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2020.0 DEFENDER (LE), 501-30

REAR END SHEET METAL REPAIRS

QUARTER PANEL ASSEMBLY - 110 (G2417003)

mcx30.com

REMOVAL

The following step(s) applies to:

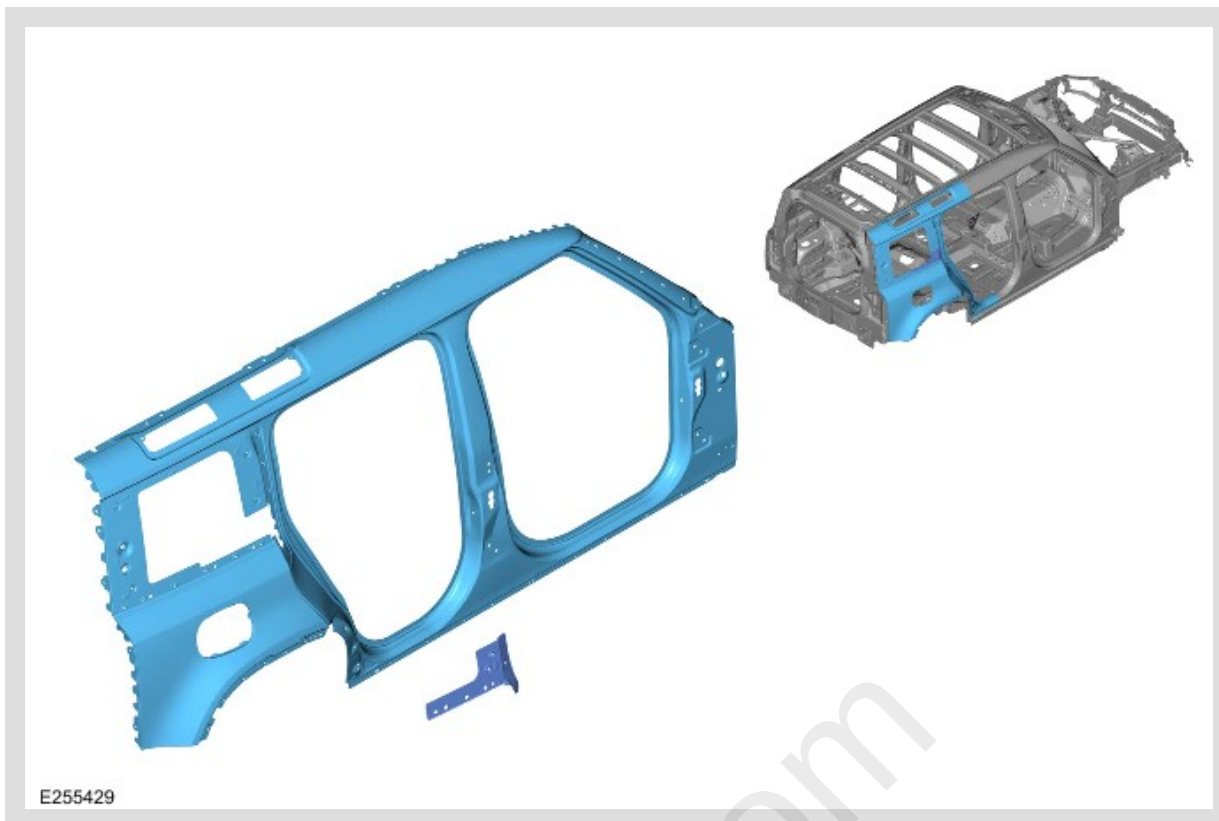
All vehicles

**NOTE:**

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

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

1.



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).

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4. For additional information on the fixings required to complete this procedure
Refer to: [Specifications - 110](#) (501-30 Rear End Sheet Metal Repairs, Specifications).
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5. For additional removal information
Refer to: [Tailgate](#) (501-03 Body Closures, Removal and Installation).
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6. For additional removal information
Refer to: [Rear Door](#) (501-03 Body Closures, Removal and Installation).
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7. For additional removal information
Refer to: [Rear Armature](#) (501-19 Bumpers, Removal and Installation).
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8. For additional removal information
Refer to: [Tail Lamp Assembly](#) (417-01 Exterior Lighting, Removal and Installation).
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9. For additional removal information
Refer to: [Left Loadspace Trim Panel - 110, Vehicles With: 5 Seats](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).
Refer to: [Left Loadspace Trim Panel - \[+\] 7 Seat Configuration, 110](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).
Refer to: [Right Loadspace Trim Panel](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).
Refer to: [Right Loadspace Trim Panel - \[+\] 7 Seat Configuration, 110](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).
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10. For additional removal information
Refer to: [Rear Treadplate](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).
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11. For additional removal information
Refer to: [Rear Quarter Window](#) (501-11 Glass, Frames and Mechanisms, Removal and Installation).
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12. For additional removal information
Refer to: [Second Row Left Seat - 110](#) (501-10 Seating, Removal and Installation).
Refer to: [Second Row Right Seat - 110](#) (501-10 Seating, Removal and Installation).
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13. For additional removal information
Refer to: [Third Row Seat](#) (501-10 Seating, Removal and Installation).
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14. 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).
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15. For additional removal information

Refer to: [Second Row Seatbelt Retractor - 110](#) (501-20A Seatbelt System, Removal and Installation).

16. For additional removal information

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

17. For additional removal information

Refer to: [Roof Panel - 110, Vehicles Without: Roof Opening Panel](#) (501-28 Roof Sheet Metal Repairs, Removal and Installation).

18. For additional removal information

Refer to: [Rear Roof Panel - 110, Vehicles With: Roof Opening Panel](#) (501-28 Roof Sheet Metal Repairs, Removal and Installation).

19. Remove the rear door striker from the C-pillar.

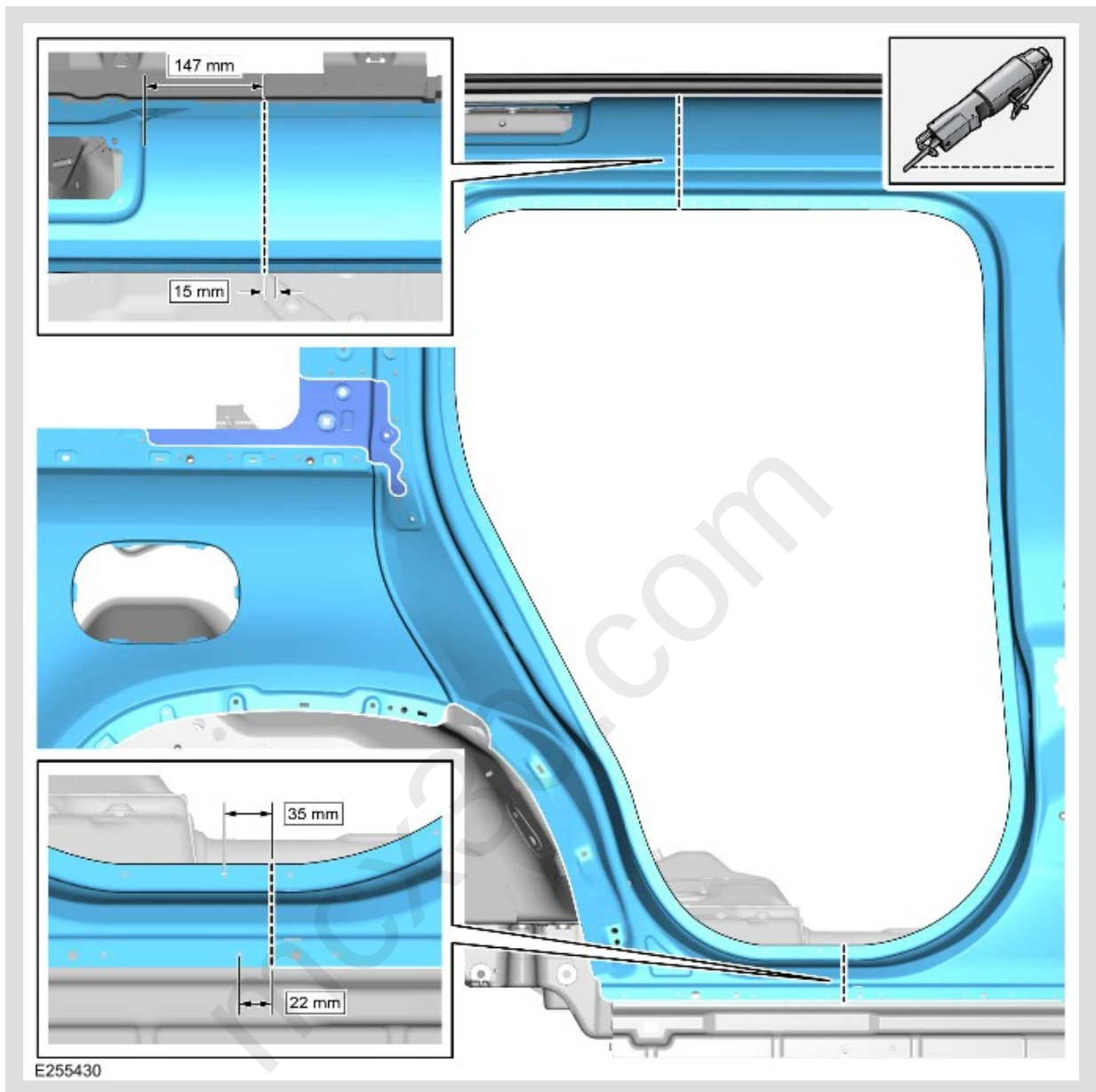
20. Release and position the floor carpet to one side.

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

22. 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 assembly, 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

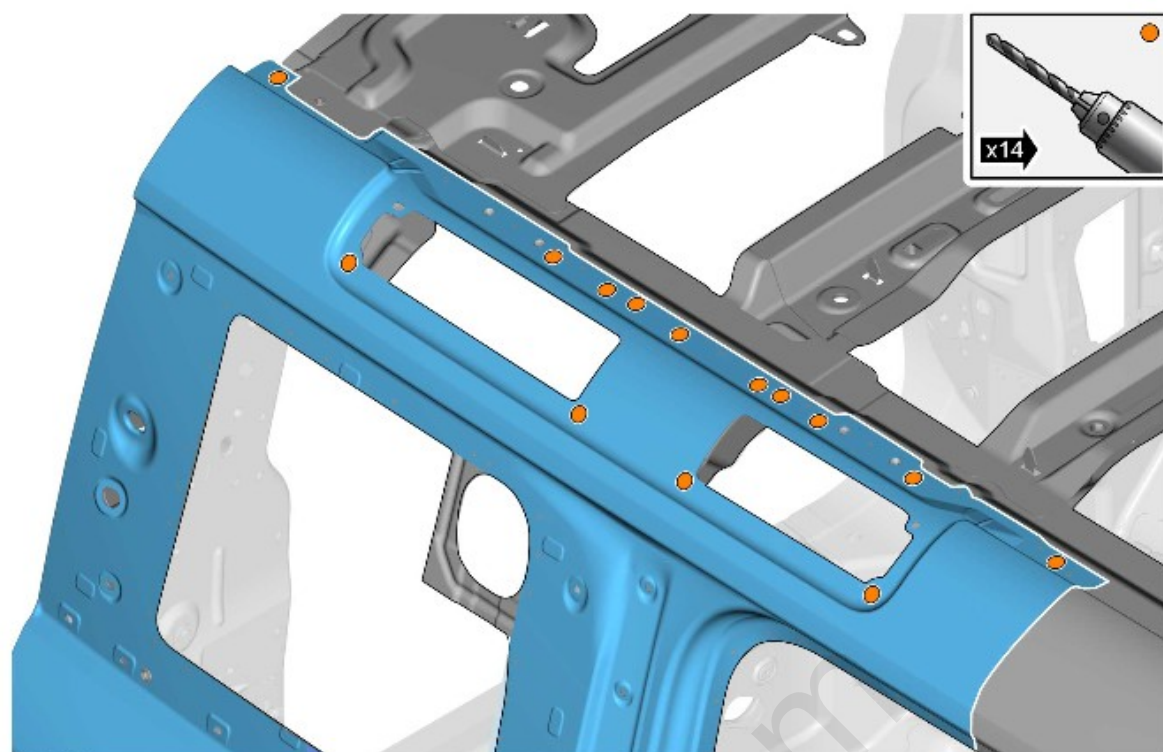


E255432

Remove the Self Piercing Rivets (SPRs) as indicated.

The following step(s) applies to:

Vehicles without roof opening panel

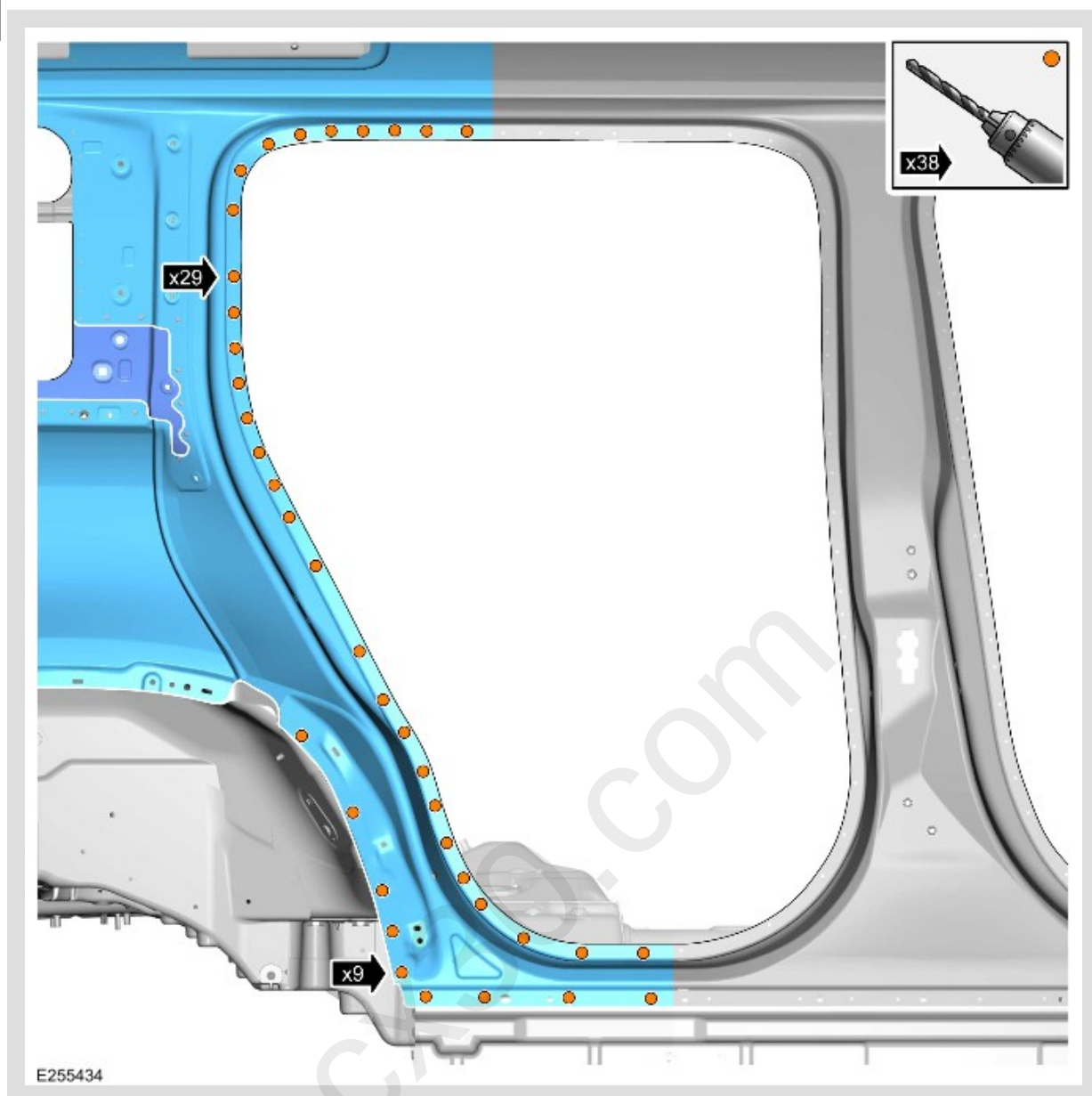


E255433

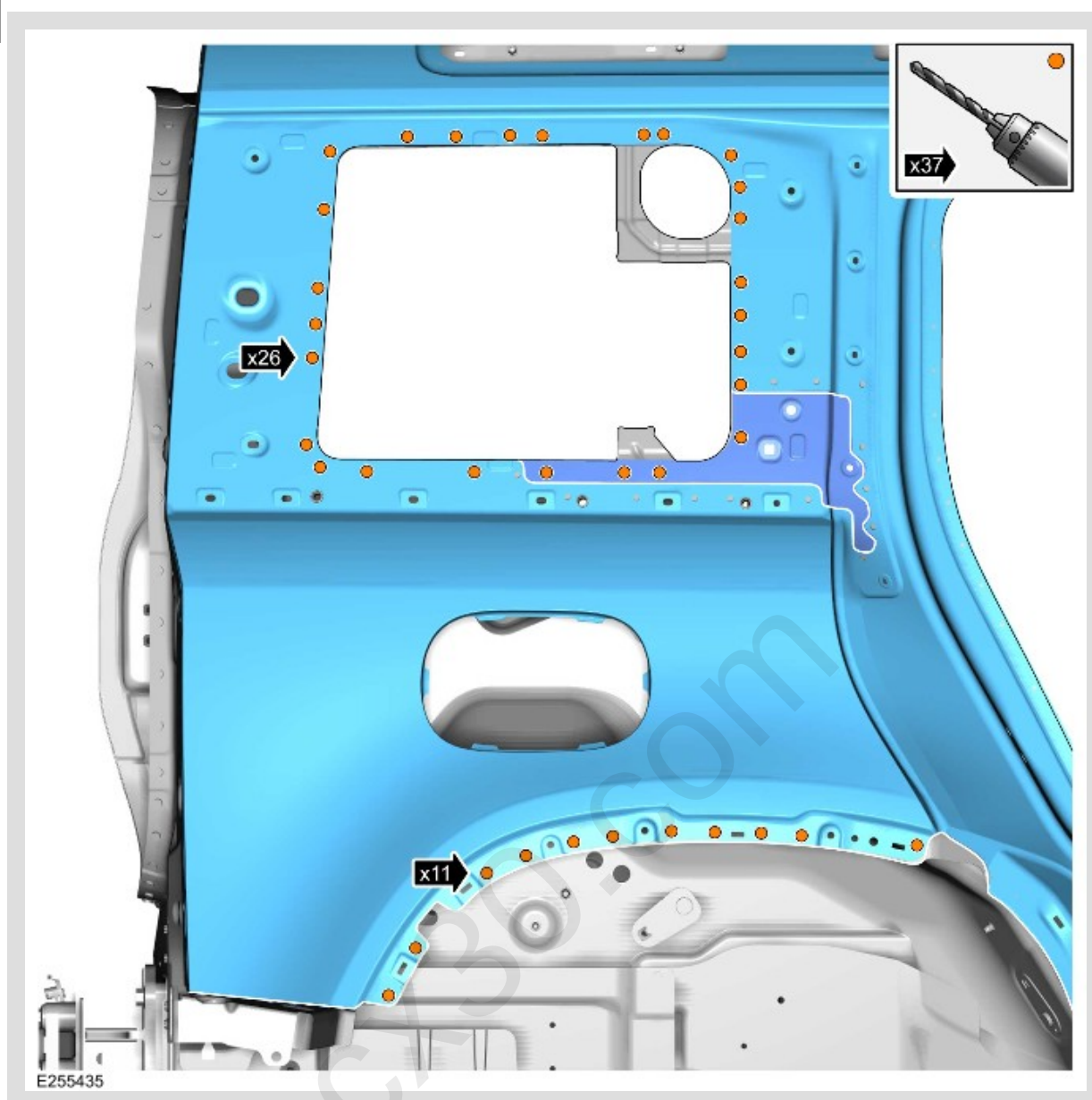
Remove the SPRs as indicated.

The following step(s) applies to:

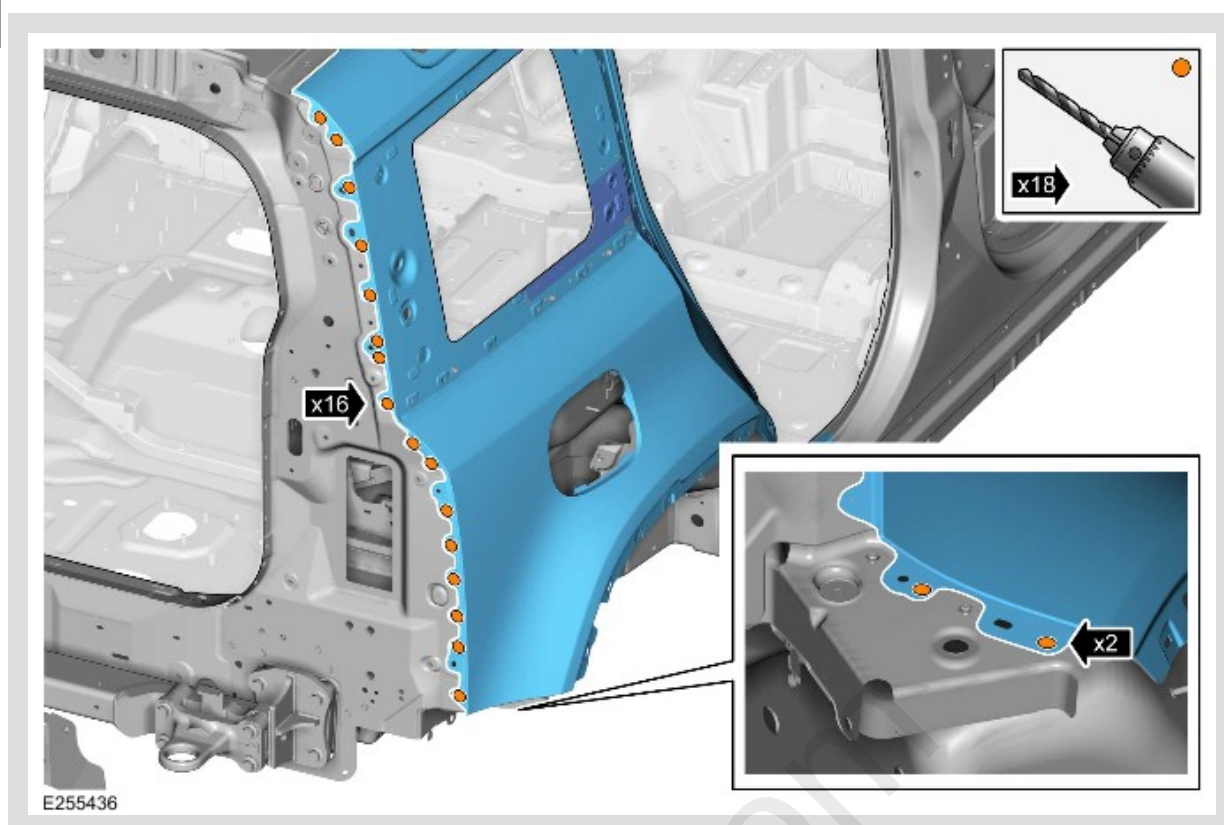
All vehicles



Remove the SPRs as indicated.



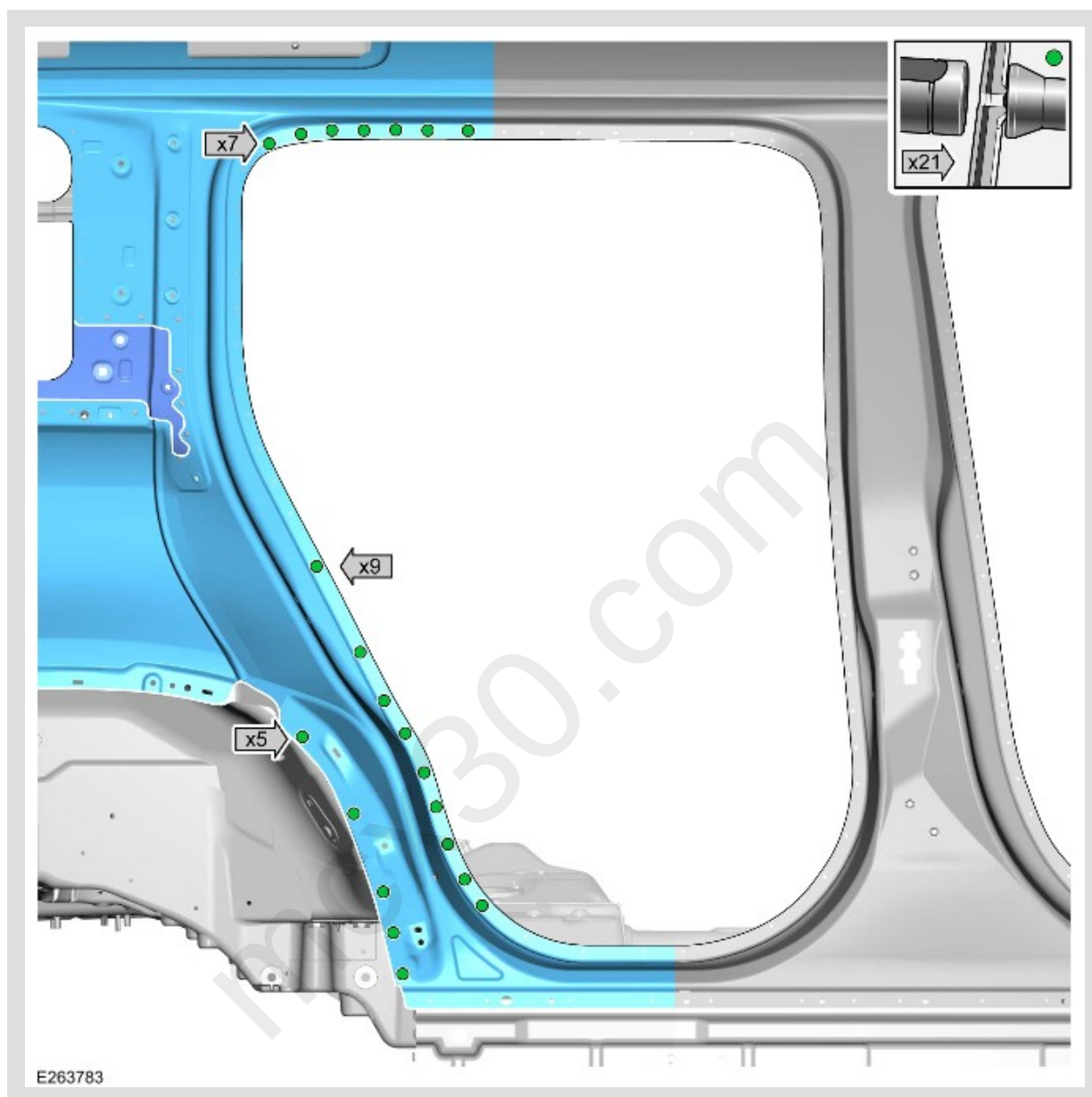
Remove the SPRs as indicated.



Remove the SPRs as indicated.

NOTE:

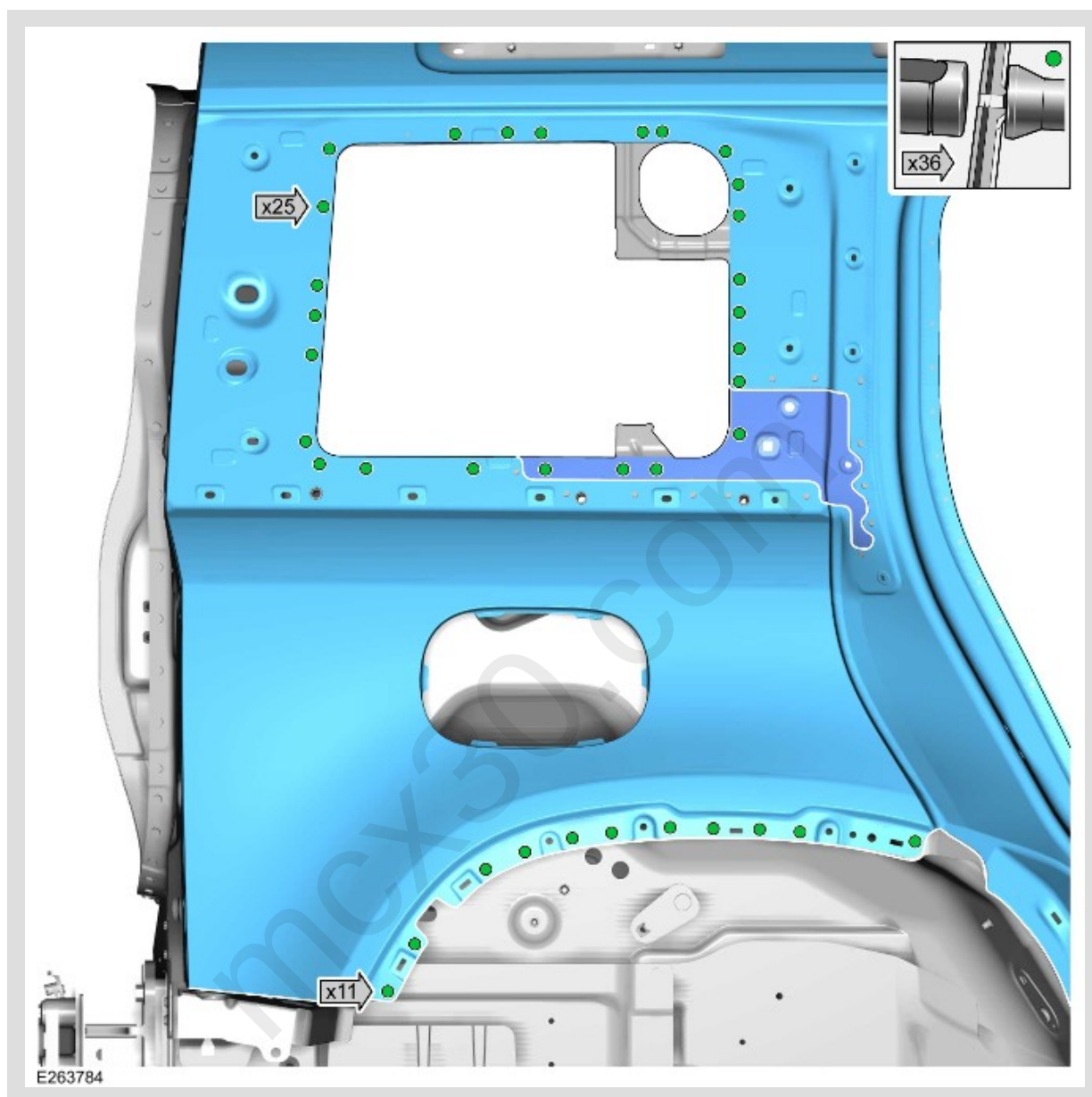
Where Flow Form Rivet (FFR) installation is indicated. Make sure that the panel is planished before removal.



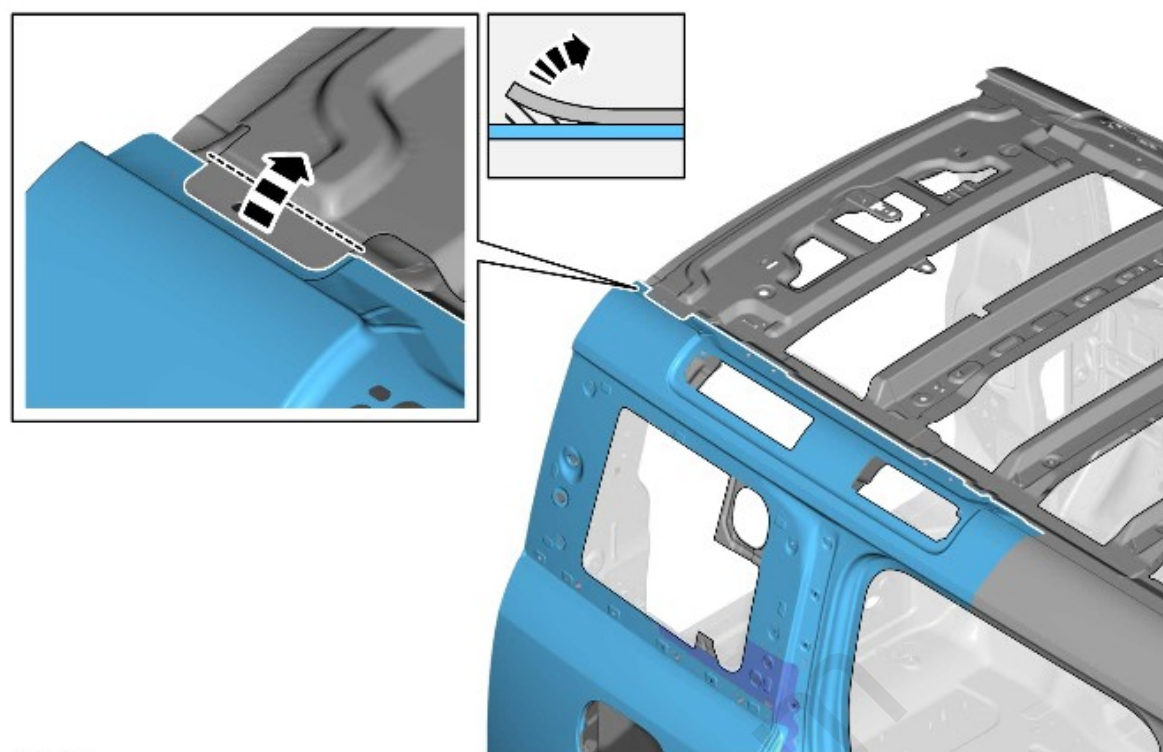
Planish the panel as indicated.

 NOTE:

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



Planish the panel as indicated.

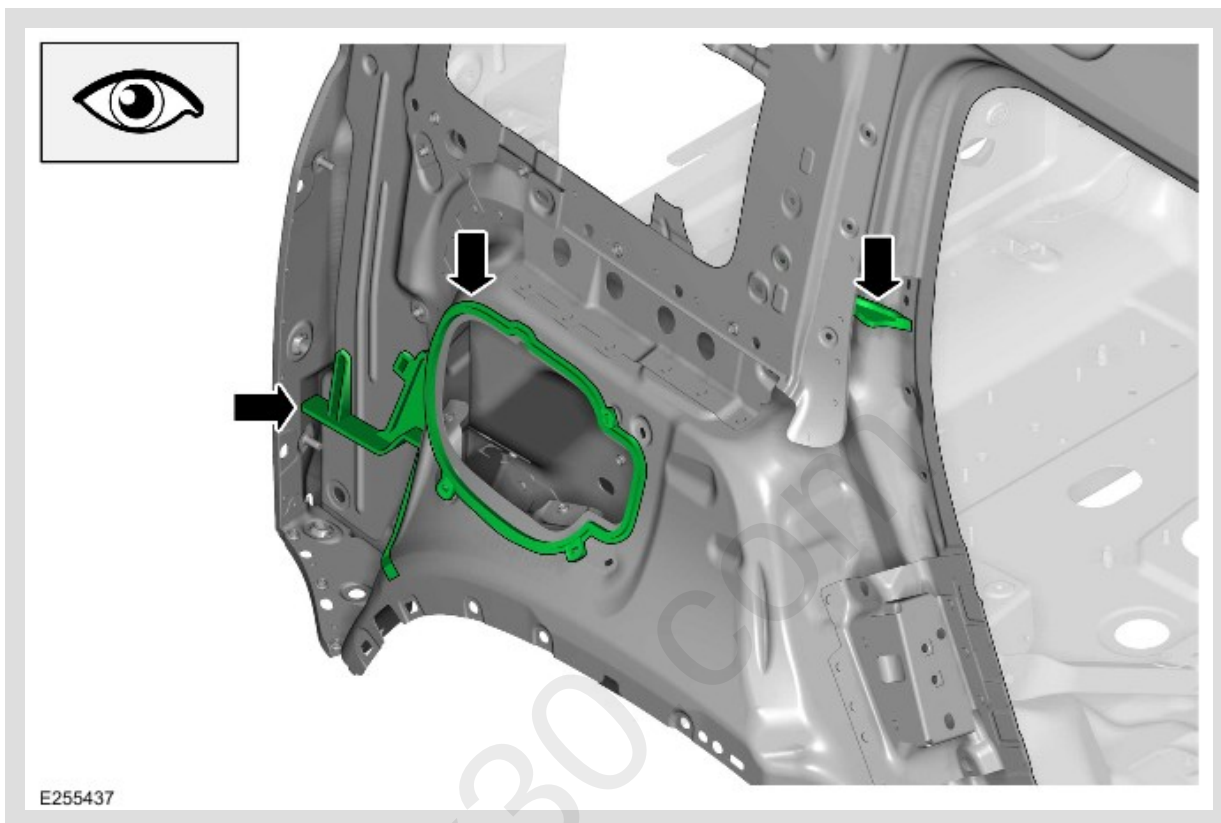


E255431

Build an expansion space as indicated.

**⚠ 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 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.



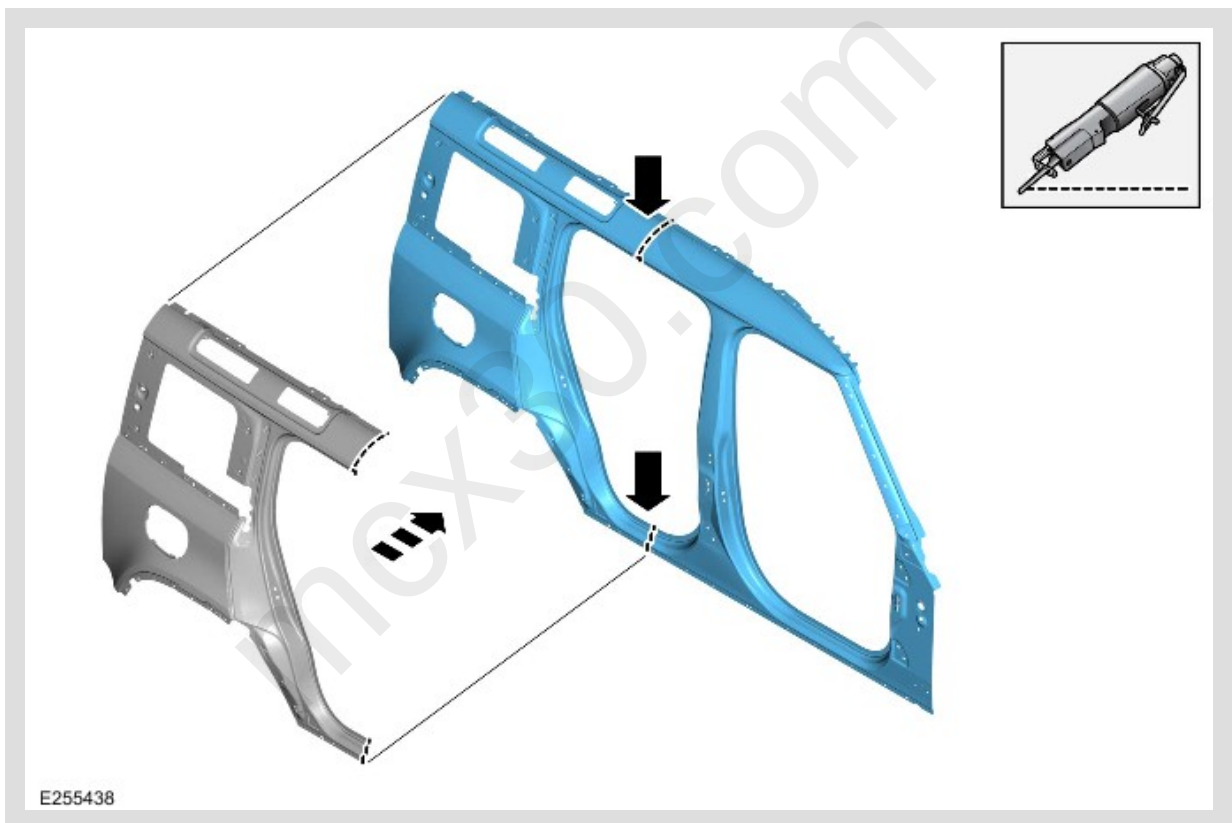
NOTES:

- 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.

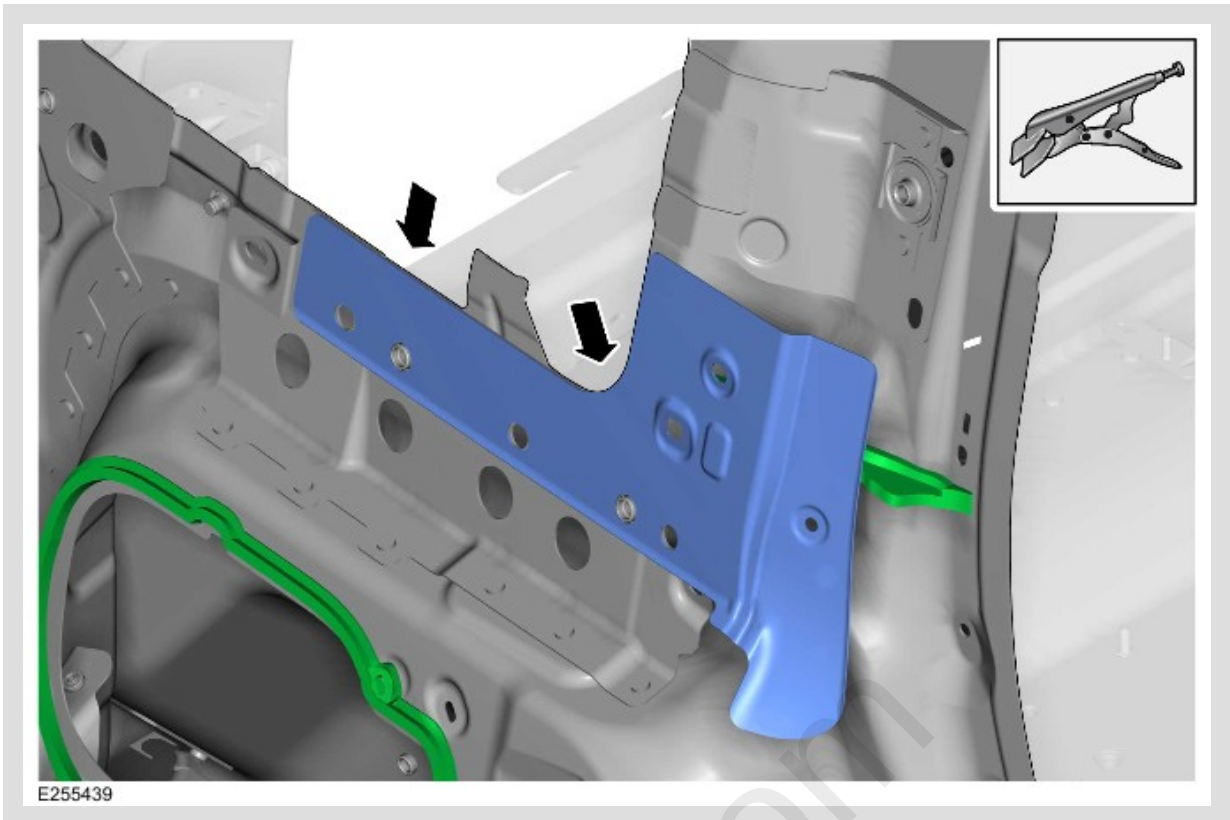
2. Dress the flanges where necessary.

3.



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

4.



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

5.



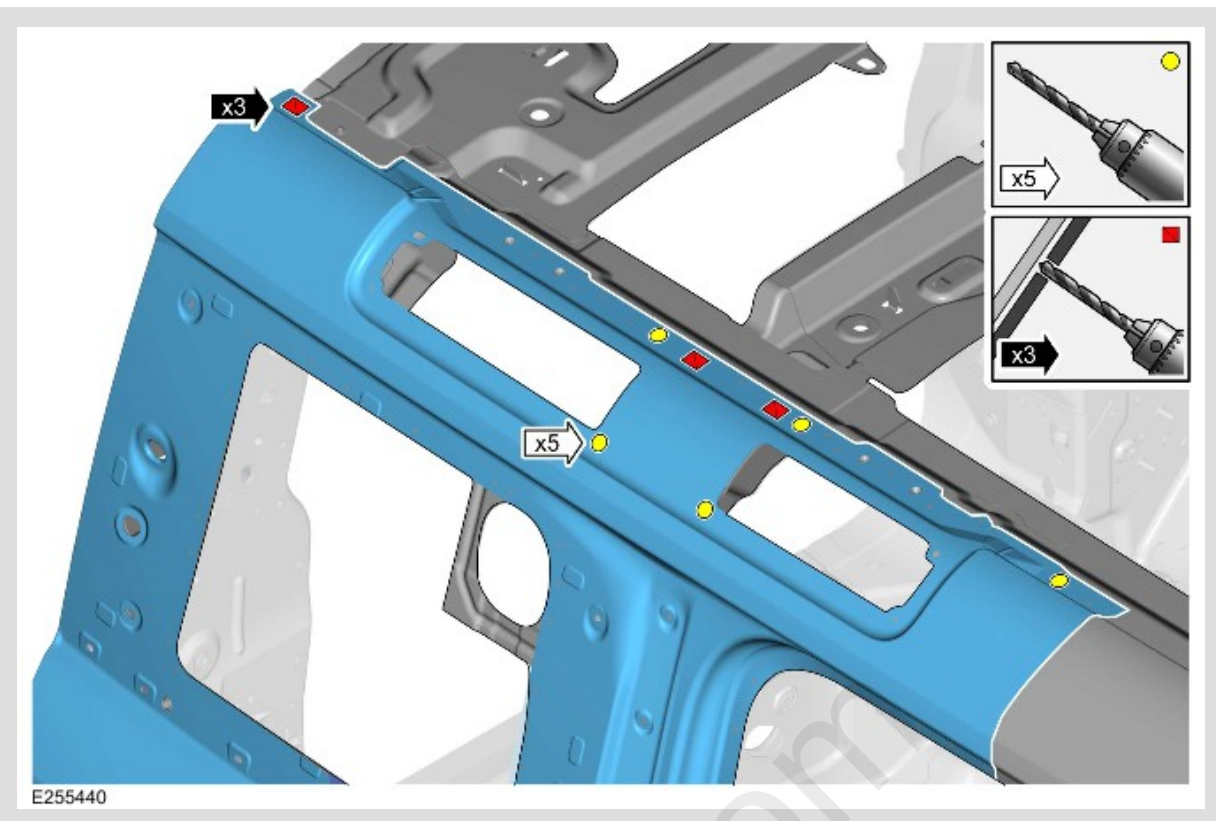
⚠ CAUTION:

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.

The following step(s) applies to:

Vehicles with roof opening panel

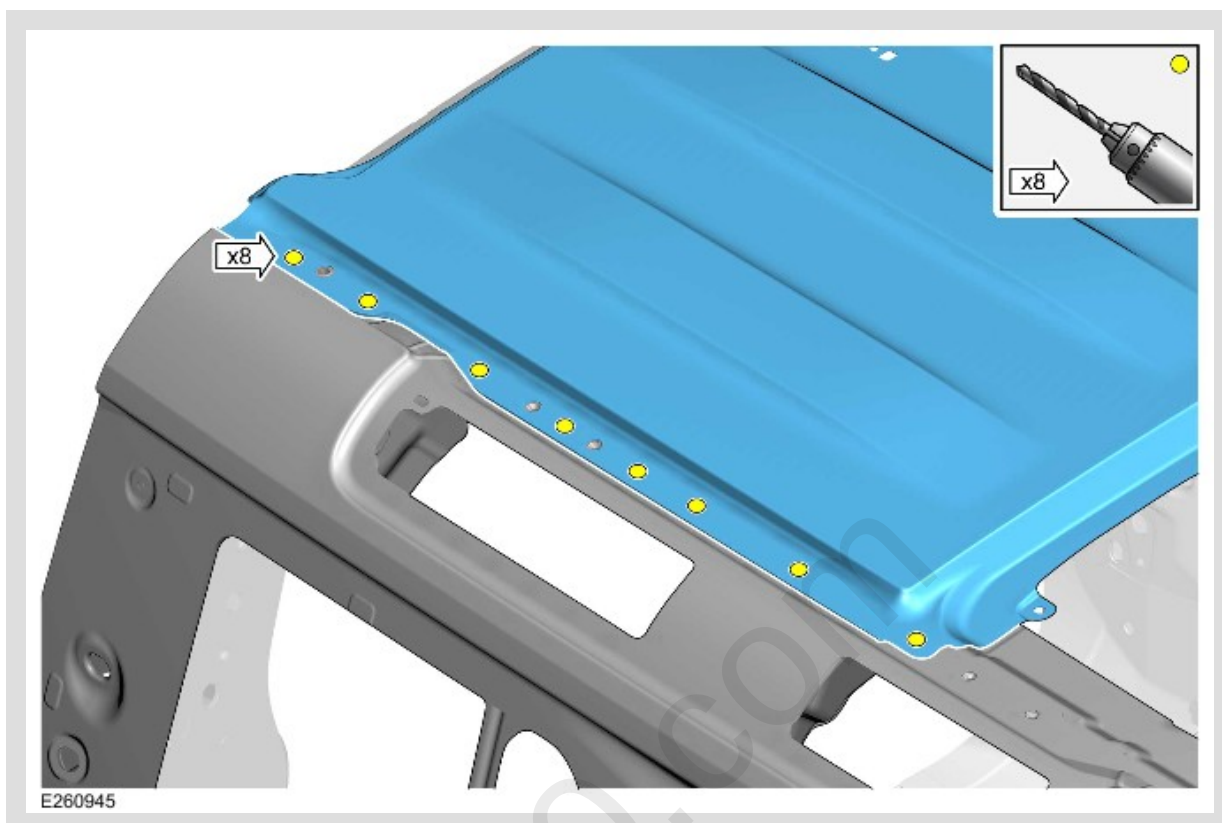


Drill holes where the Breakstem Fasteners (BSFs) and MIG plug welds are to be installed as indicated.

7.

NOTE:

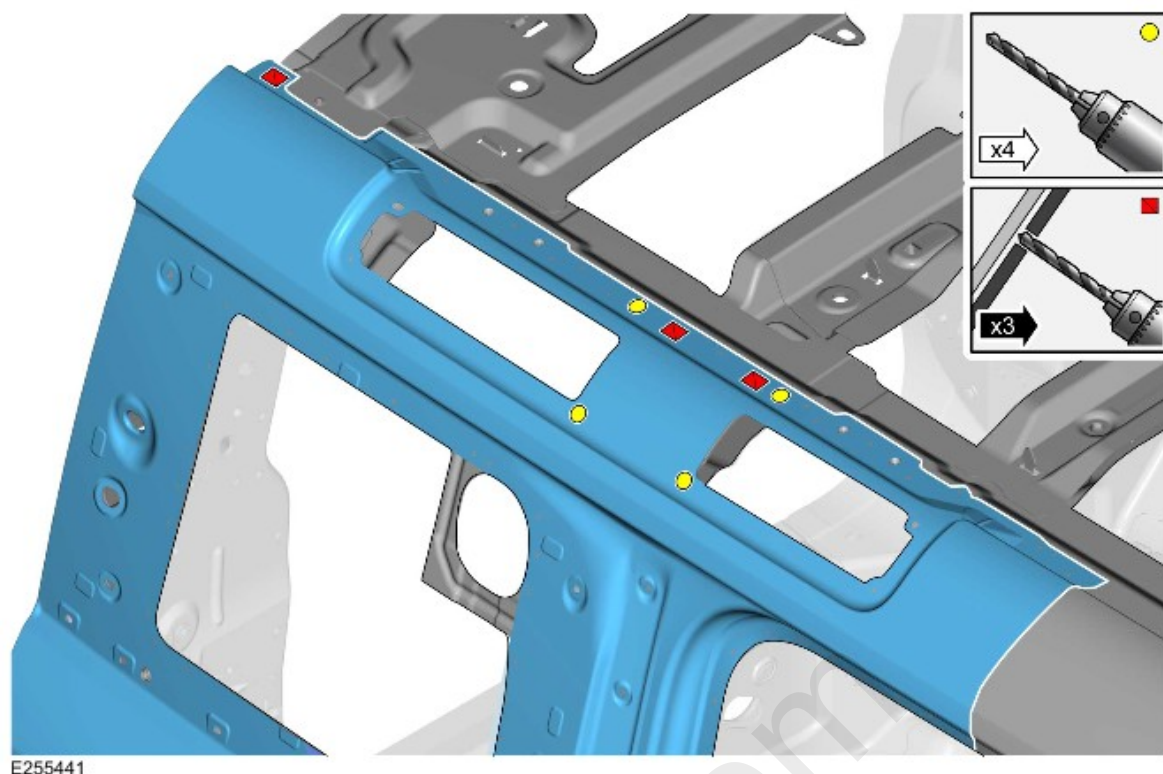
When installing the quarter panel assembly in conjunction with the Rear Roof Panel.



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

The following step(s) applies to:

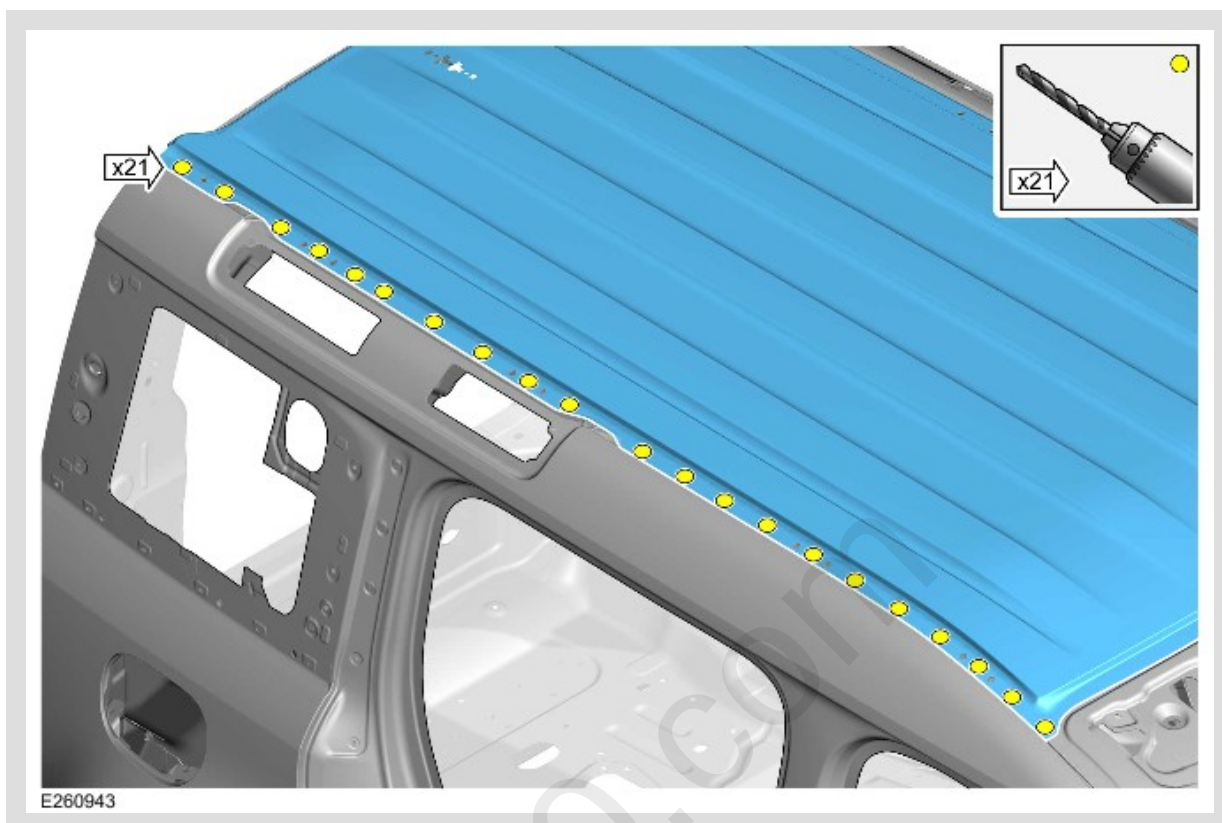
Vehicles without roof opening panel



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

NOTE:

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



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

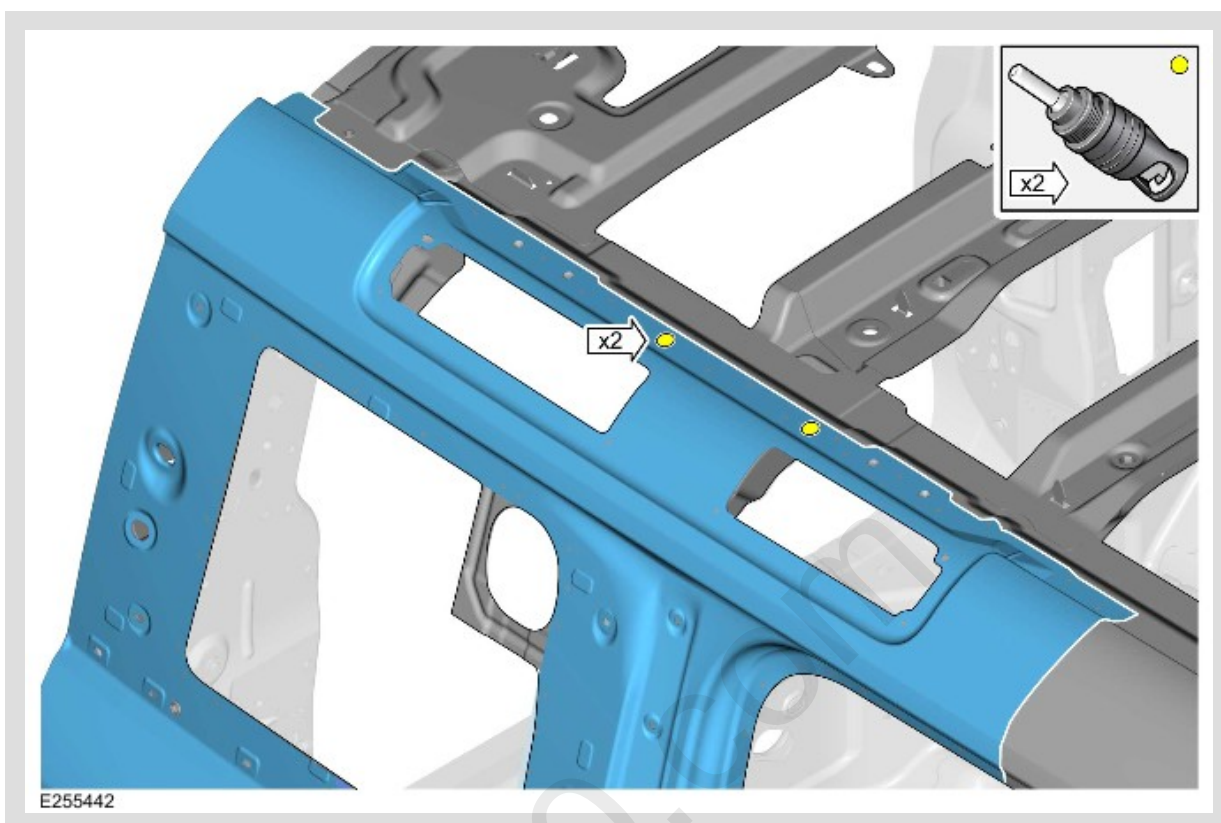
The following step(s) applies to:

All vehicles

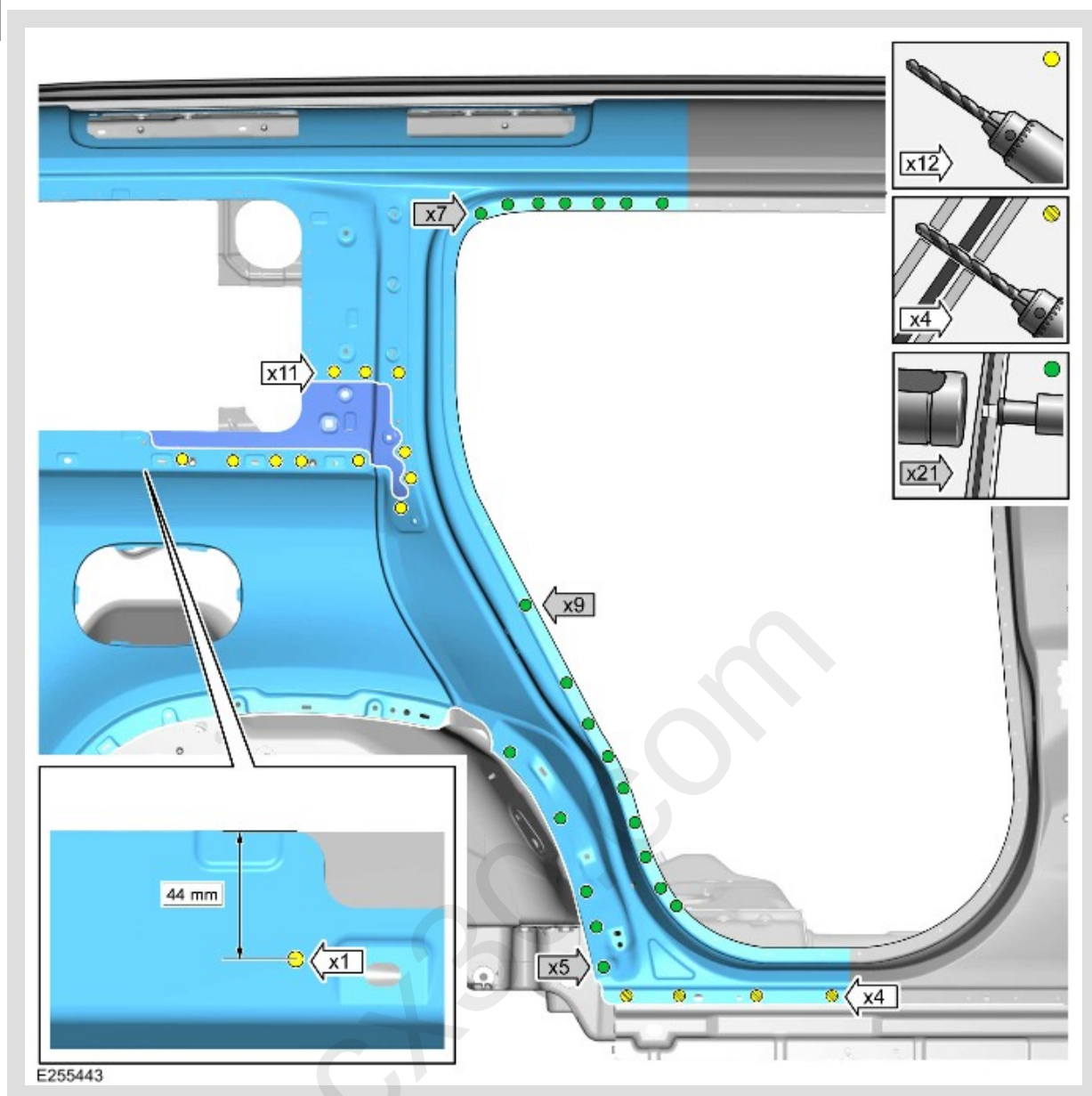
10.

 NOTE:

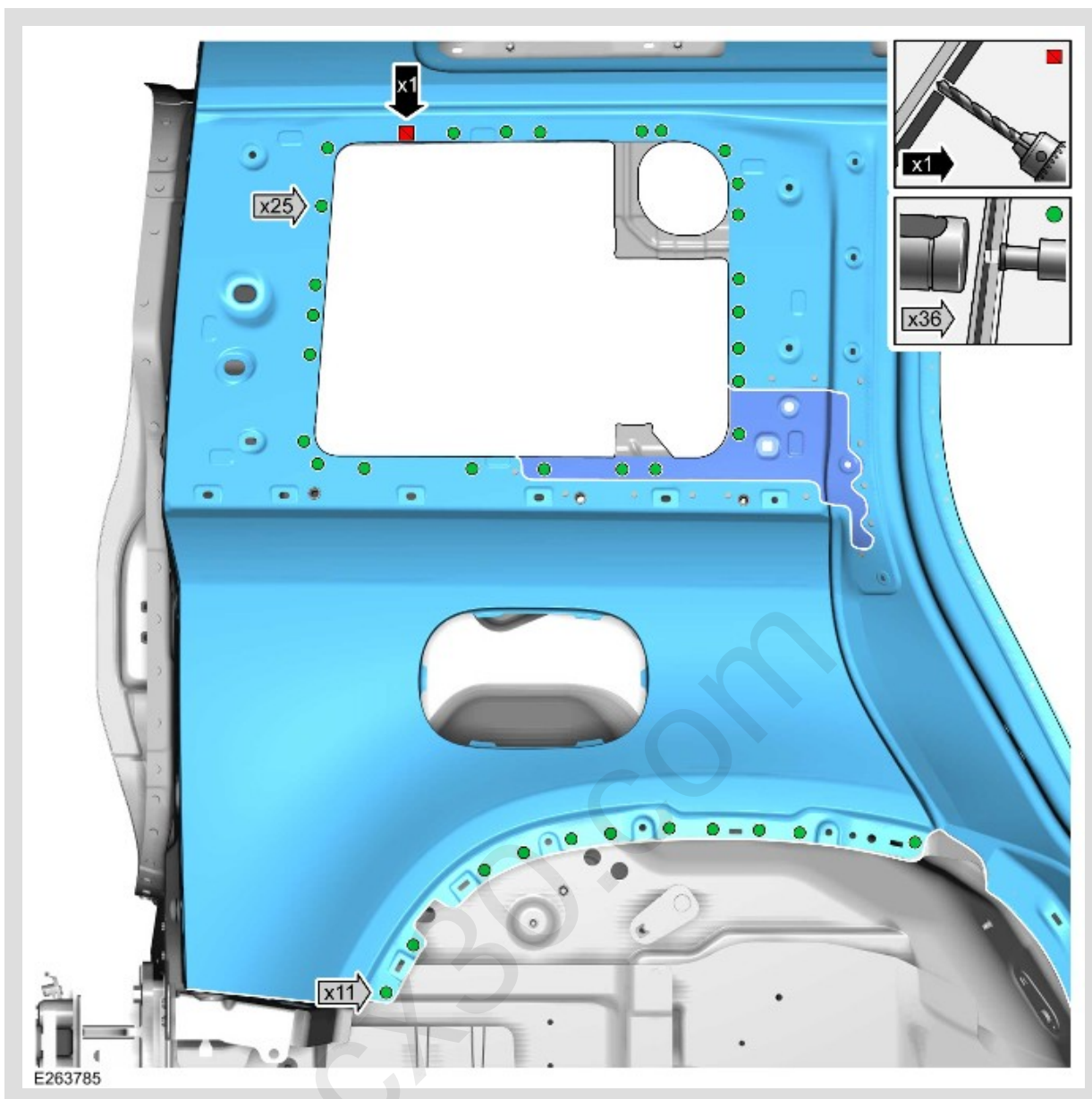
Make sure that the JLR recommended countersink tool is used for this step.



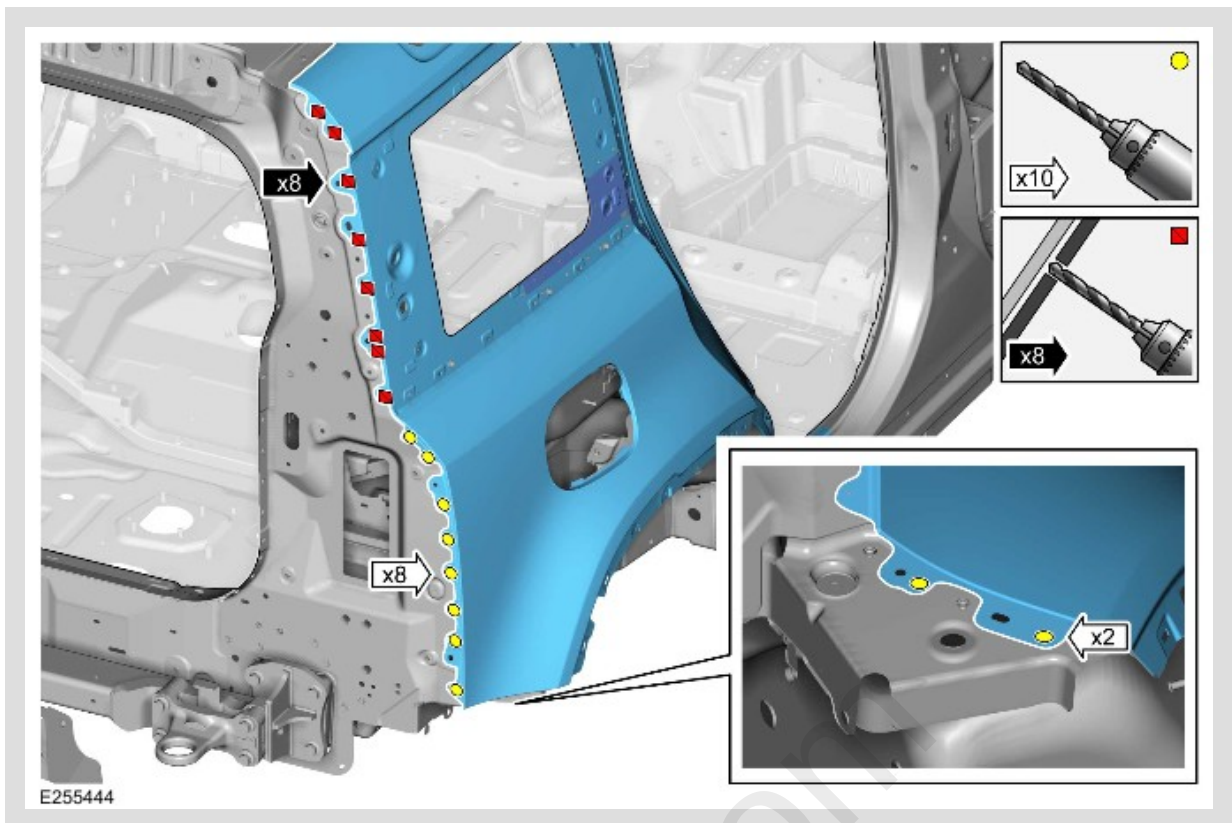
Countersink the holes to a depth of 2 mm as indicated.



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

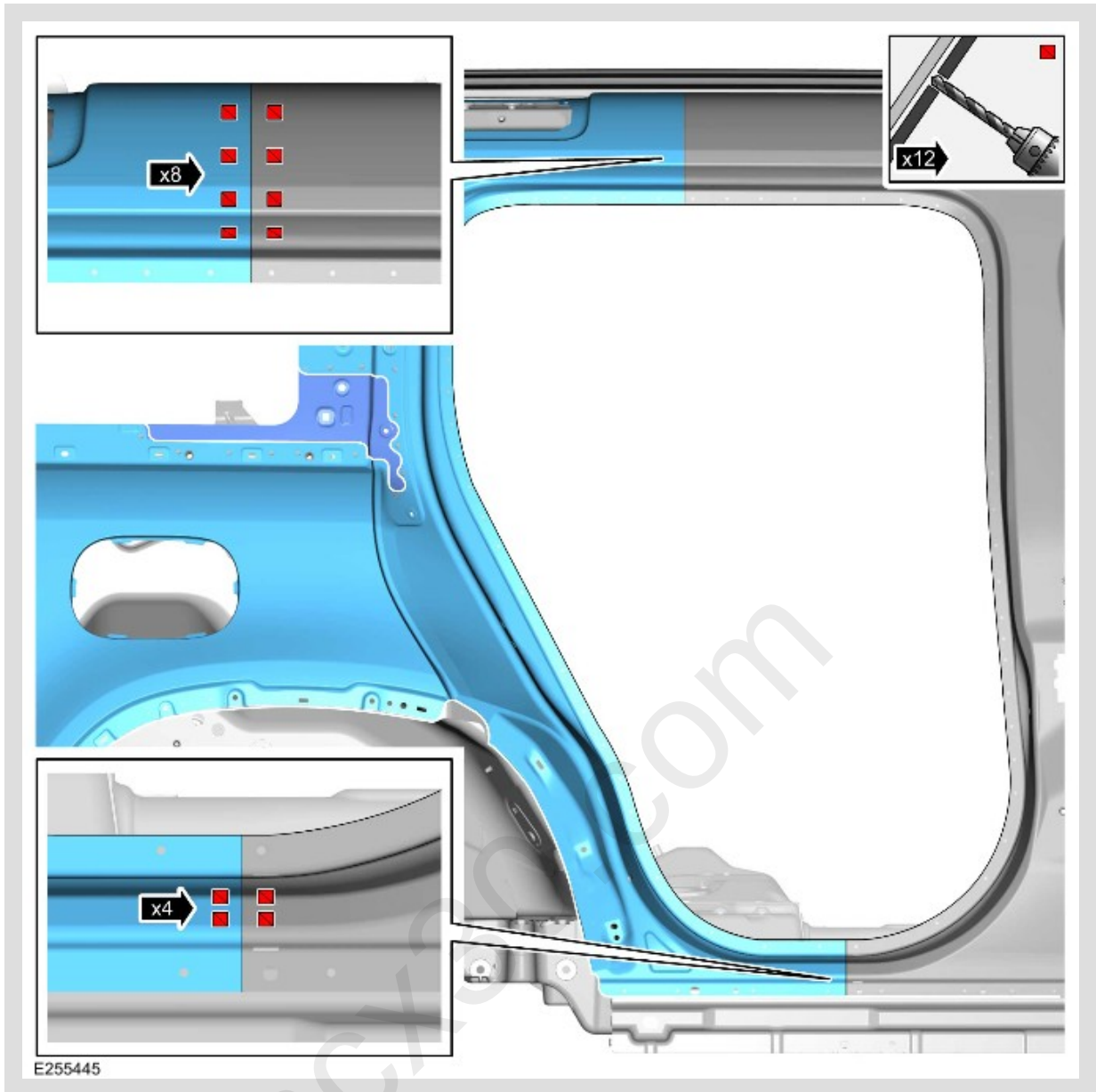


Drill a hole where the MIG plug weld is to be installed. Punch calibrated holes where the FFRs are to be installed as indicated.



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

14.



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

15.



⚠ CAUTION:

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

Remove the new quarter panel assembly and quarter panel reinforcement.

16.

Deburr the drilled holes.

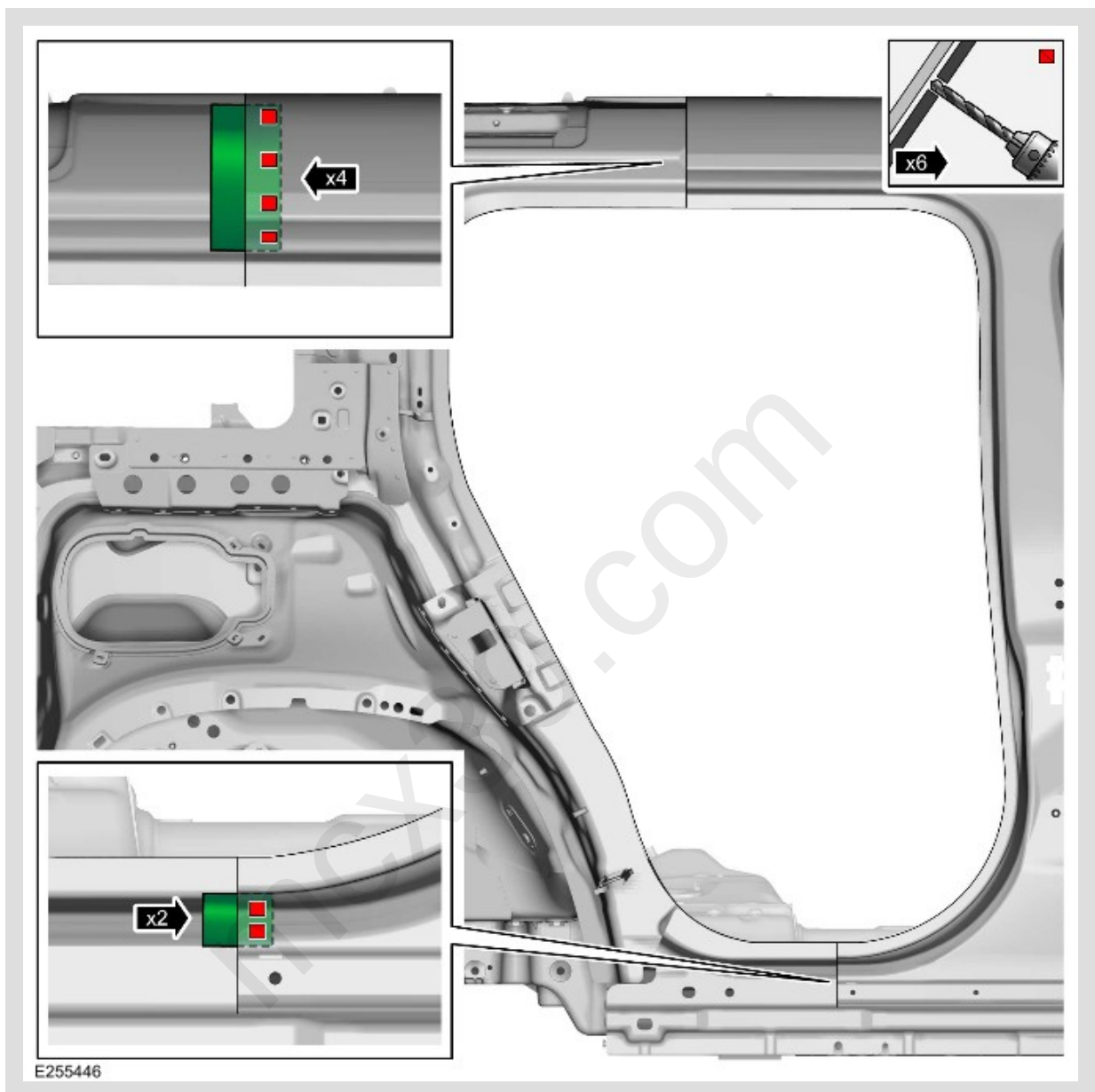
17.

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

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

19. Clean and prepare the panel surfaces.

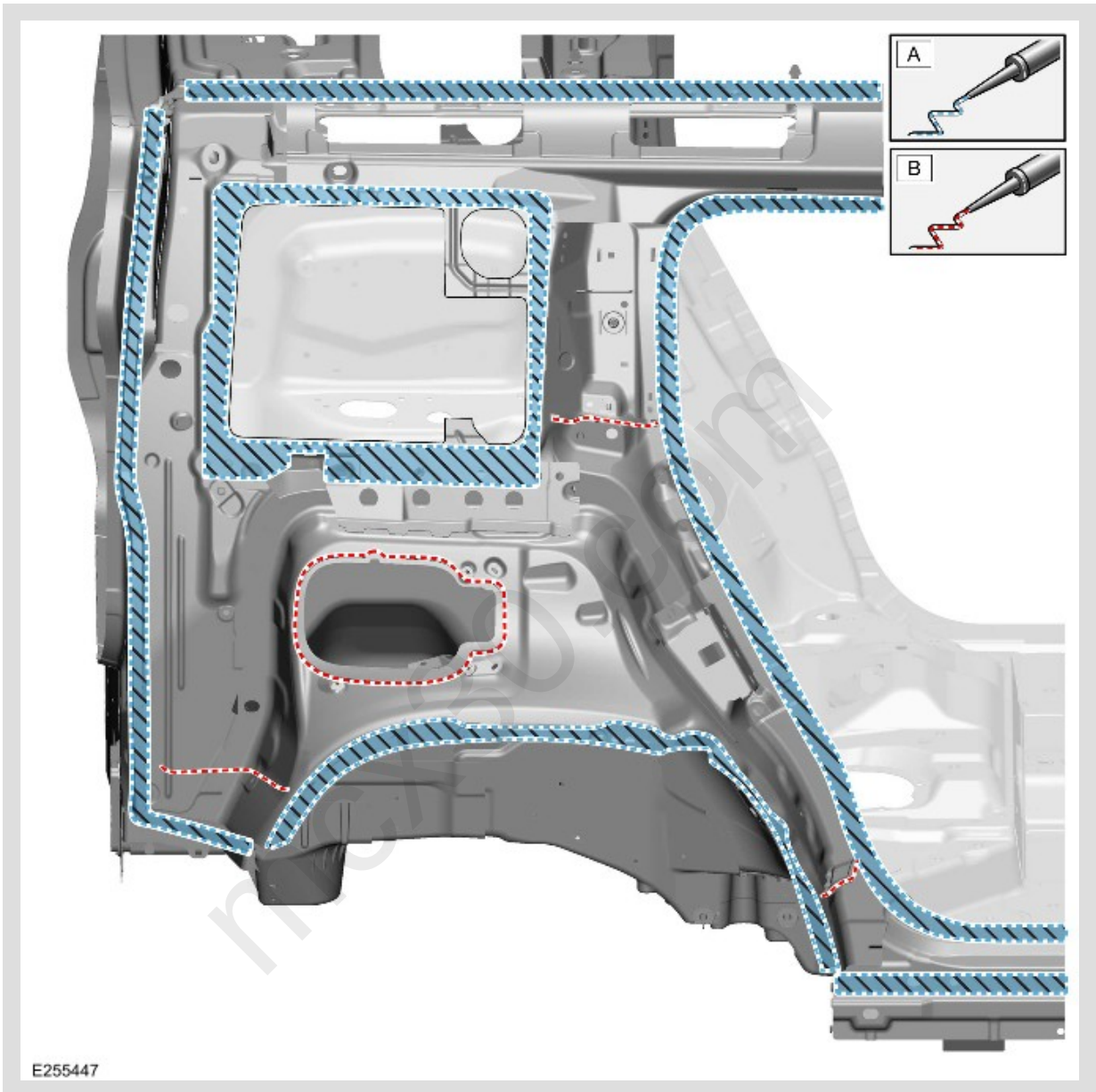
20.

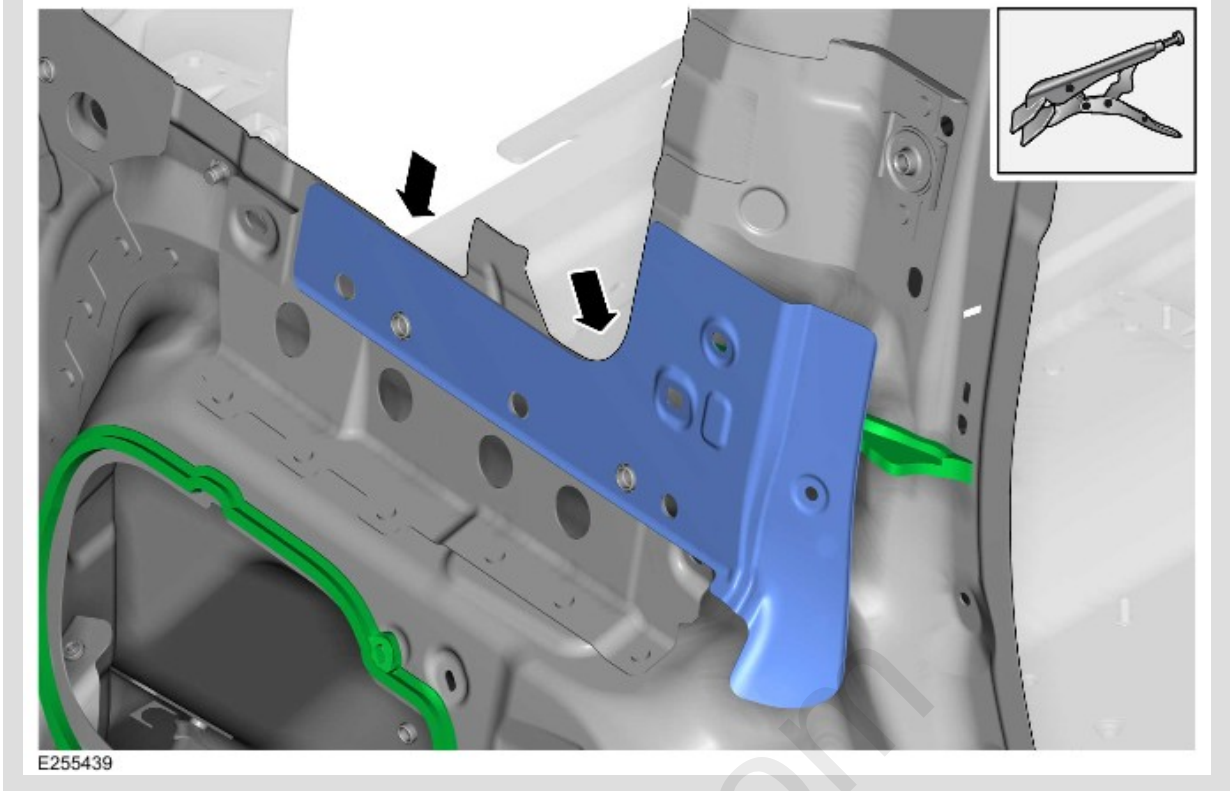


Install and MIG plug weld the backing plates as indicated.

 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.



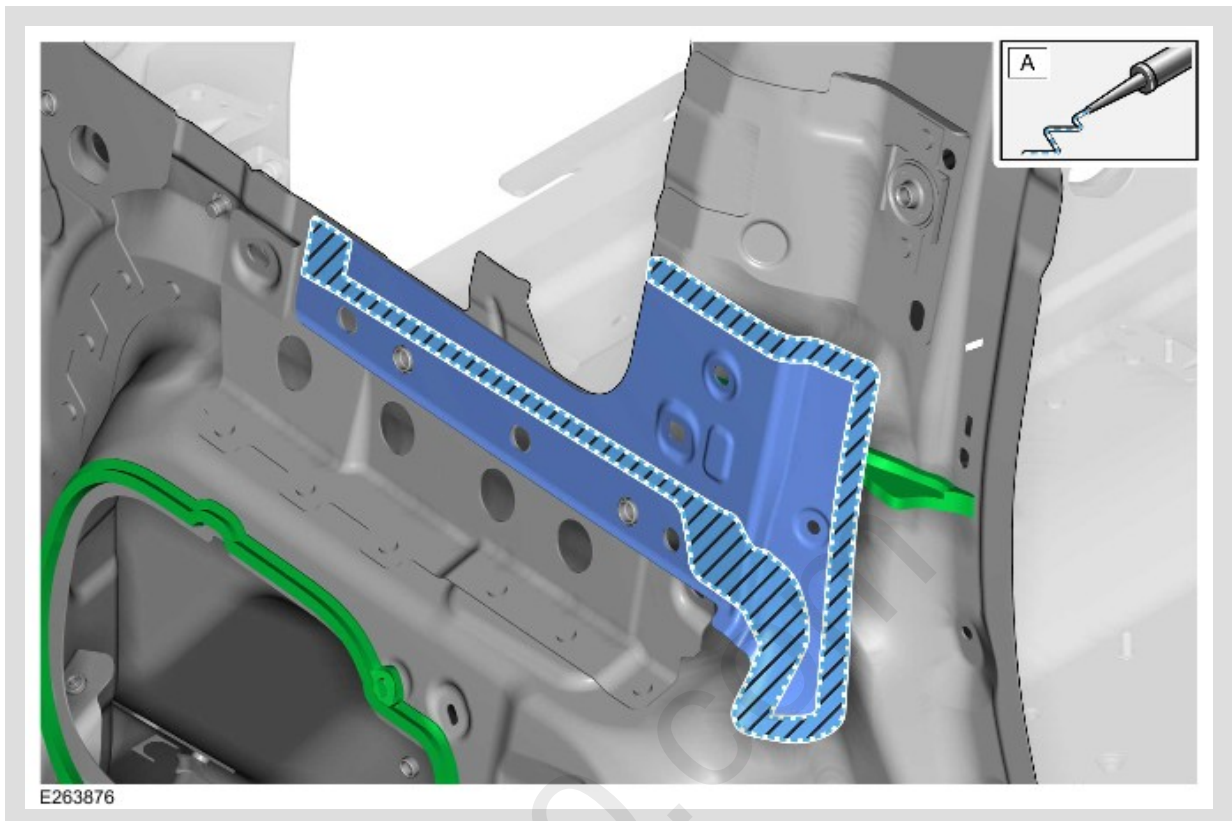


Offer up the new quarter panel reinforcement and clamp into position. Check alignment, if correct proceed to next step, if not rectify and check the alignment again before proceeding.

23.

 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.

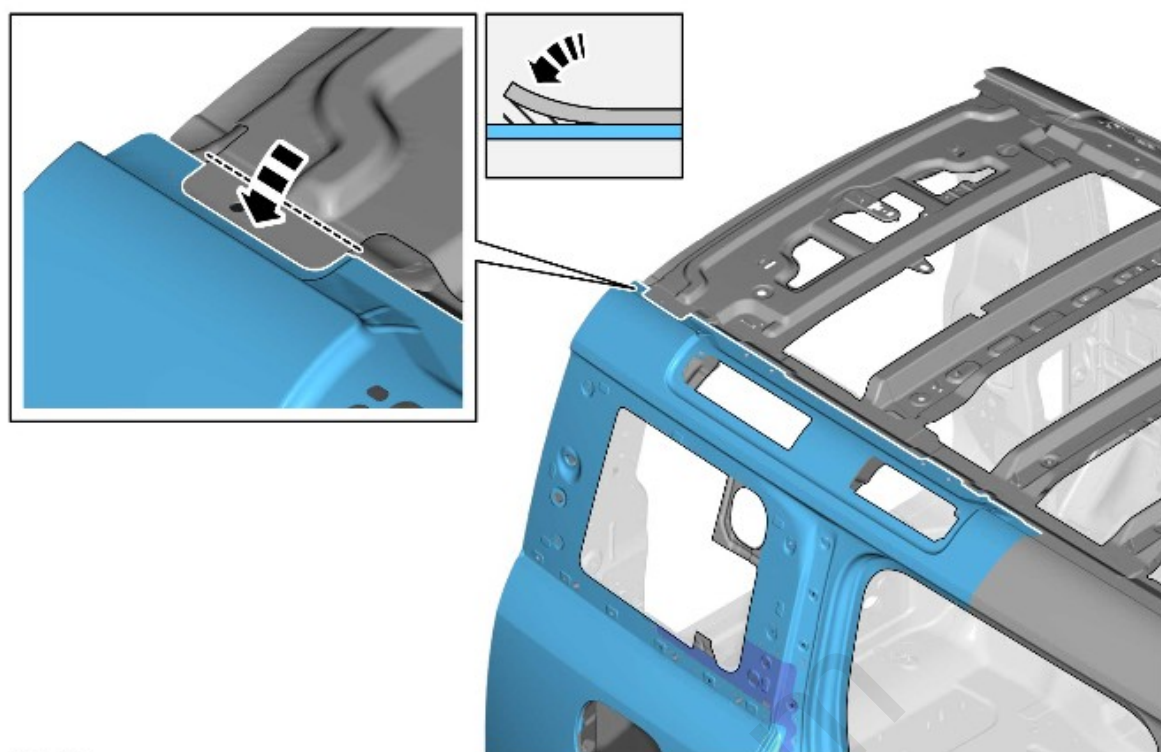
24.



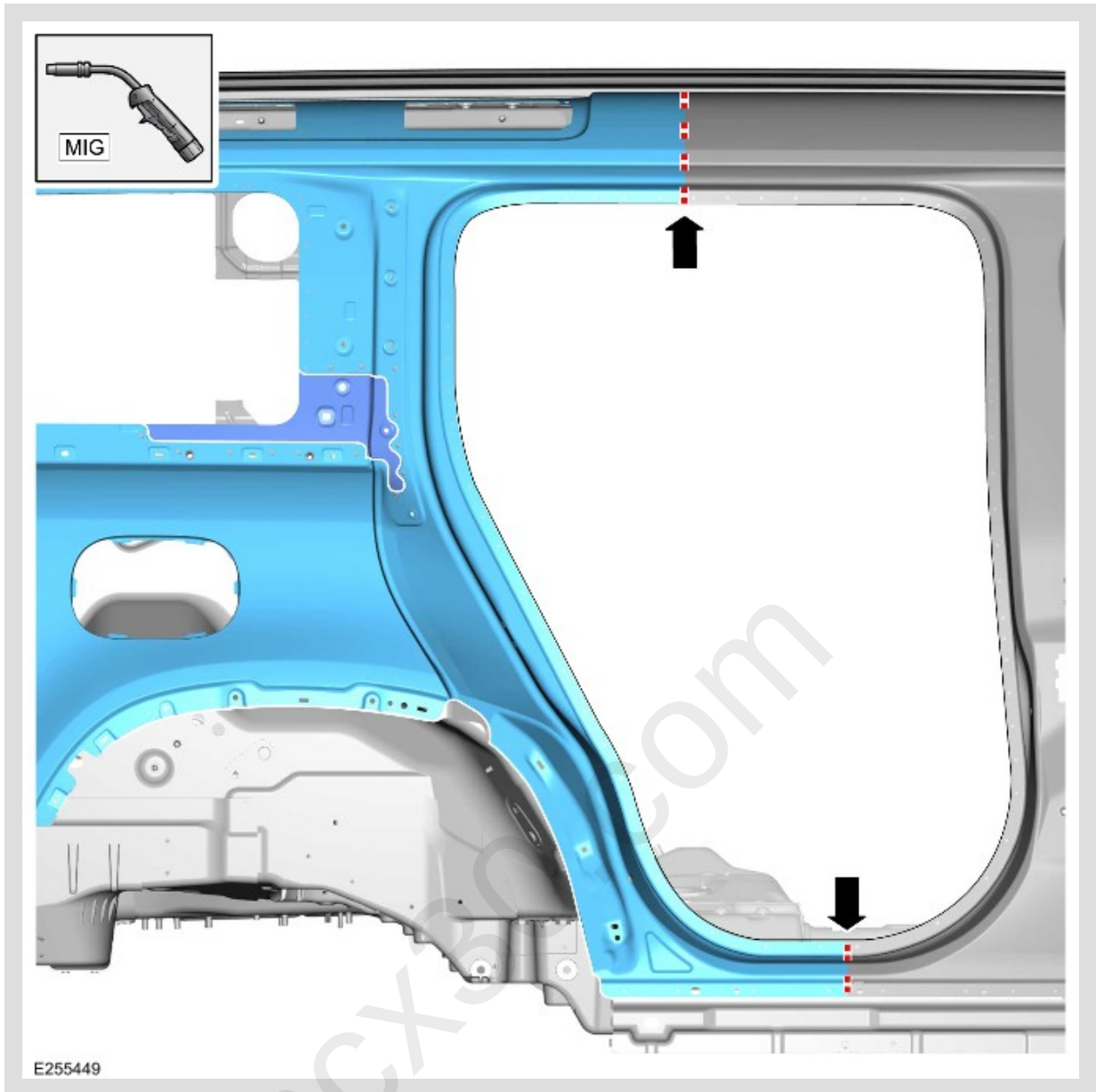
 CAUTION:

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.



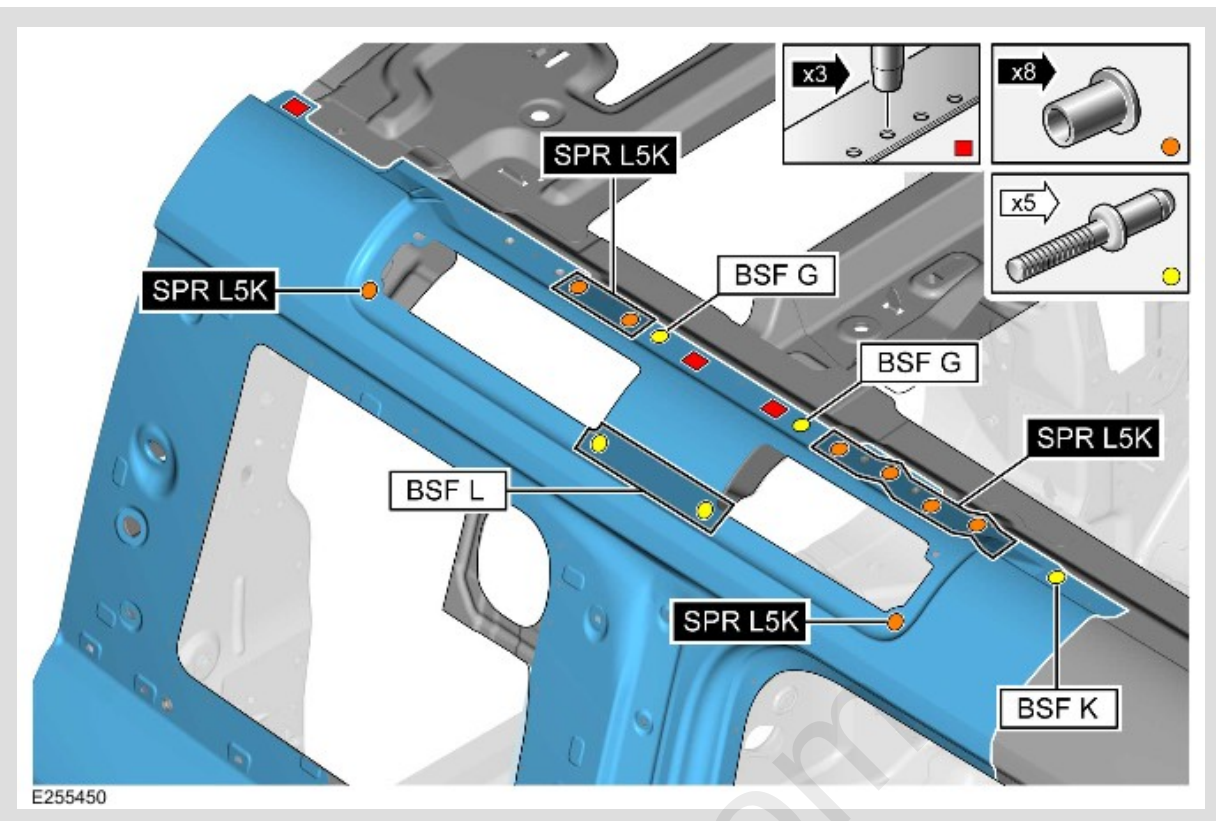
Close the expansion space.



Tack MIG weld butt joints as indicated.

The following step(s) applies to:

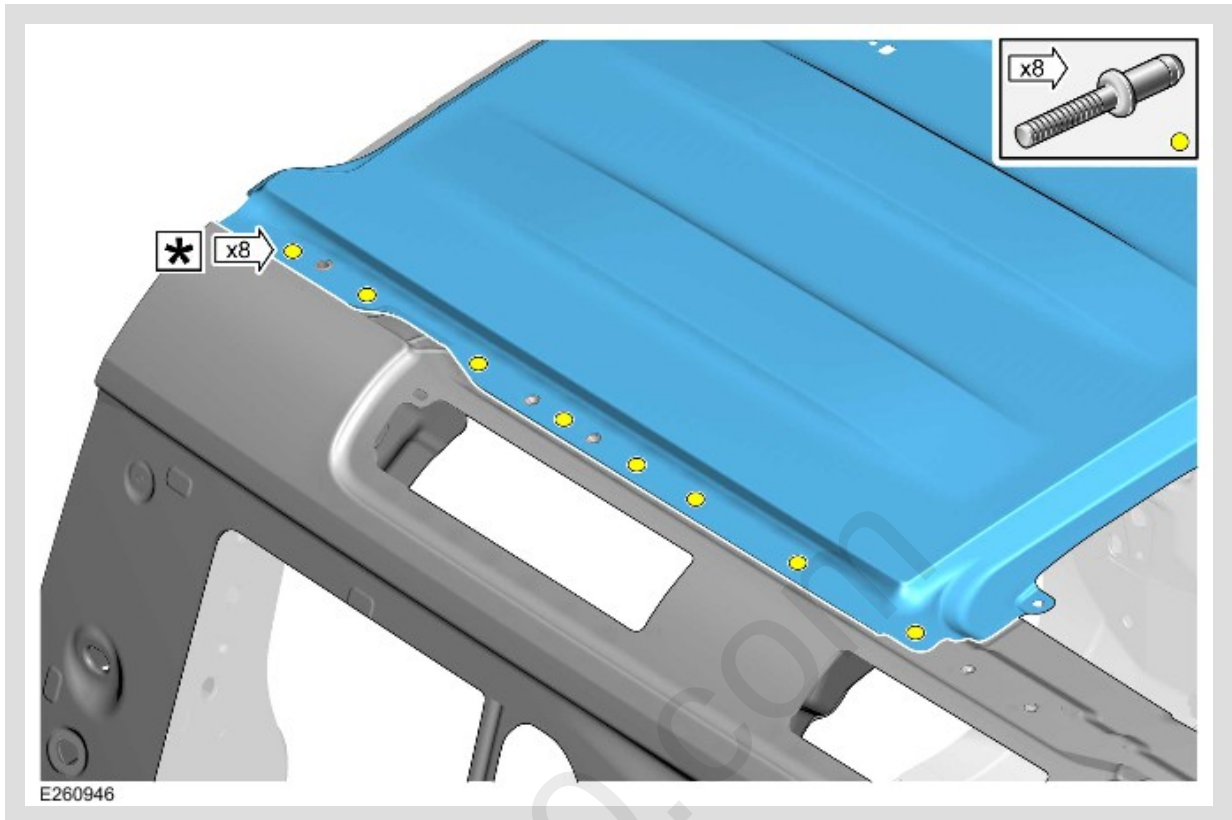
Vehicles with roof opening panel



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

ⓘ CAUTION:

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

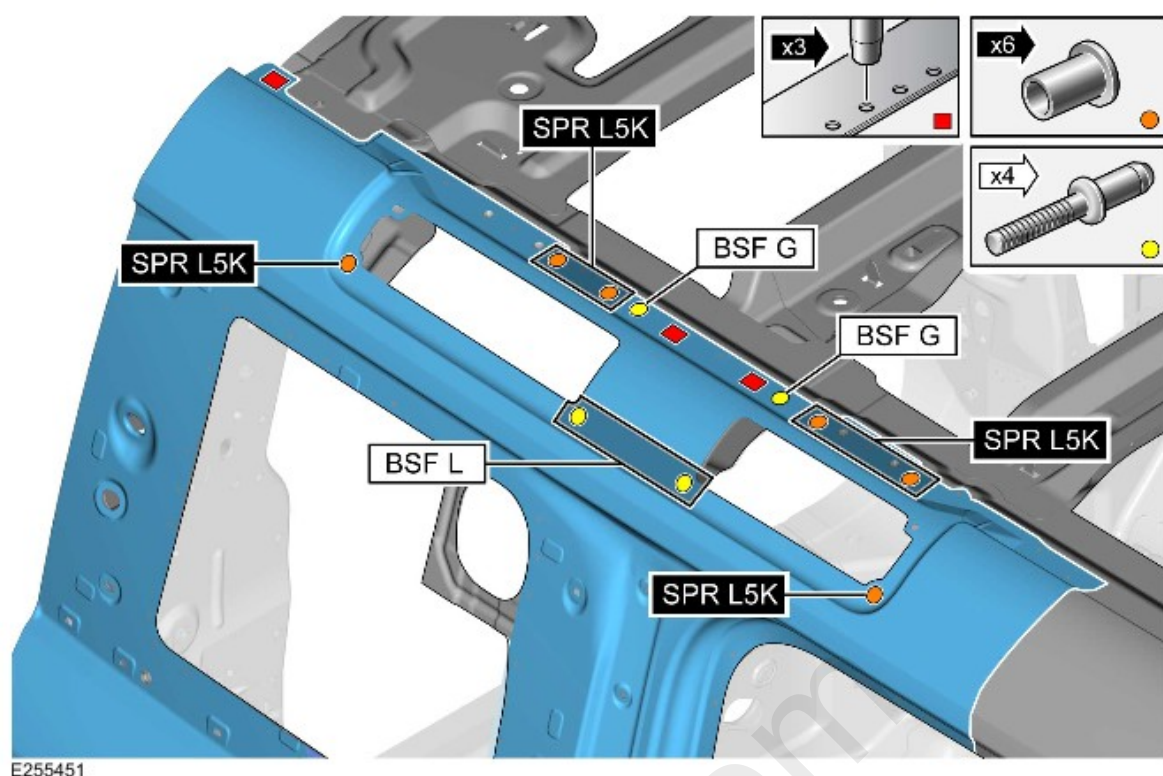


*When installing the quarter panel assembly in conjunction with the Rear Roof Panel.

Refer to: [Rear Roof Panel - 110, Vehicles With: Roof Opening Panel](#) (501-28 Roof Sheet Metal Repairs, Removal and Installation).

The following step(s) applies to:

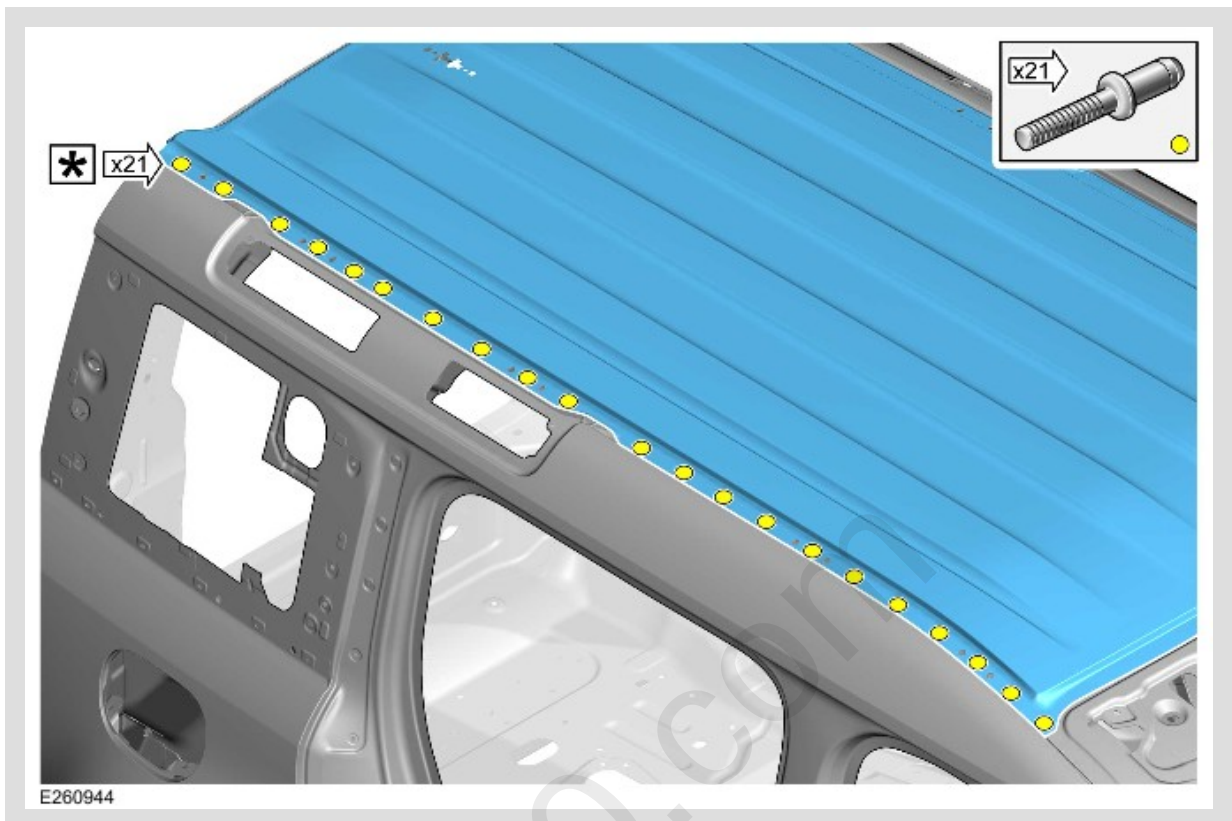
Vehicles without roof opening panel



Install the MIG plug welds, BSFs and SPRs as indicated.

ⓘ CAUTION:

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

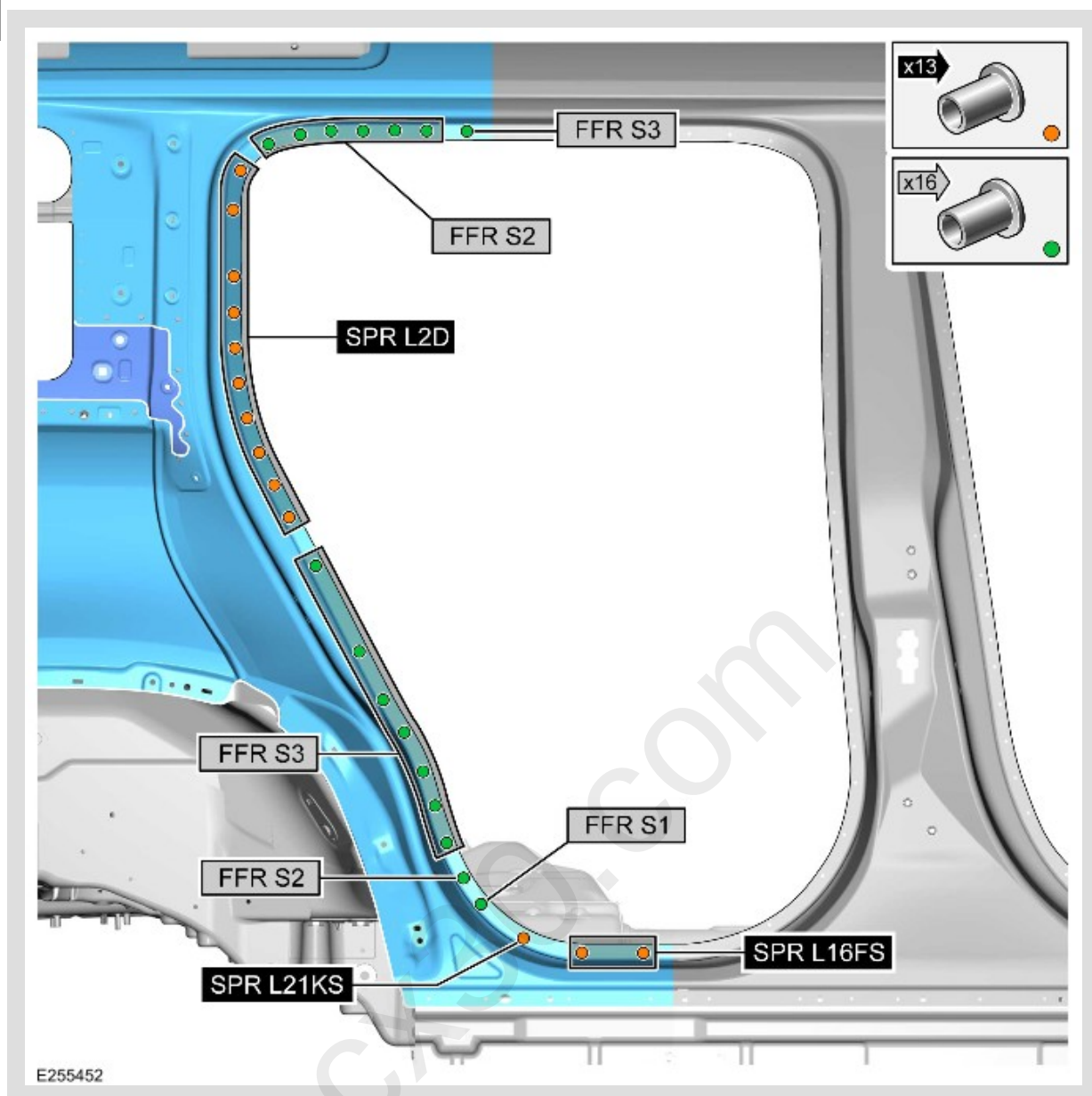


*When installing the quarter panel assembly in conjunction with the Roof Panel.

Refer to: [Roof Panel - 110, Vehicles Without: Roof Opening Panel](#) (501-28 Roof Sheet Metal Repairs, Removal and Installation).

The following step(s) applies to:

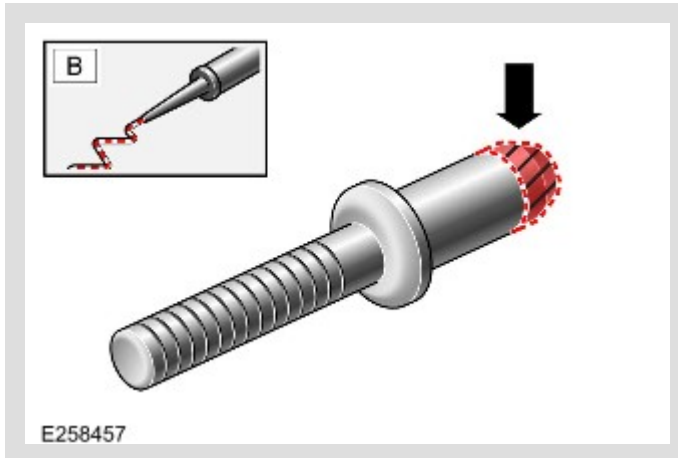
All vehicles



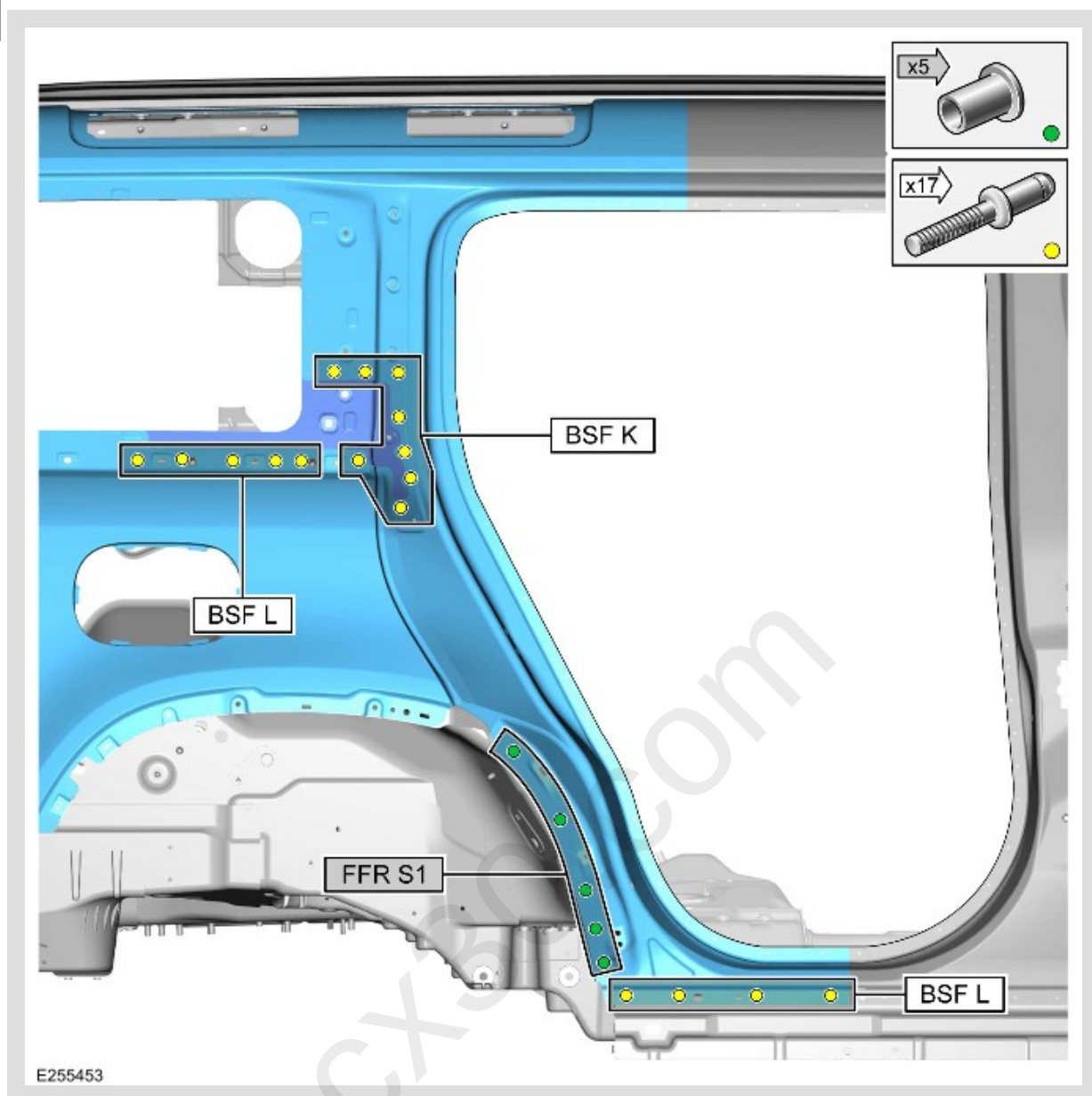
Install the SPRs and FFRs as indicated.

NOTE:

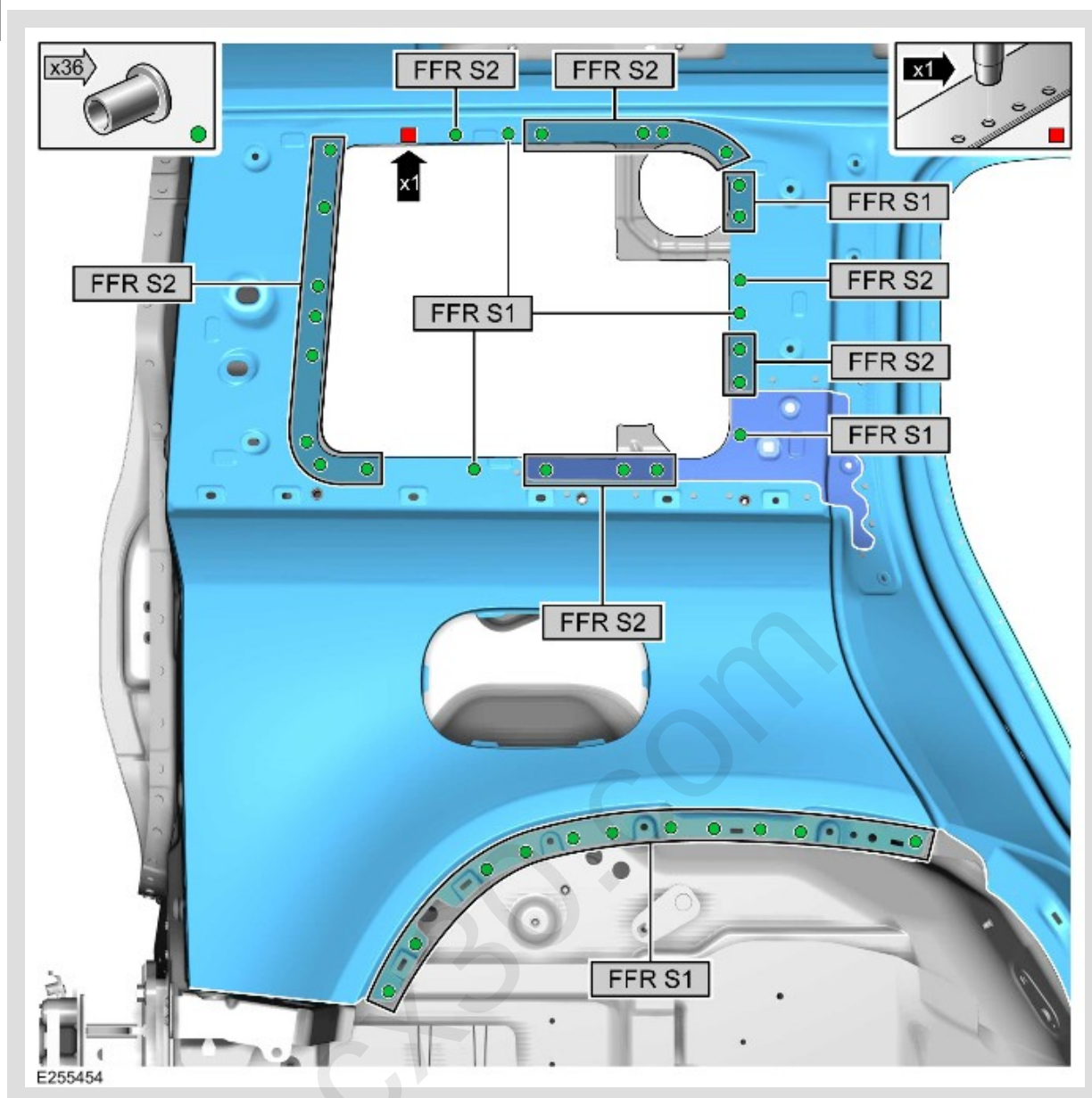
When installing Breakstem Fasteners (BSFs) into the rocker panel.



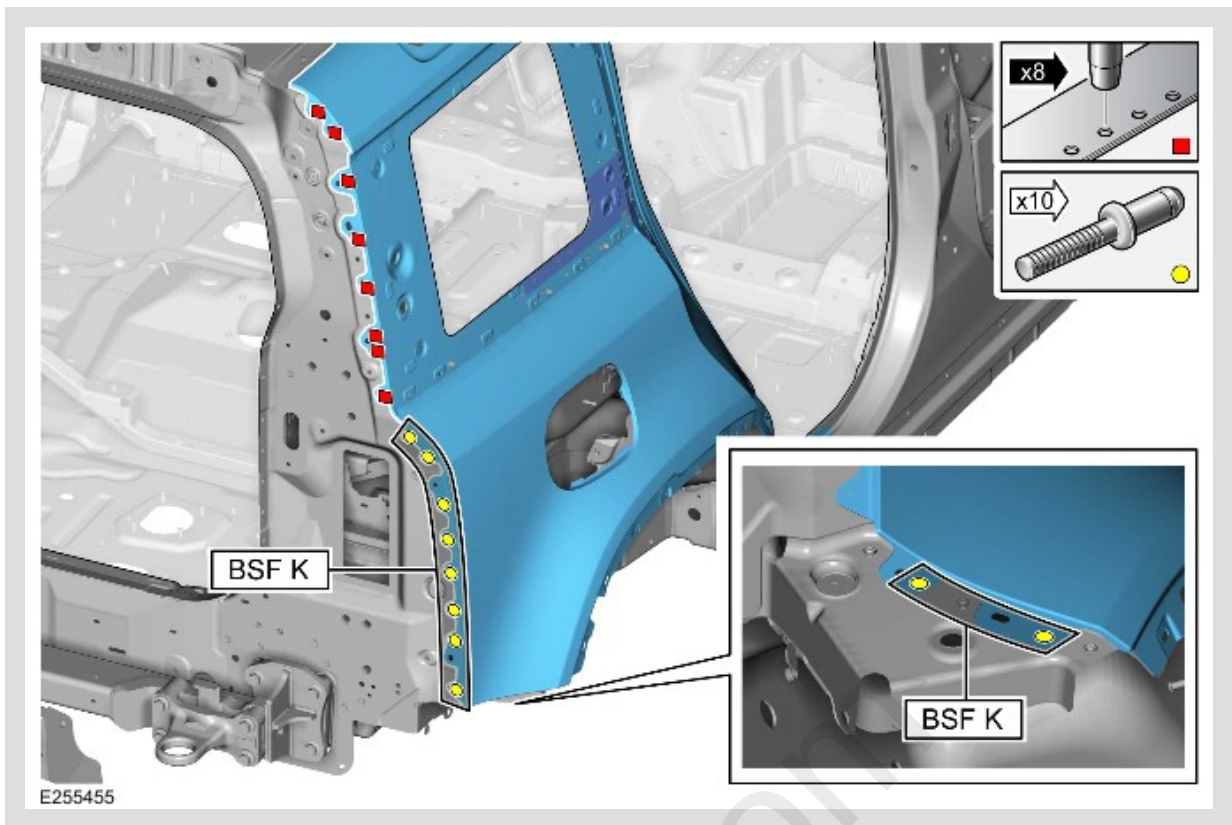
Apply a small amount of JLR recommended flexible sealant to the BSFs before installation as indicated.



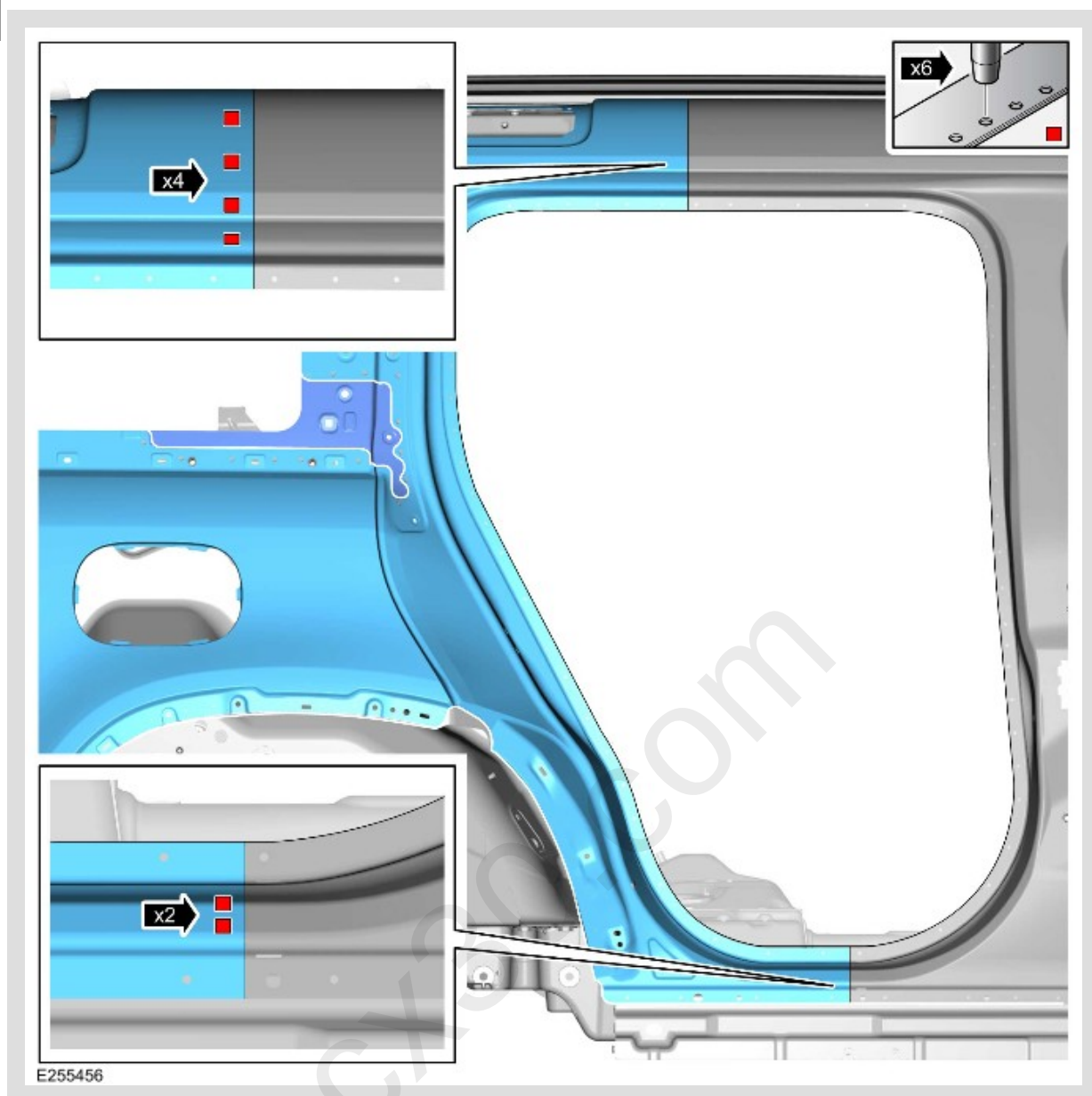
Install the BSFs and FFRs as indicated.



Install the MIG plug weld and FFRs as indicated.

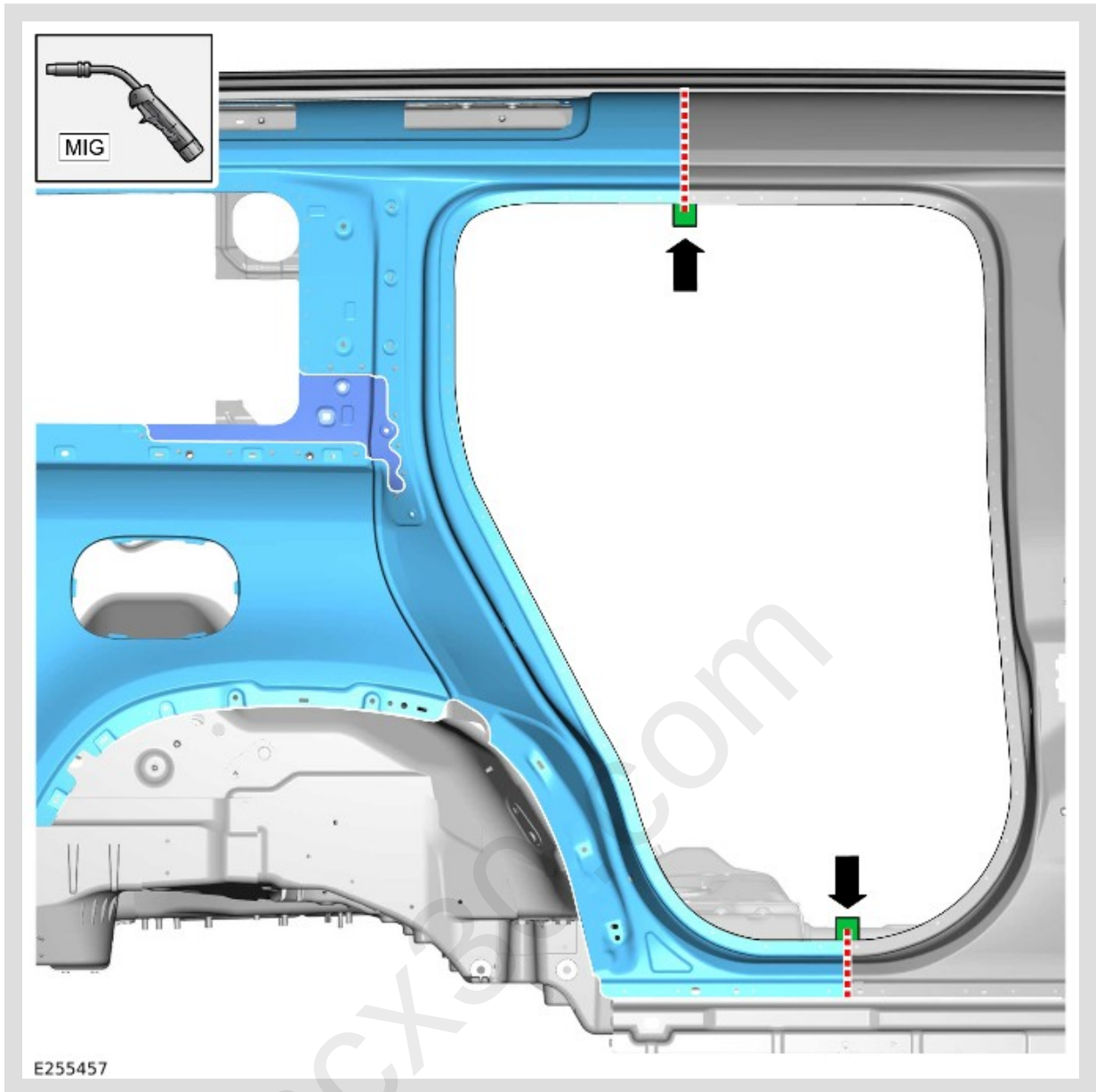


Install the MIG plug welds and BSFs as indicated.



MIG plug weld the backing plates as indicated.

37.



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

38. Dress all welds.

39. Remove the run on/run off tabs.

40. 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.

41. Install the rear door striker to the C-pillar and tighten.
Torque: 25Nm

42. Remove any excess adhesive.

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

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

45. 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.

46. For additional installation information.

Refer to: [Rear Roof Panel - 110, Vehicles With: Roof Opening Panel](#) (501-28 Roof Sheet Metal Repairs, Removal and Installation).

47. For additional installation information.

Refer to: [Roof Panel - 110, Vehicles Without: Roof Opening Panel](#) (501-28 Roof Sheet Metal Repairs, Removal and Installation).

48. For additional installation information.

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

49. For additional installation information.

Refer to: [Second Row Seatbelt Retractor - 110](#) (501-20A Seatbelt System, 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: [Third Row Seat](#) (501-10 Seating, Removal and Installation).

52. For additional installation information.

Refer to: [Second Row Left Seat - 110](#) (501-10 Seating, Removal and Installation).

Refer to: [Second Row Right Seat - 110](#) (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: [Rear Treadplate](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).

55. For additional installation information.

Refer to: [Left Loadspace Trim Panel - 110, Vehicles With: 5 Seats](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).

Refer to: [Left Loadspace Trim Panel - \[+\] 7 Seat Configuration, 110](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).

Refer to: [Right Loadspace Trim Panel](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).

Refer to: [Right Loadspace Trim Panel - \[+\] 7 Seat Configuration, 110](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).

56. For additional installation information.

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

57. For additional installation information.

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

58. For additional installation information.

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

59. For additional installation information.

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