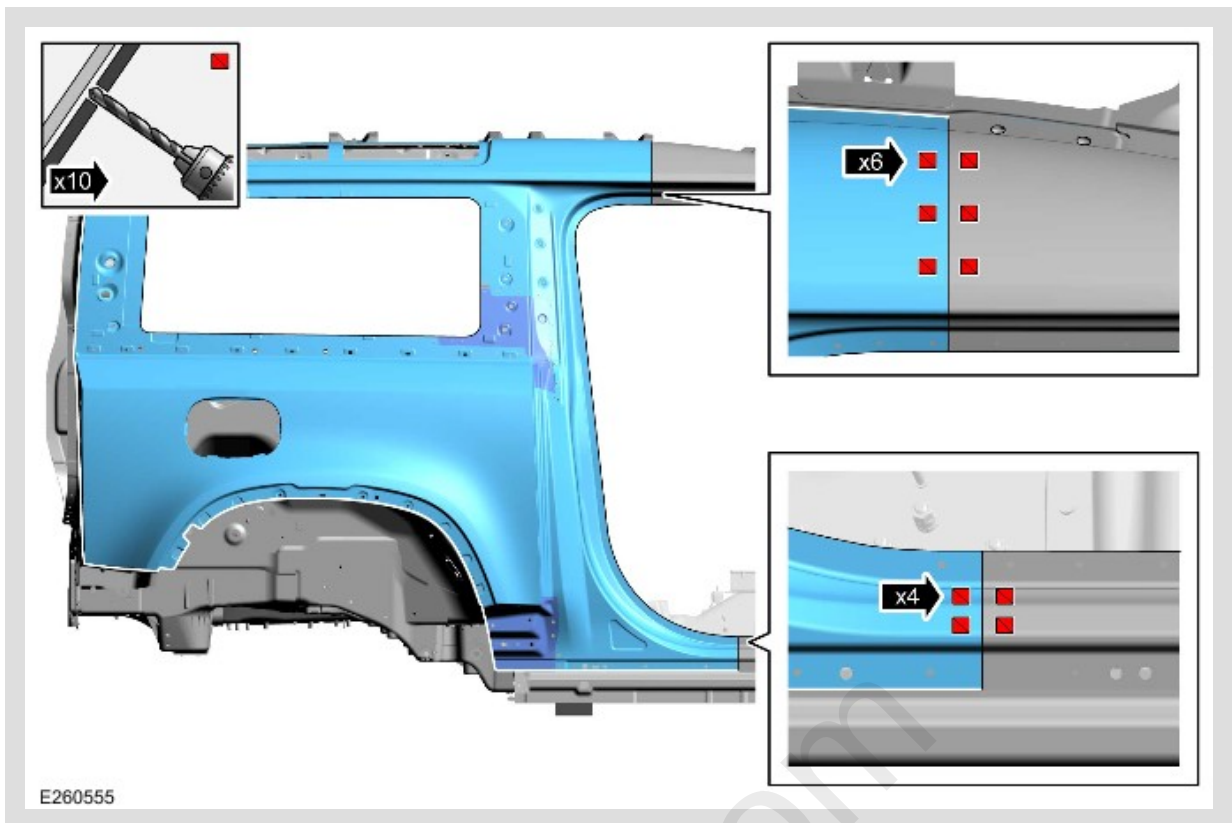


Punch calibrated holes where the FFRs are to be installed as indicated.



Drill holes where the BSFs and MIG plug welds are to be installed as indicated.

18.



Drill holes where the backing plates are to be installed as indicated.

19.



⚠ CAUTION:

This step will require the aid of another technician as the panel will be heavy.

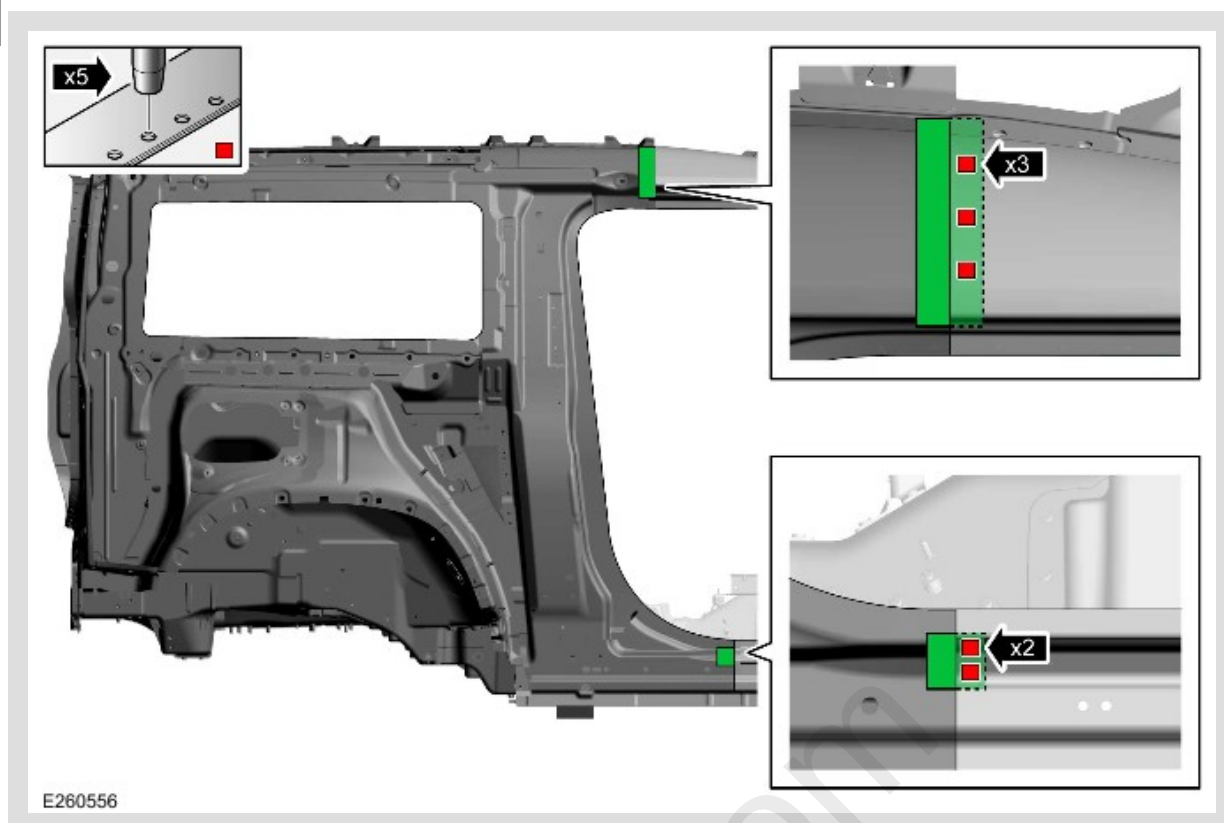
Remove the new quarter panel assembly.

20. Deburr the drilled holes.

21. Measure and cut 2 backing plates 50 mm wide, 25 mm each side of the MIG butt joints from the quarter panel remnant.

22. Cut 2 run on/run off tabs from the quarter panel remnant.

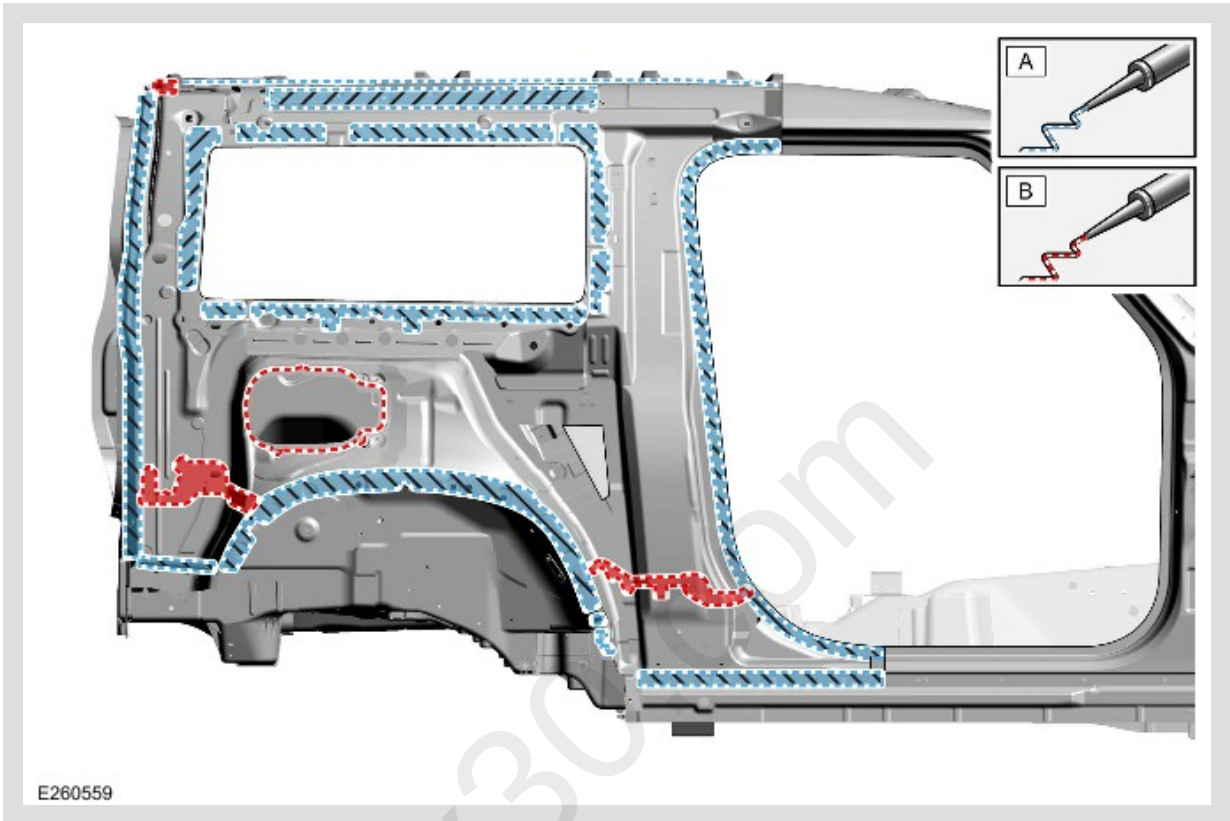
23. Clean and prepare the panel surfaces.



Install and MIG plug weld the backing plates as indicated.

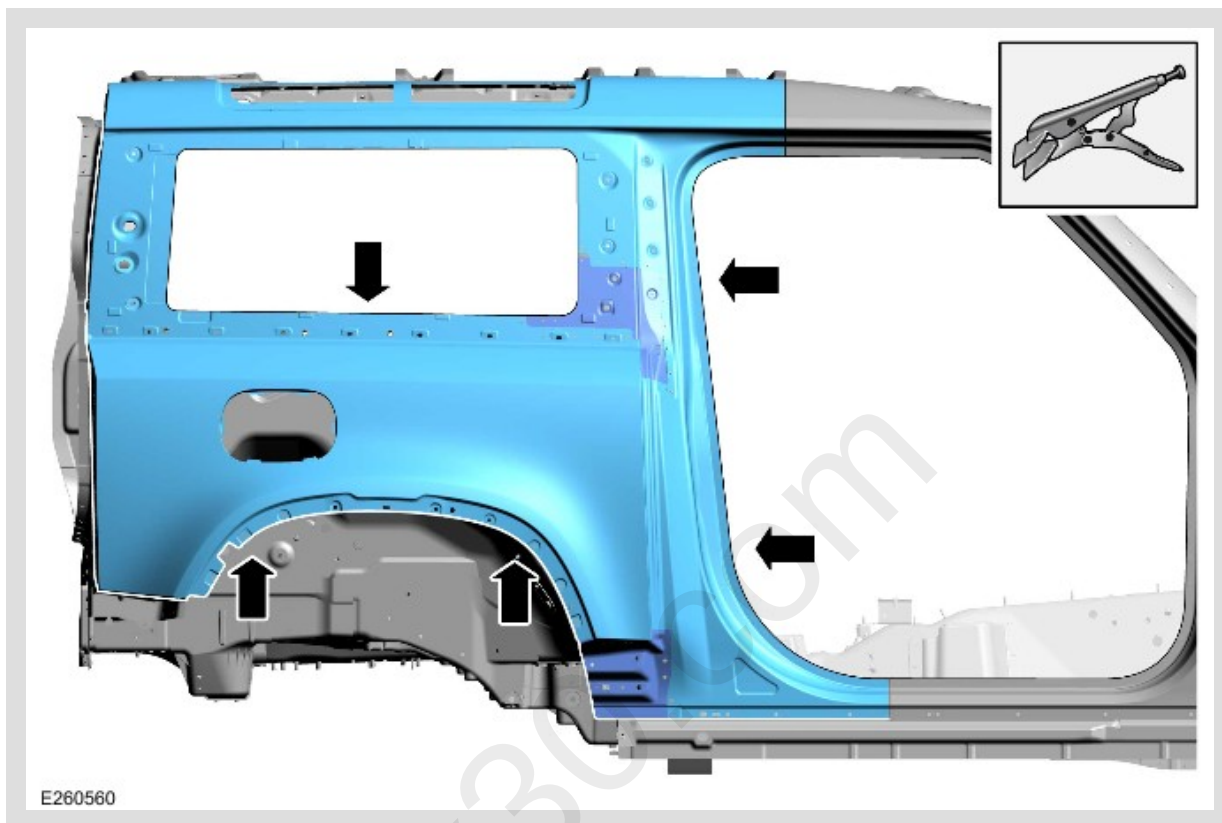
 NOTES:

- Make sure a continuous bead of adhesive surrounds the fixing holes.
- A: Apply a 5 mm zig zag bead of JLR recommended bonding material as indicated.
- B: Apply a 5 mm zig zag bead of JLR recommended flexible sealant as indicated.



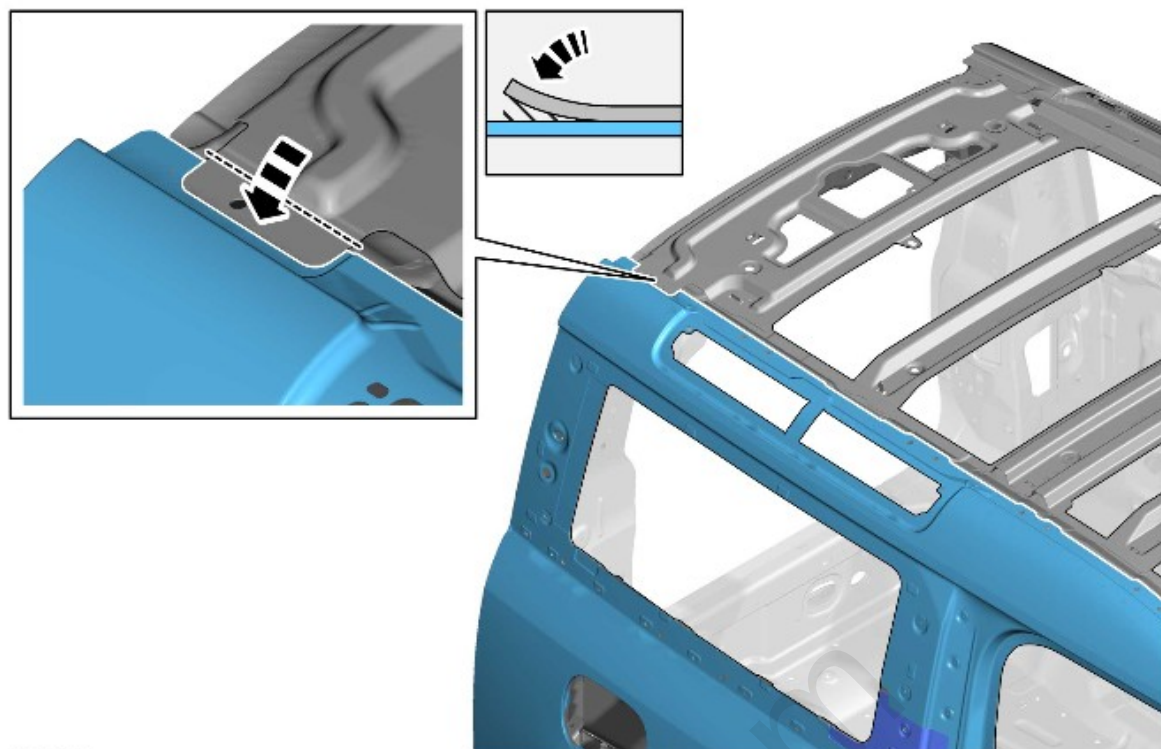
**⚠ CAUTION:**

This step will require the aid of another technician as the panel will be heavy.



Offer up the new quarter panel assembly and clamp into position. Check alignment, if correct proceed to next step, if not rectify and check the alignment again before proceeding.

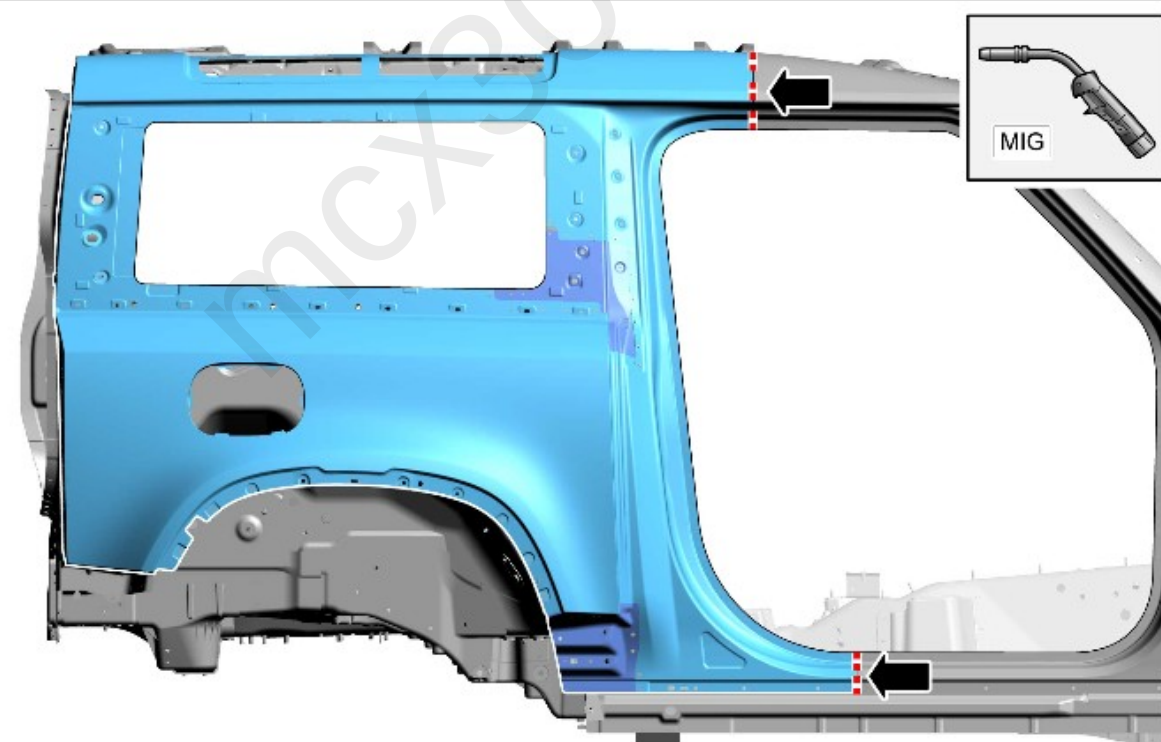
27.



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Close the expansion space as indicated.

28.



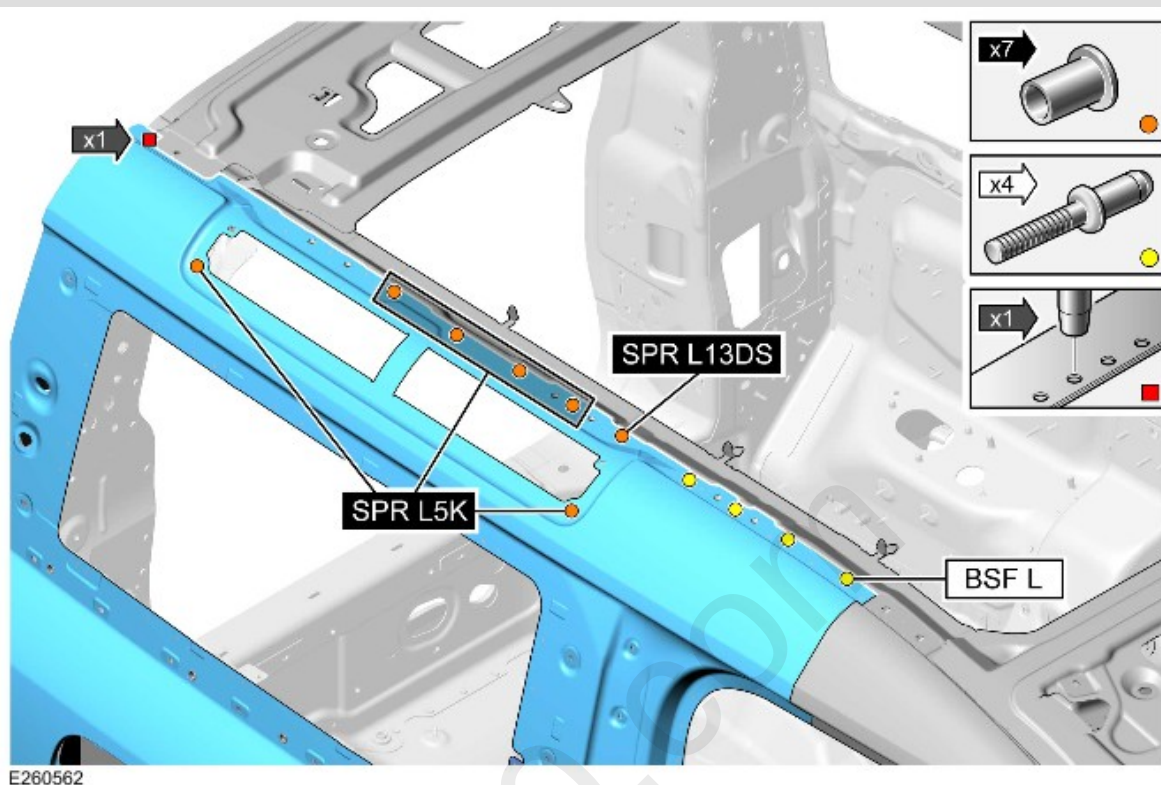
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Tack MIG weld the butt joints as indicated.

The following step(s) applies to:

Vehicles with roof opening panel

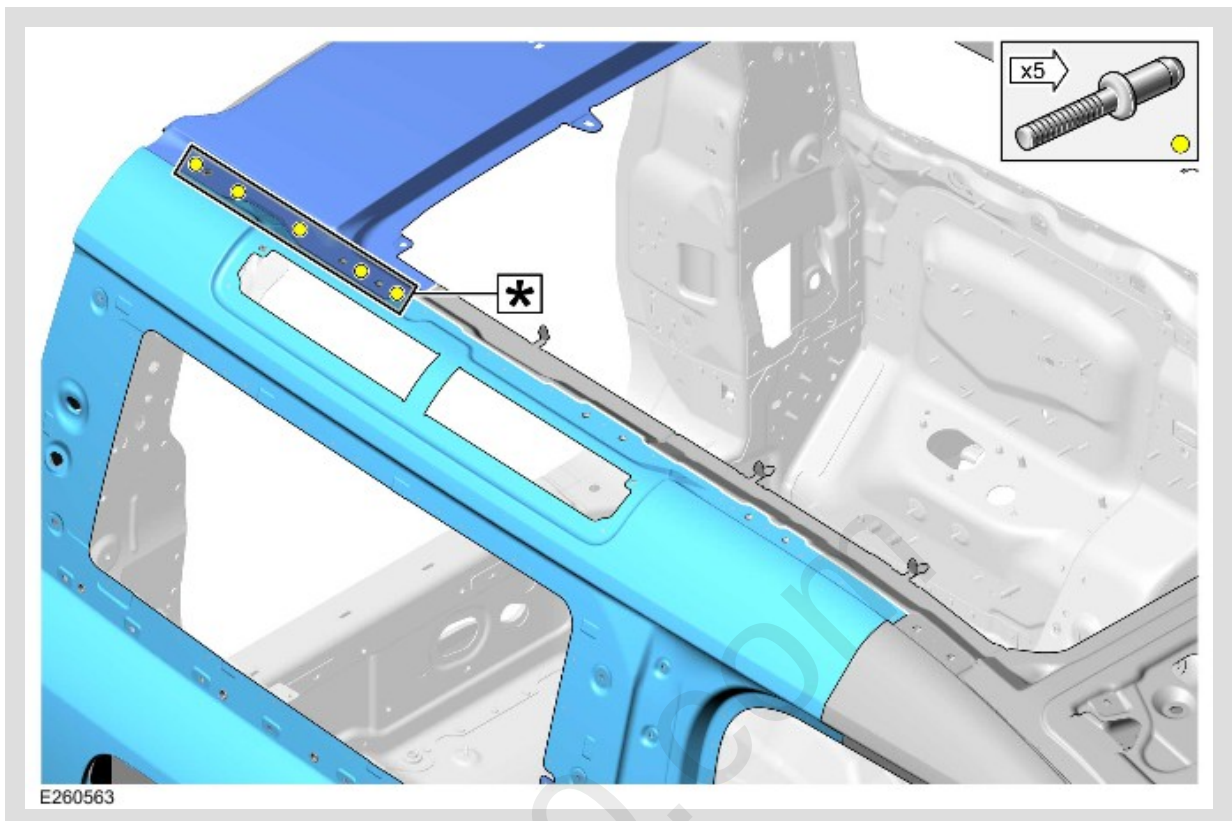
29.



Install the MIG plug weld, Self Piercing Rivets (SPRs) and BSFs as indicated.

ⓘ CAUTION:

*Breakstem Fasteners (BSFs) to be installed in conjunction with the roof panel.

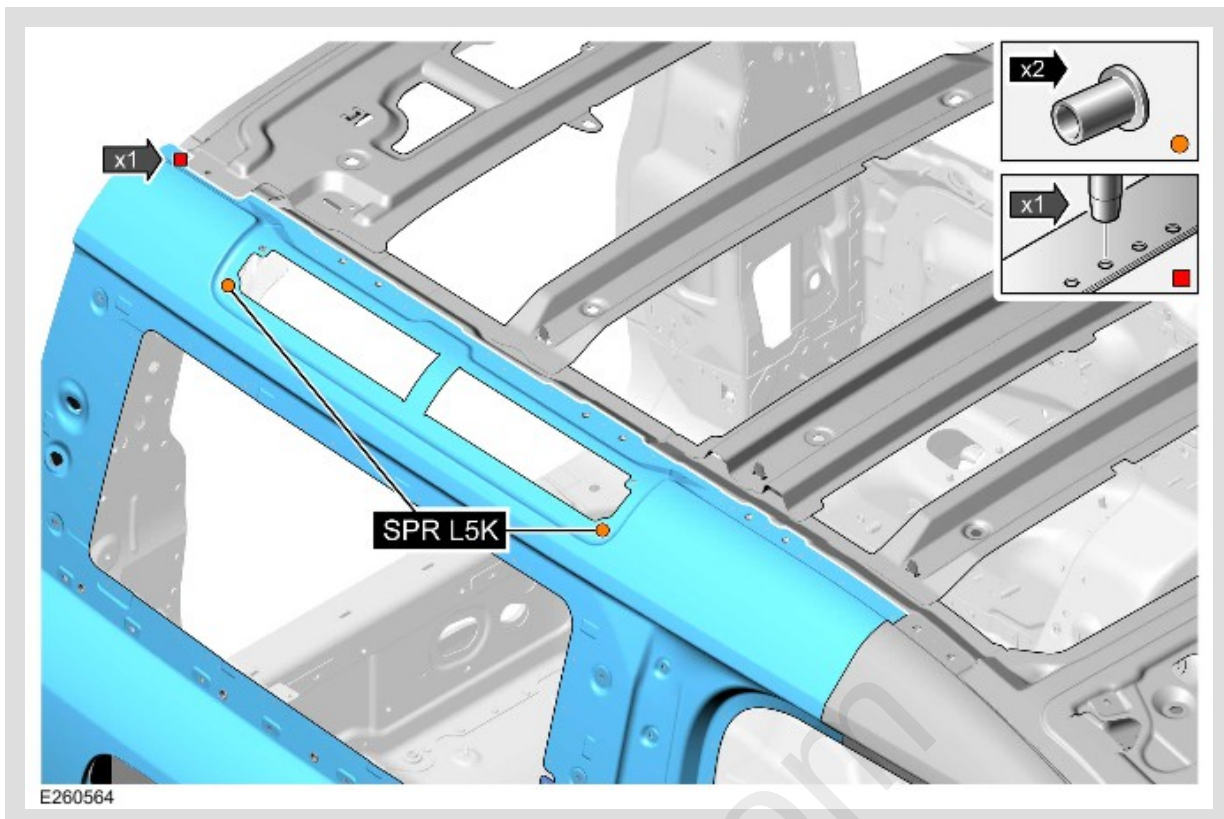


*When installing the quarter panel assembly in conjunction with the Rear Roof Panel.

Refer to: [Rear Roof Panel - 90, Vehicles With: Roof Opening Panel](#) (501-28 Roof Sheet Metal Repairs, Removal and Installation).

The following step(s) applies to:

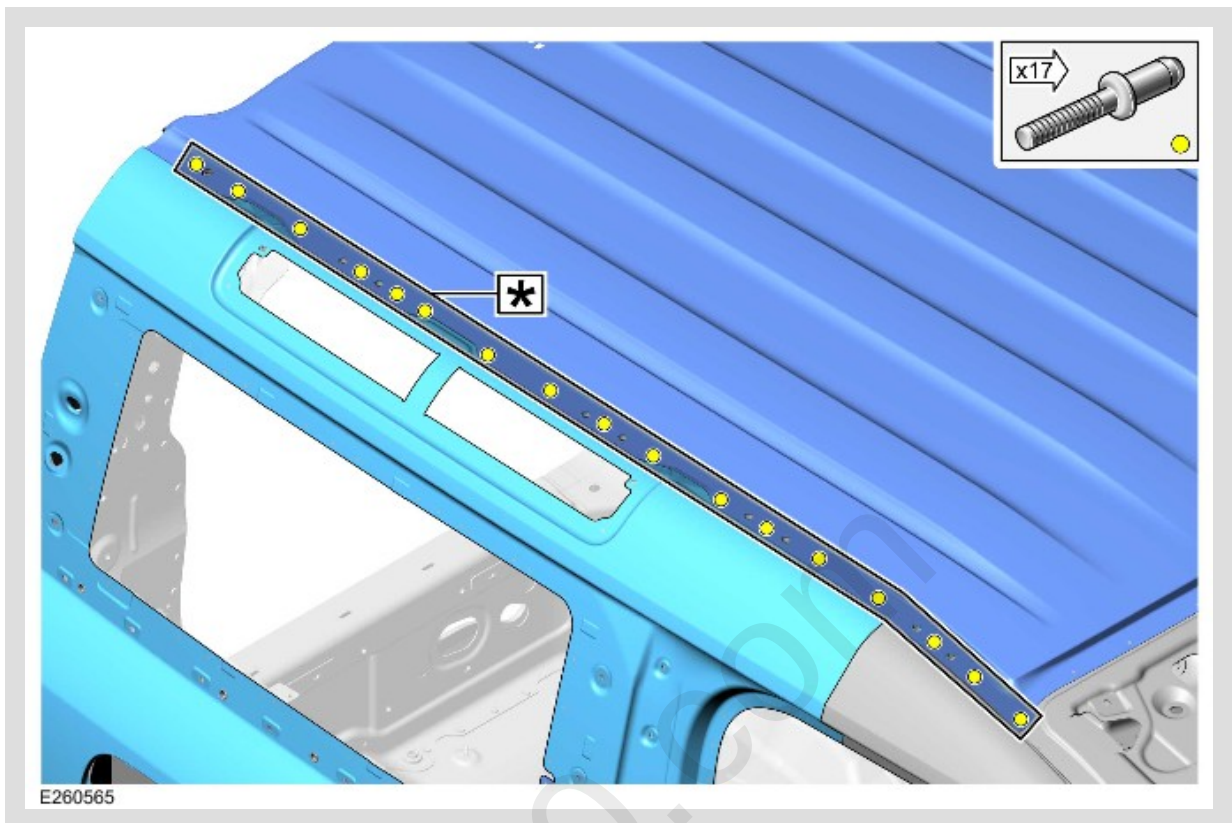
Vehicles without roof opening panel



Install the MIG plug weld and SPRs as indicated.

ⓘ CAUTION:

*Breakstem Fasteners (BSFs) to be installed in conjunction with the roof panel.



*When installing the quarter panel assembly in conjunction with the Roof Panel.

Refer to: [Roof Panel - 90, Vehicles Without: Roof Opening Panel](#) (501-28 Roof Sheet Metal Repairs, Removal and Installation).

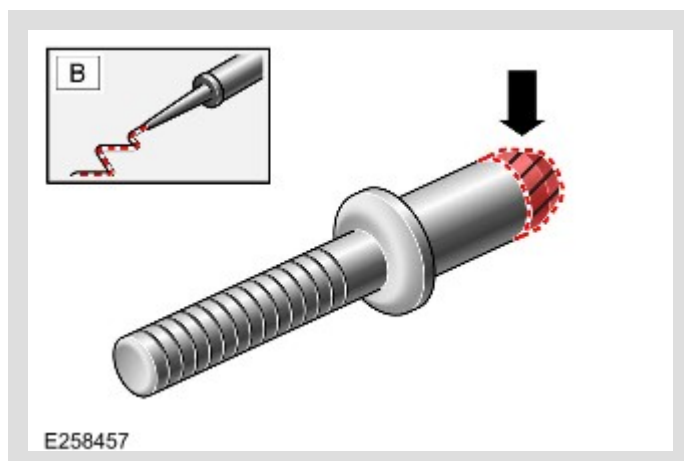
The following step(s) applies to:

All vehicles

33.

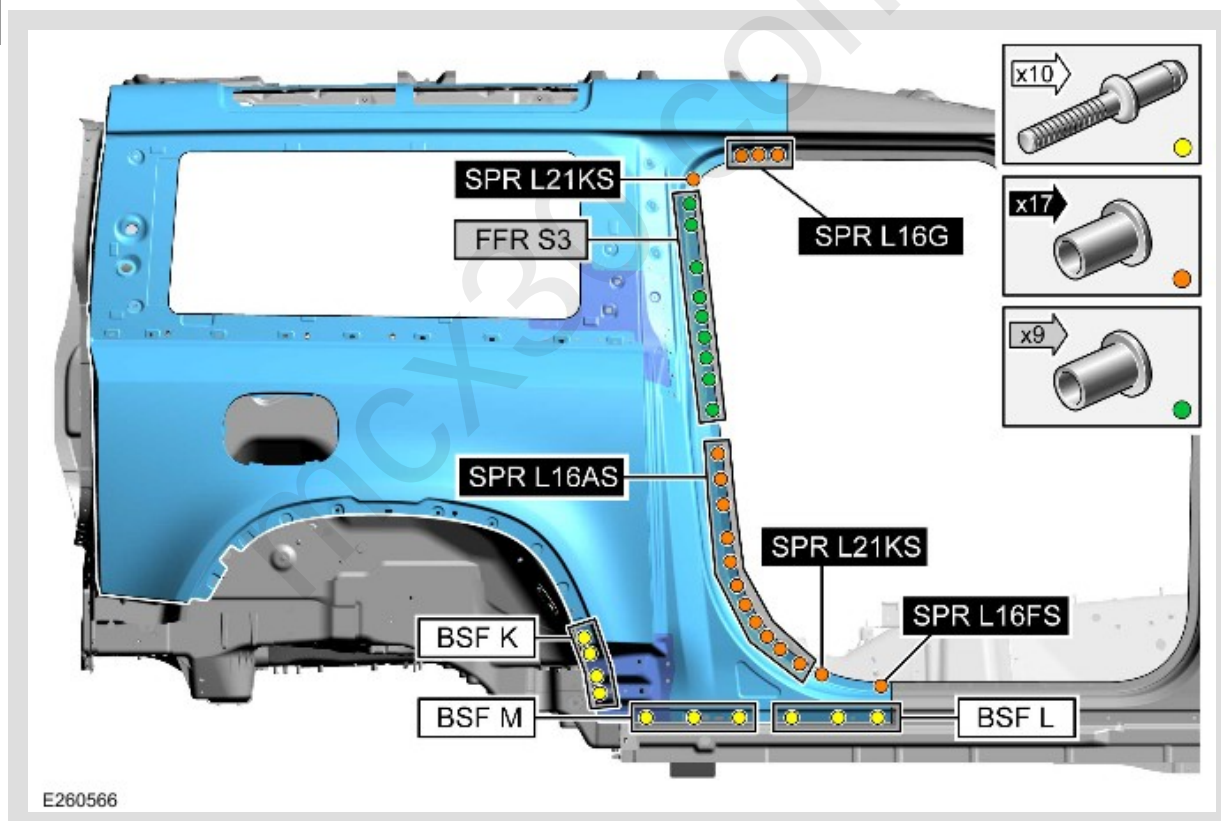
NOTE:

When installing Breakstem Fasteners (BSFs) into the rocker panel.

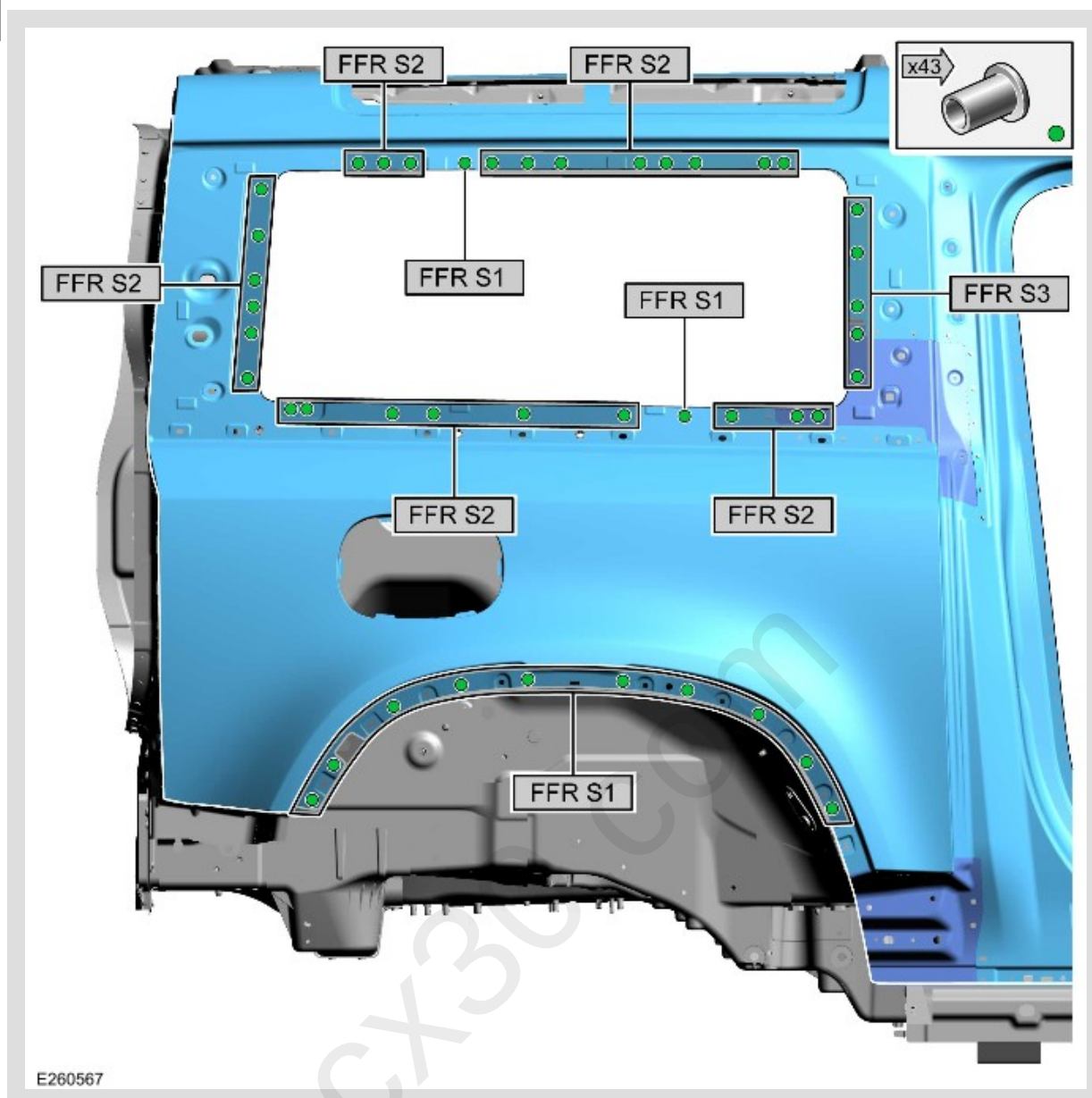


Apply a small amount of JLR recommended flexible sealant to the BSFs before installation as indicated.

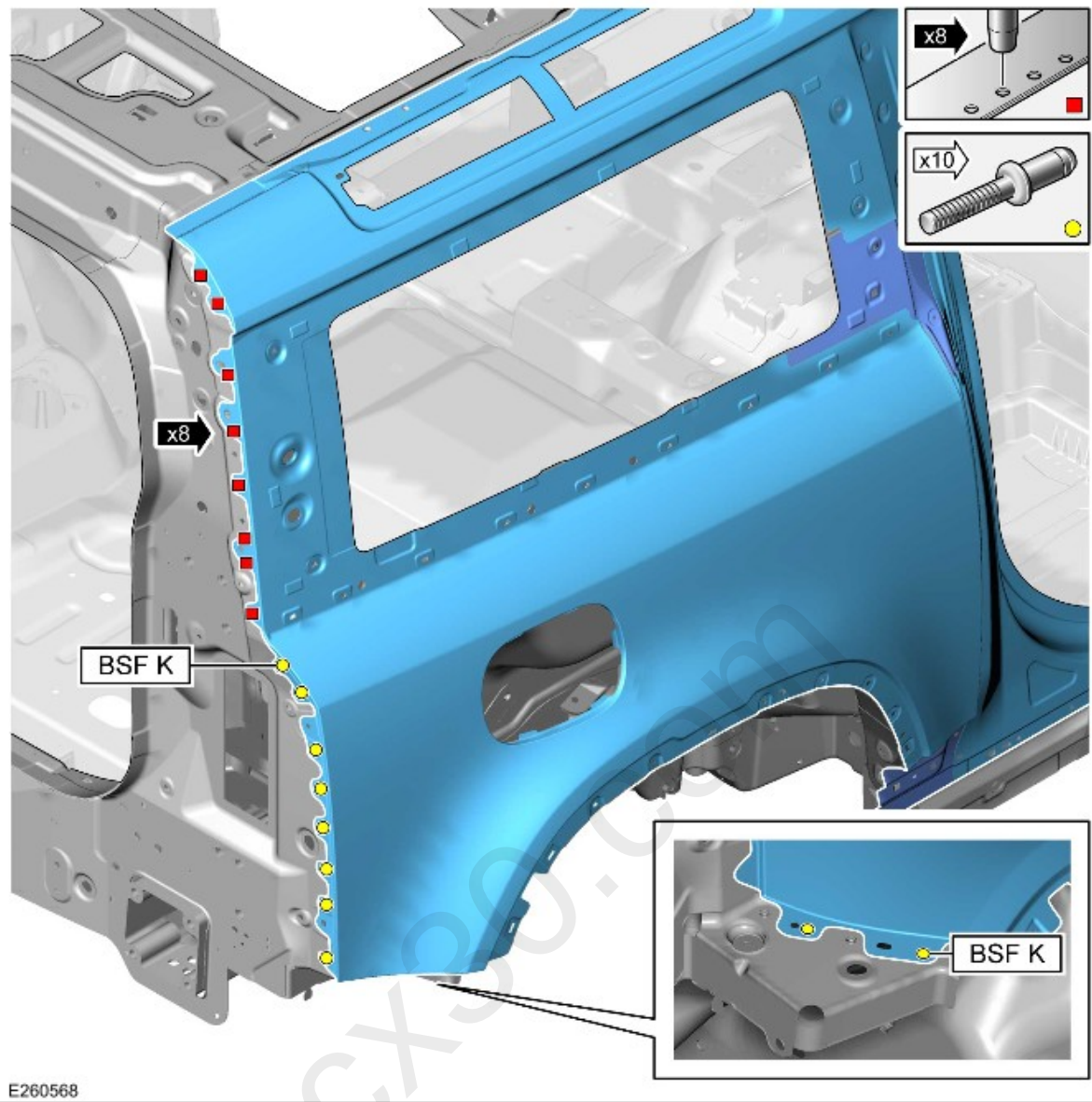
34.



Install the FFRs, BSFs and SPRs as indicated.

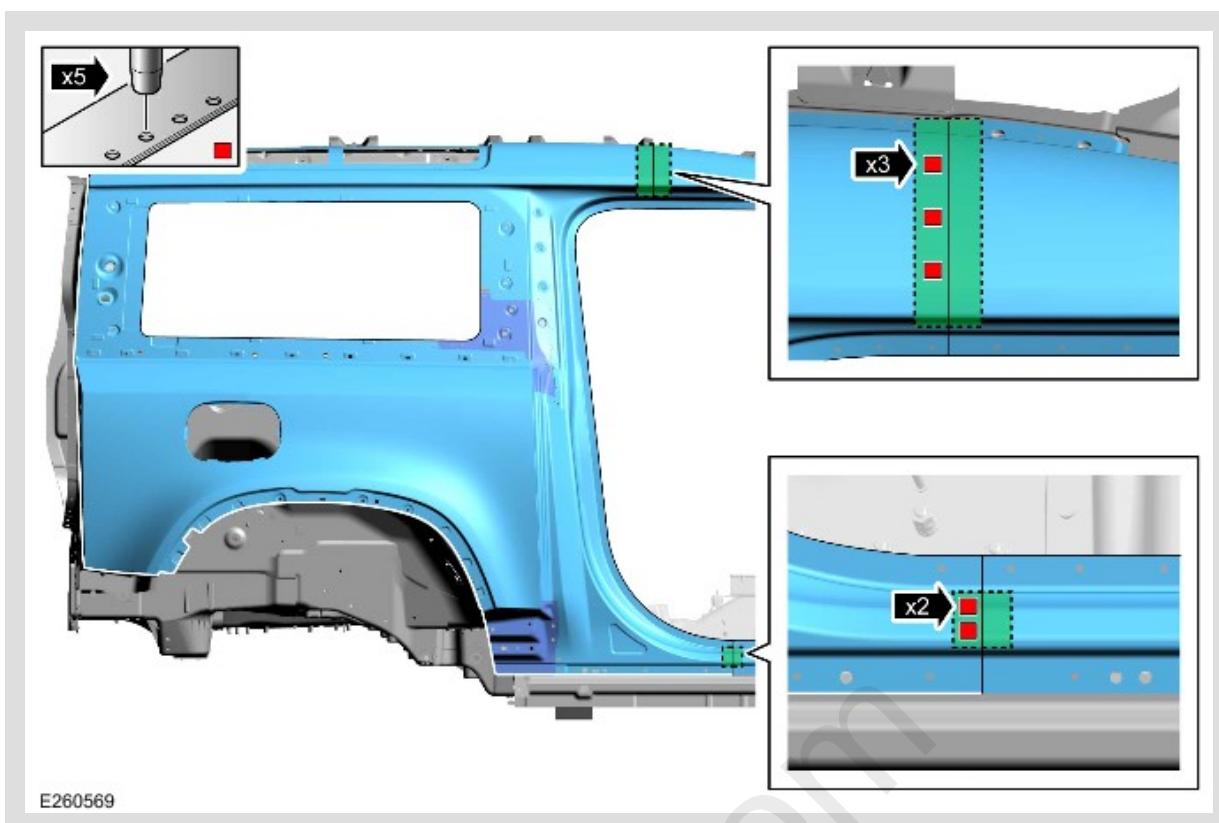


Install the FFRs as indicated.



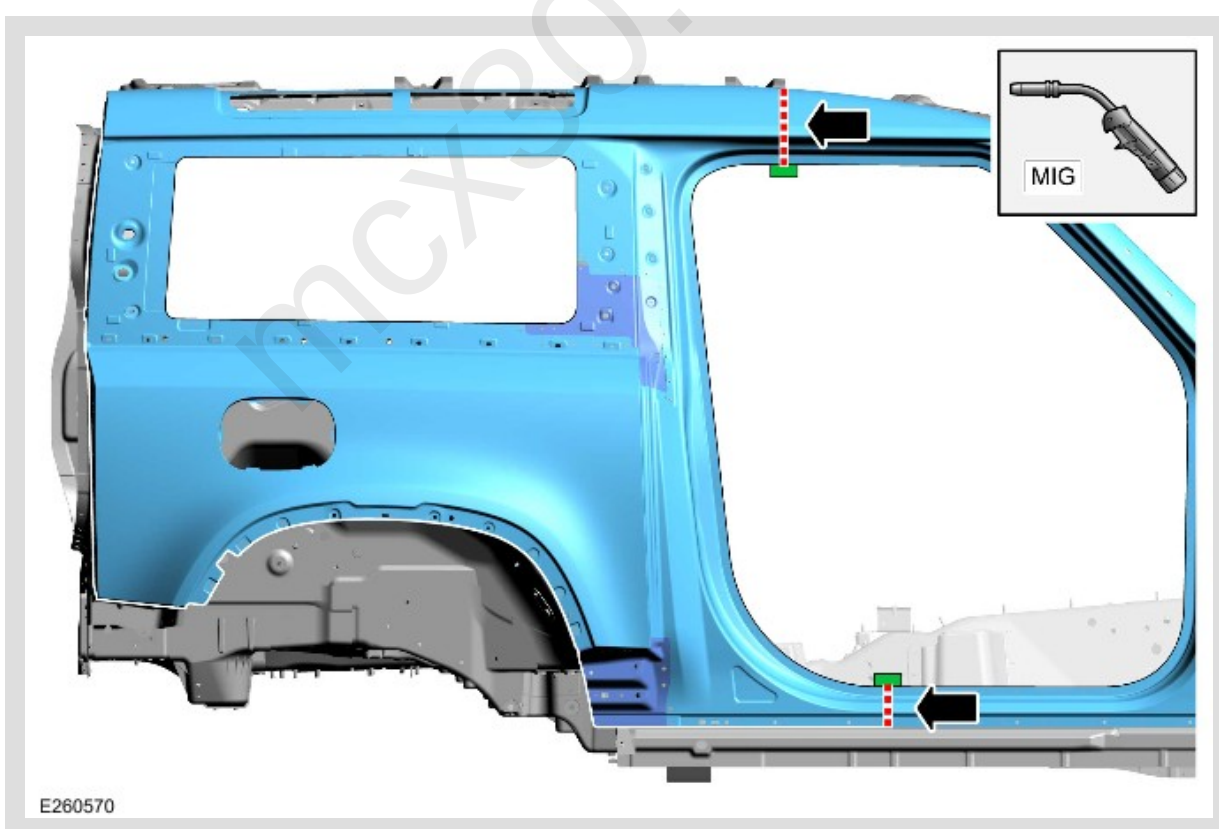
Install the MIG plug welds and BSFs as indicated.

37.



MIG plug weld the backing plates as indicated.

38.



Install the run on/run off tabs and MIG weld the butt joints as indicated.

39. Dress all welds.

40. Remove the run on/run off tabs.

41. Complete a non-destructive crack inspection on the MIG butt joints. If correct proceed to next step, if not, rectify and check again before proceeding.

42. Remove any excess adhesive.

43. Install the door striker to the B-pillar and tighten.

Torque: 25Nm

44. Make sure that any open or exposed panel joints are correctly sealed.

45. Make sure corrosion protection is applied to all areas affected by the repair.

46. Make sure that all installed fixings are sealed using a JLR recommended sealer.



NOTE:

The installation of associated panels and components is the reversal of the removal procedure.

47. For additional installation information.

Refer to: [Rear Header Panel Upper - 90](#) (501-28 Roof Sheet Metal Repairs, Removal and Installation).

48. For additional installation information.

Refer to: [Rear Roof Panel - 90](#), [Vehicles With: Roof Opening Panel](#) (501-28 Roof Sheet Metal Repairs, Removal and Installation).

49. For additional installation information.

Refer to: [Roof Panel - 90](#), [Vehicles Without: Roof Opening Panel](#) (501-28 Roof Sheet Metal Repairs, Removal and Installation).

50. For additional installation information.

Refer to: [Fuel Filler Neck - INGENIUM I4 2.0L Petrol](#) (310-01A Fuel Tank and Lines - INGENIUM I4 2.0L Petrol/INGENIUM I4 2.0L Petrol - PHEV, Removal and Installation).

Refer to: [Fuel Filler Neck](#) (310-01C Fuel Tank and Lines - INGENIUM I4 2.0L Diesel, Removal and Installation).

51. For additional installation information.

Refer to: [Second Row Seatbelt Retractor - 90](#) (501-20A Seatbelt System, Removal and Installation).

52. For additional installation information.

Refer to: [Second Row Seat - 90](#) (501-10 Seating, Removal and Installation).

53. For additional installation information.

Refer to: [Rear Quarter Window](#) (501-11 Glass, Frames and Mechanisms, Removal and Installation).

54. For additional installation information.

Refer to: [Tail Lamp Assembly](#) (417-01 Exterior Lighting, Removal and Installation).

55. For additional installation information.

Refer to: [Rear Armature](#) (501-19 Bumpers, Removal and Installation).

56. For additional installation information.

Refer to: [Tailgate](#) (501-03 Body Closures, Removal and Installation).
