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2020.0 DEFENDER (LE), 501-29

SIDE PANEL SHEET METAL REPAIRS

A-PILLAR OUTER PANEL - 90 (G2452697)

mcx30.com

REMOVAL



NOTE:

In this procedure the A-pillar outer panel is installed in conjunction with:

- Front row seat
- Windshield
- Instrument panel
- Fender apron panel
- A-pillar lower trim
- Deployable side step
- Fender mounting bracket lower.

1.

 NOTE:

The A-pillar outer panel is serviced as part of the side panel.



The side panel 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).



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.

3.

When installing the A-pillar outer panel make sure that you are aware of the methods, tools and fixings used in this procedure.

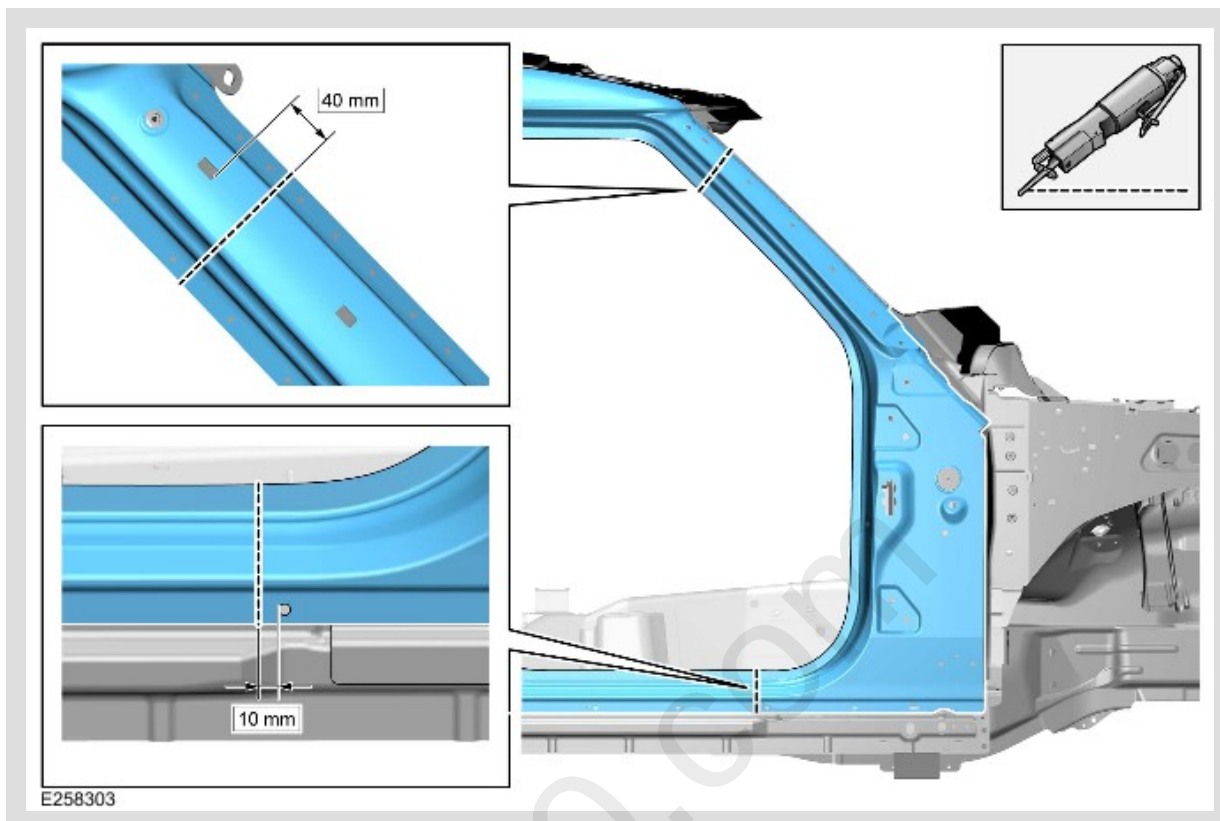
Refer to: [Body Repairs](#) (501-25A Body Repairs - General Information, Description and Operation).

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

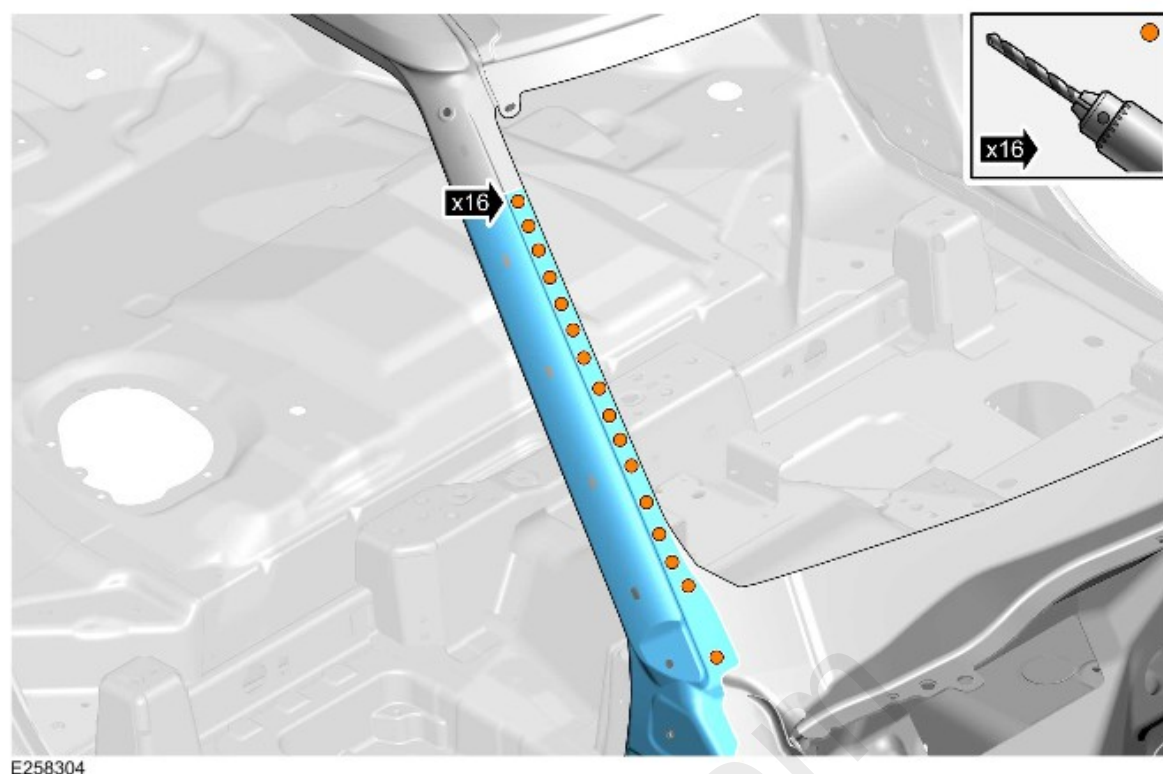
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4. For additional information on the fixings required to complete this procedure
Refer to: [Specifications - 110](#) (501-29 Side Panel Sheet Metal Repairs, Specifications).
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5. For additional removal information
Refer to: [Front Row Seat - Vehicles With: Power Seats](#) (501-10 Seating, Removal and Installation).
Refer to: [Front Row Seat - Vehicles Without: Power Seats](#) (501-10 Seating, Removal and Installation).
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6. For additional removal information
Refer to: [Windshield](#) (501-11 Glass, Frames and Mechanisms, Removal and Installation).
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7. For additional removal information
Refer to: [Instrument Panel Upper Trim](#) (501-12 Instrument Panel and Console, Removal and Installation).
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8. For additional removal information
Refer to: [Fender Apron Panel - 90](#) (501-27 Front End Sheet Metal Repairs, Removal and Installation).
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9. For additional removal information
Refer to: [A-Pillar Lower Trim Panel](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).
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10. For additional removal information
Refer to: [Fixed Side Steps and Side Tubes - Part number: 90: VPLEP0433, VPLEP0391, 110: VPLEP0434, VPLEP0392](#) (102-03 Exterior, Removal and Installation).
Refer to: [Deployable Side Steps - Part number: 110: VPLEP0393, VPLEP0394, VPLEP0422](#), (102-03 Exterior, Removal and Installation).
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11. For additional removal information
Refer to: [Front Fender Mounting Bracket Lower - 90](#) (501-27 Front End Sheet Metal Repairs, Removal and Installation).
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12. Release and position the floor carpet to one side.
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13. Release and position the floor noise, vibration and harshness material to one side.
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14. Release and position the wiring harness to one side.
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15. Remove the front door upper hinge from the A-pillar.
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16. Remove the front door lower hinge from the A-pillar.
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⚠ CAUTION:

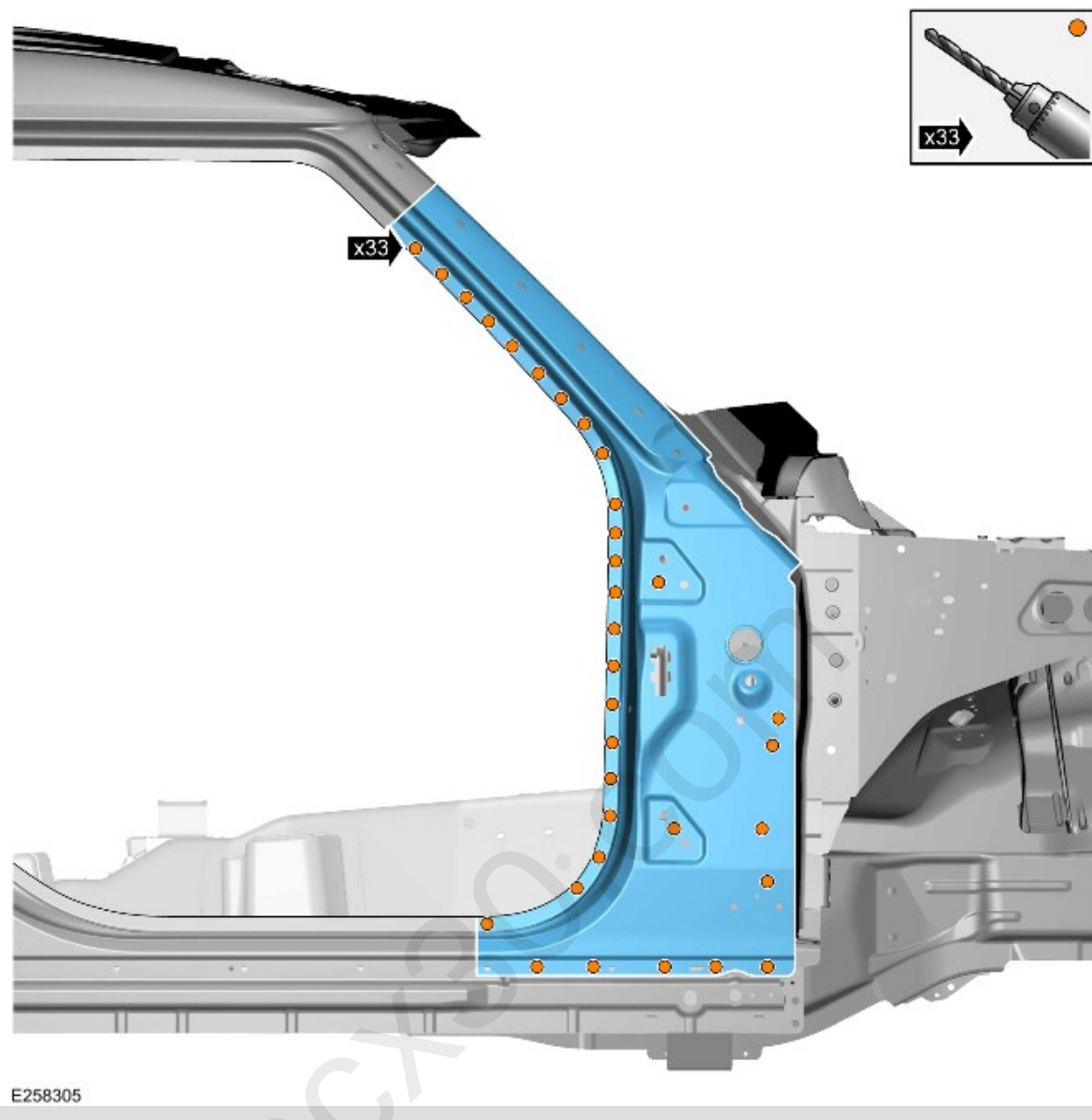
Care should be taken not to cut through into the inner reinforcements.



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



Remove the Self Piercing Rivets (SPRs) as indicated.

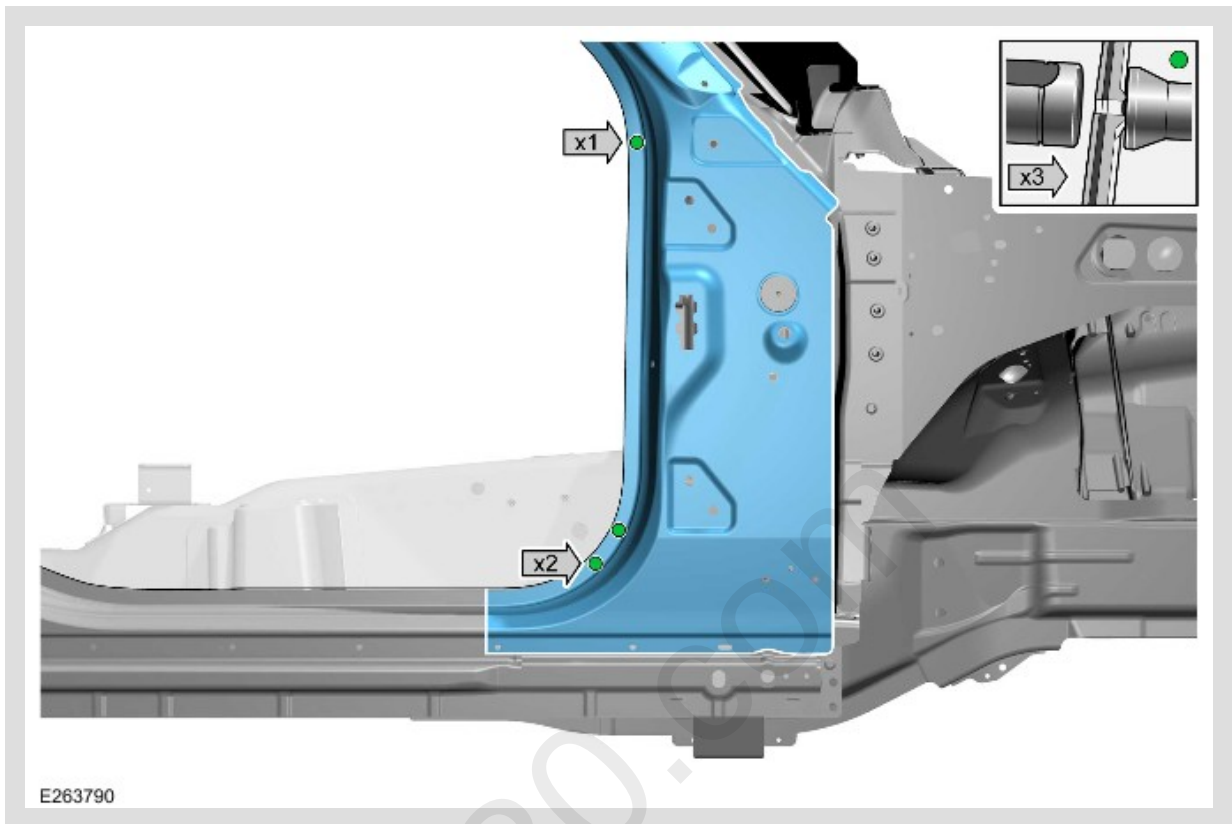


Remove the SPRs as indicated.

20.

NOTE:

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



Planish the panel as indicated.

21. Carefully separate the joints and remove the A-pillar outer panel.

INSTALLATION

CAUTION:

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

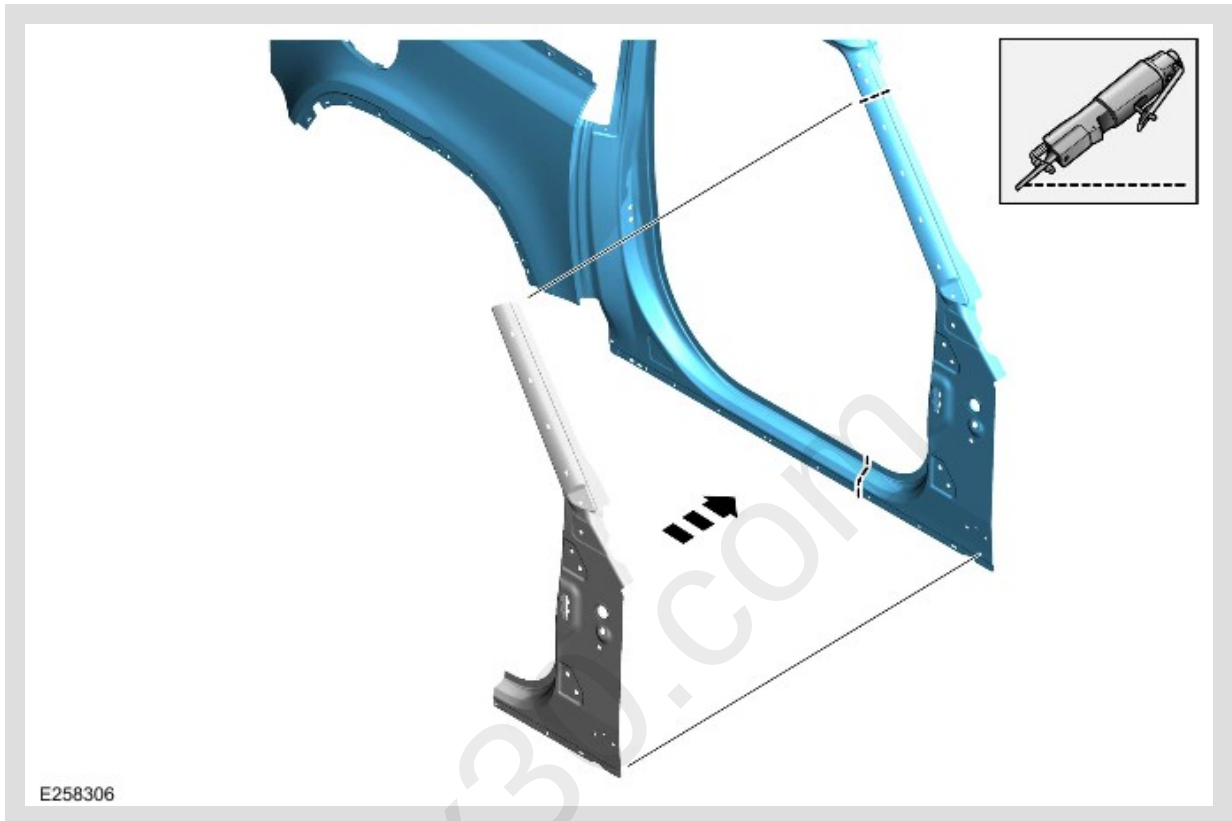
NOTES:

- 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 installation tool.
- Refer to Adhesive, Fixings and Consumables for further information on Flow Form Rivets (FFRs).

1. Remove the rivet remnants.

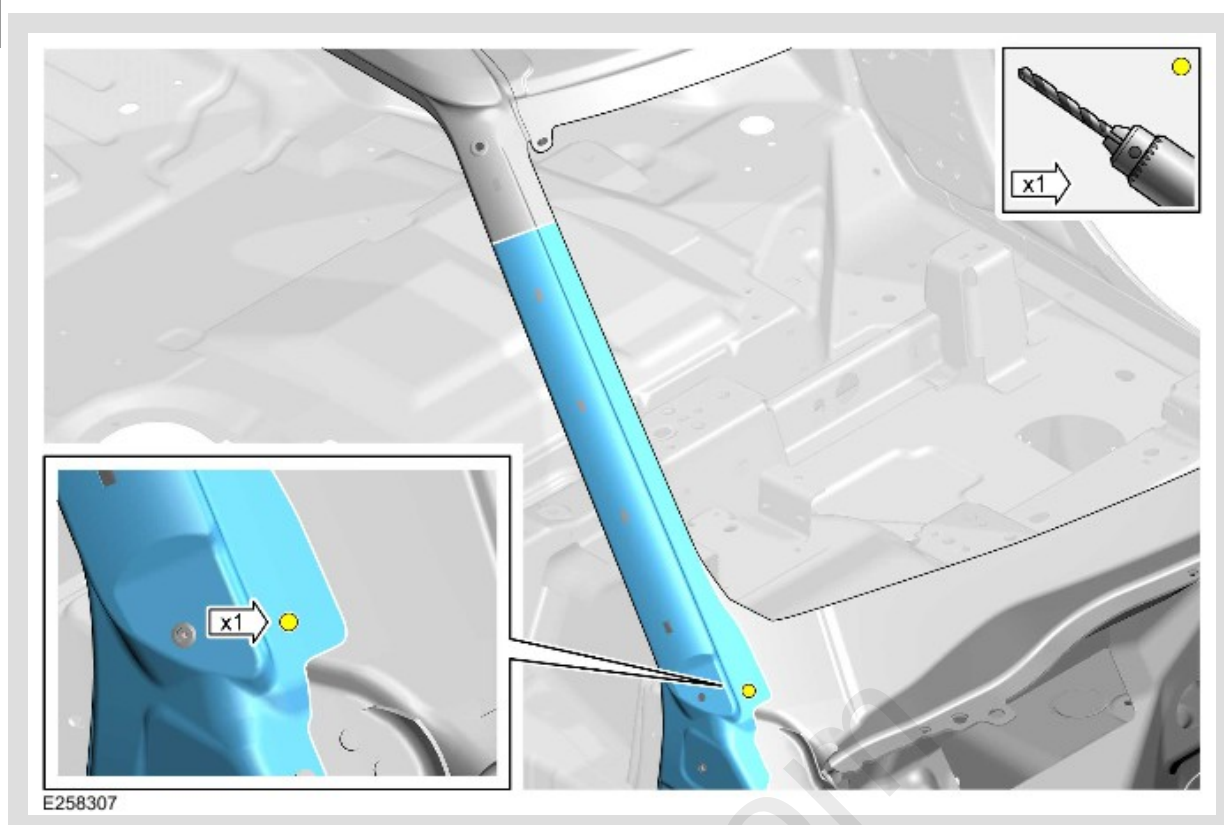
2. Dress the flanges where necessary.

3.



Use the old A-pillar outer panel for reference. Measure, mark and cut the new side panel, where the MIG welded butt joints are to be made as indicated.

4. Offer up the new A-pillar outer panel and clamp into position. Check alignment, if correct proceed to next step, if not rectify and check the alignment again before proceeding.

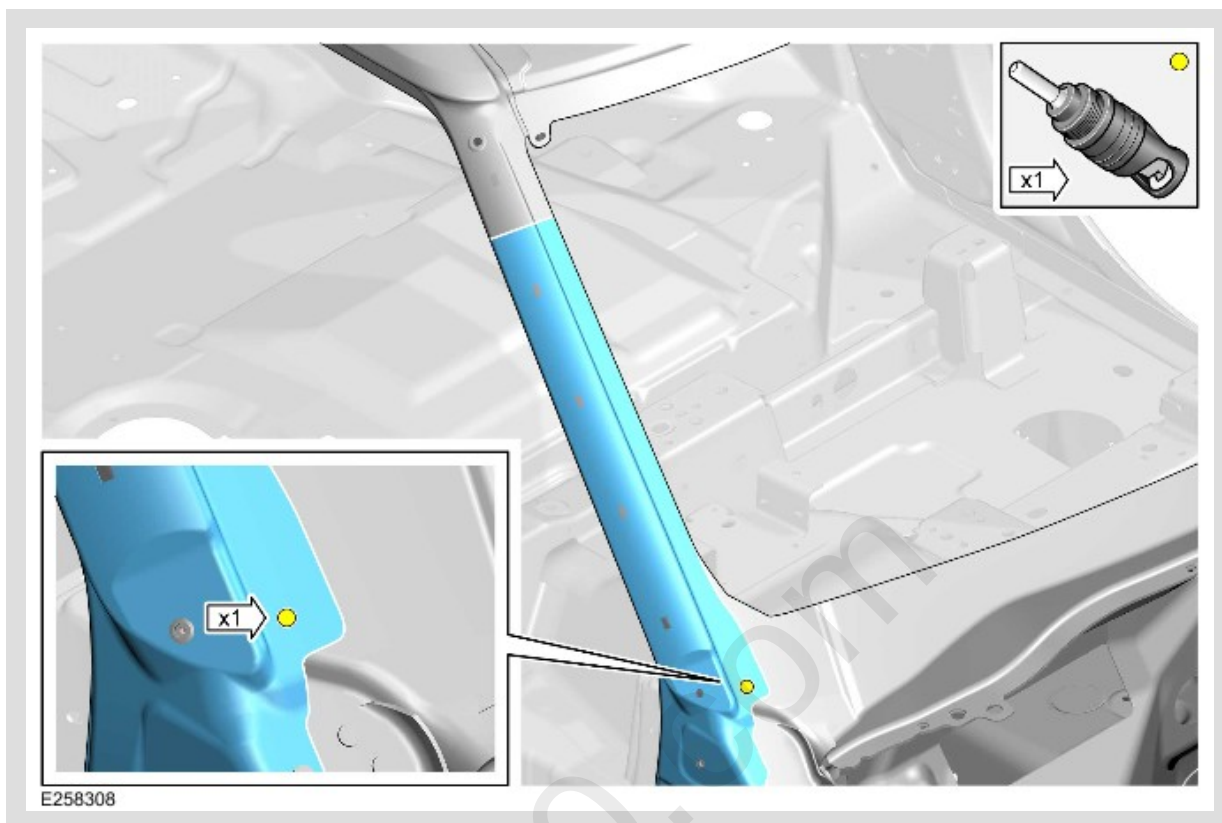


Drill a hole where the Breakstem Fastener (BSF) is to be installed as indicated.

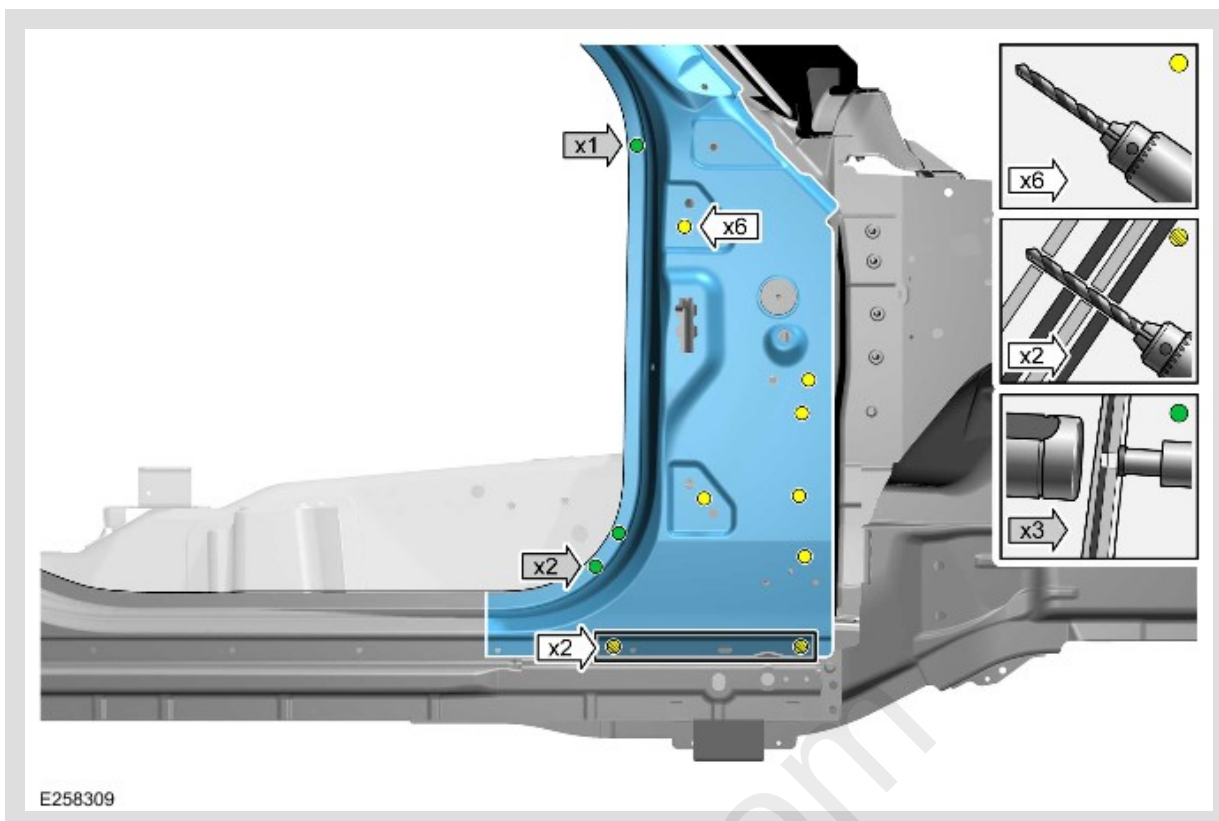
6.

 NOTE:

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



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

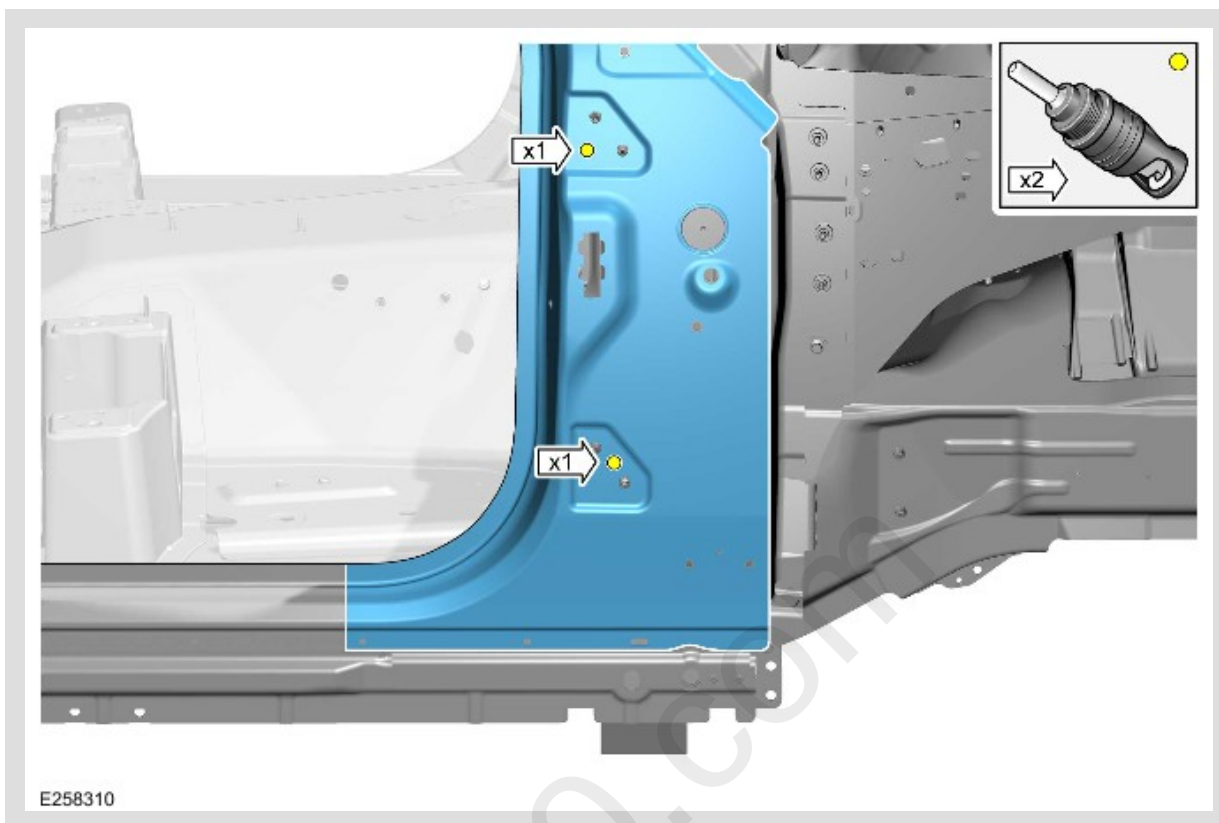


Drill holes where the BSFs are to be installed as indicated. Punch calibrated holes where the Flow Form Rivets (FFRs) are to be installed as indicated.

8.

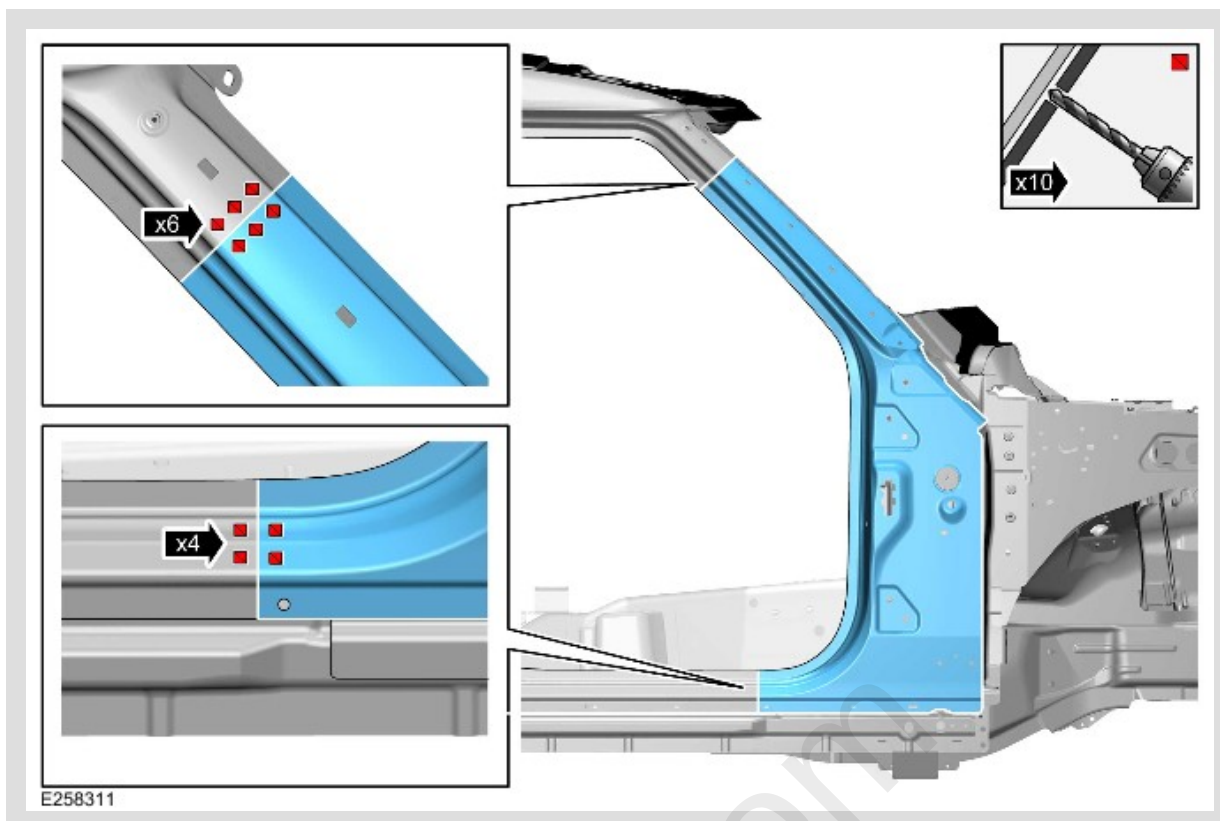
 NOTE:

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



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

9.



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

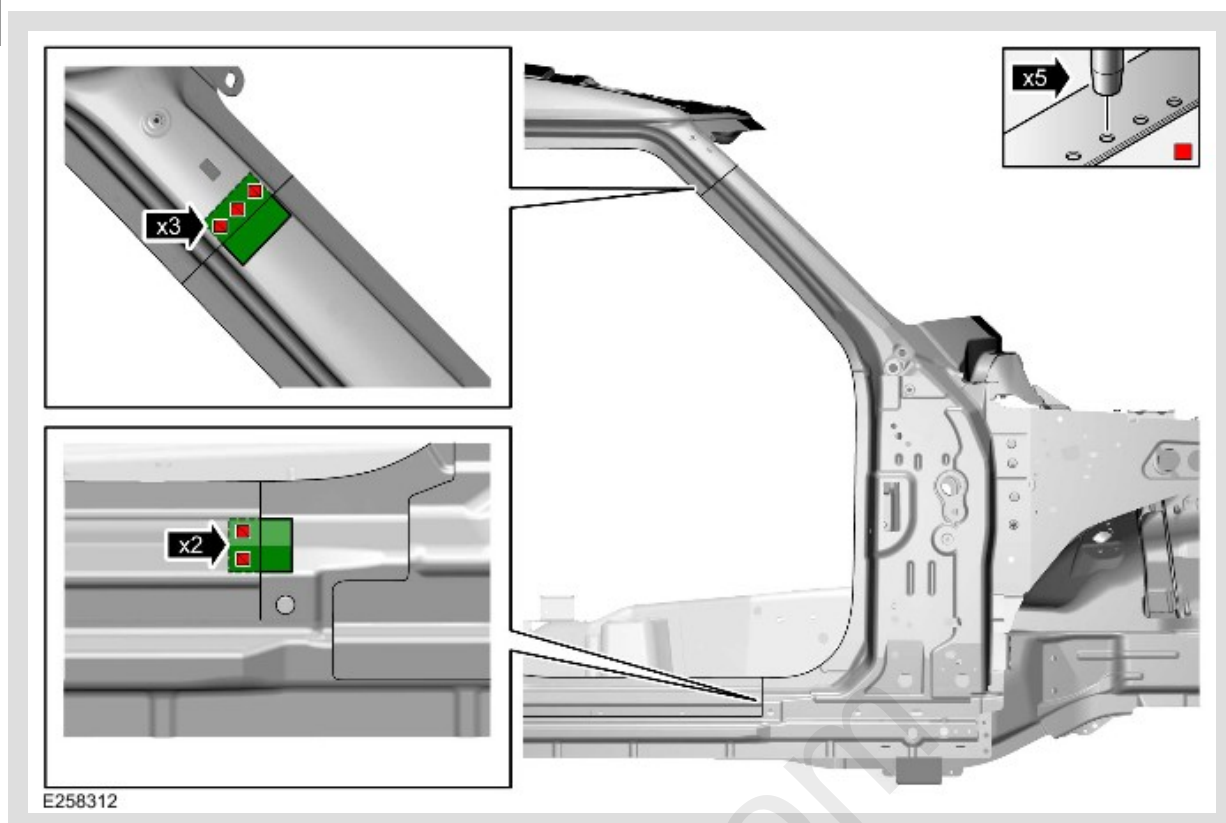
10. Remove the new A-pillar outer panel.

11. Deburr the drilled holes.

12. Measure and cut 2 backing plates 50 mm wide, 25 mm each side of the MIG welded butt joints from the A-pillar outer panel remnant.

13. Cut 3 run on/run off tabs from the A-pillar outer panel remnant.

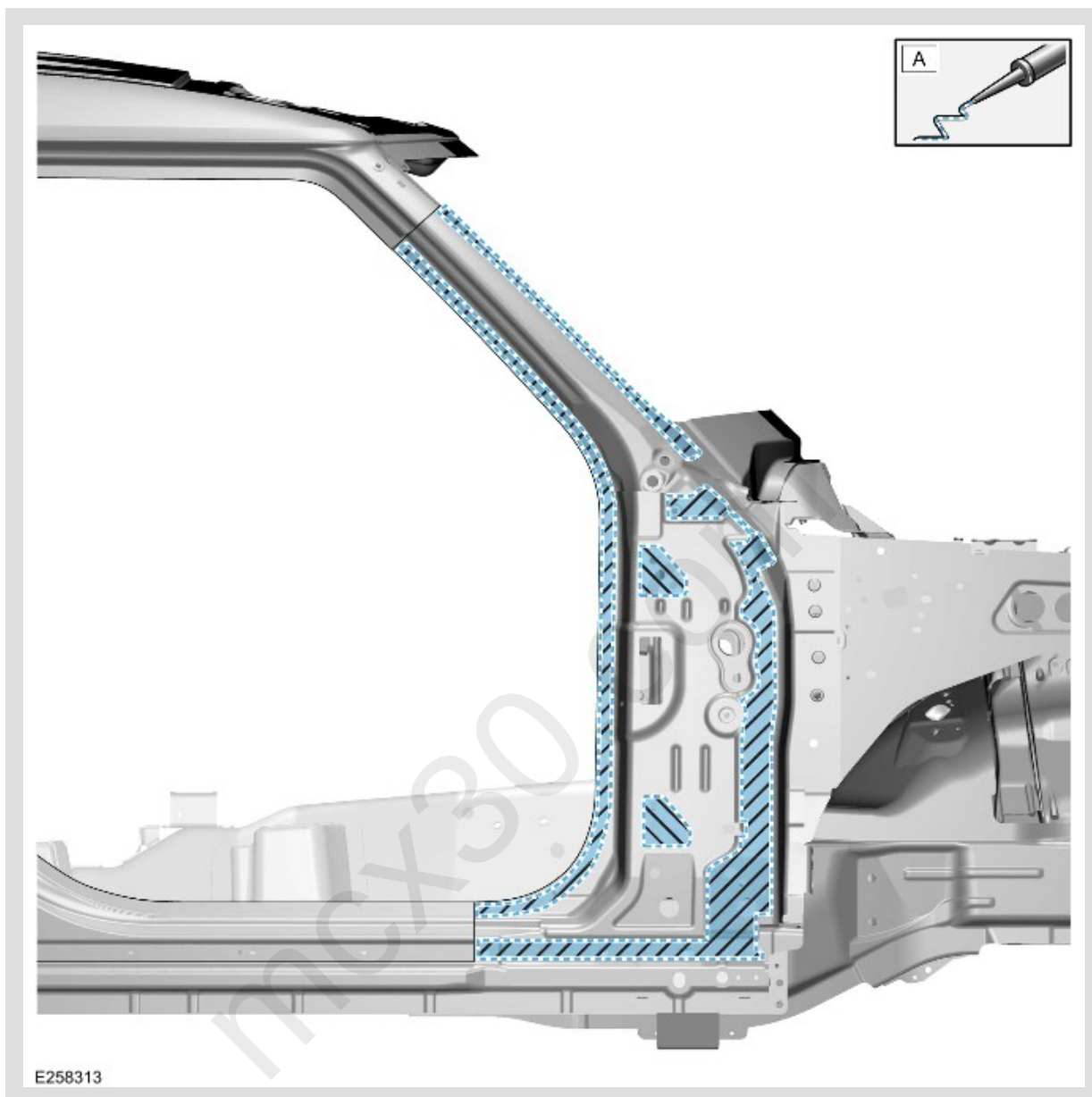
14. Clean and prepare the panel surfaces.



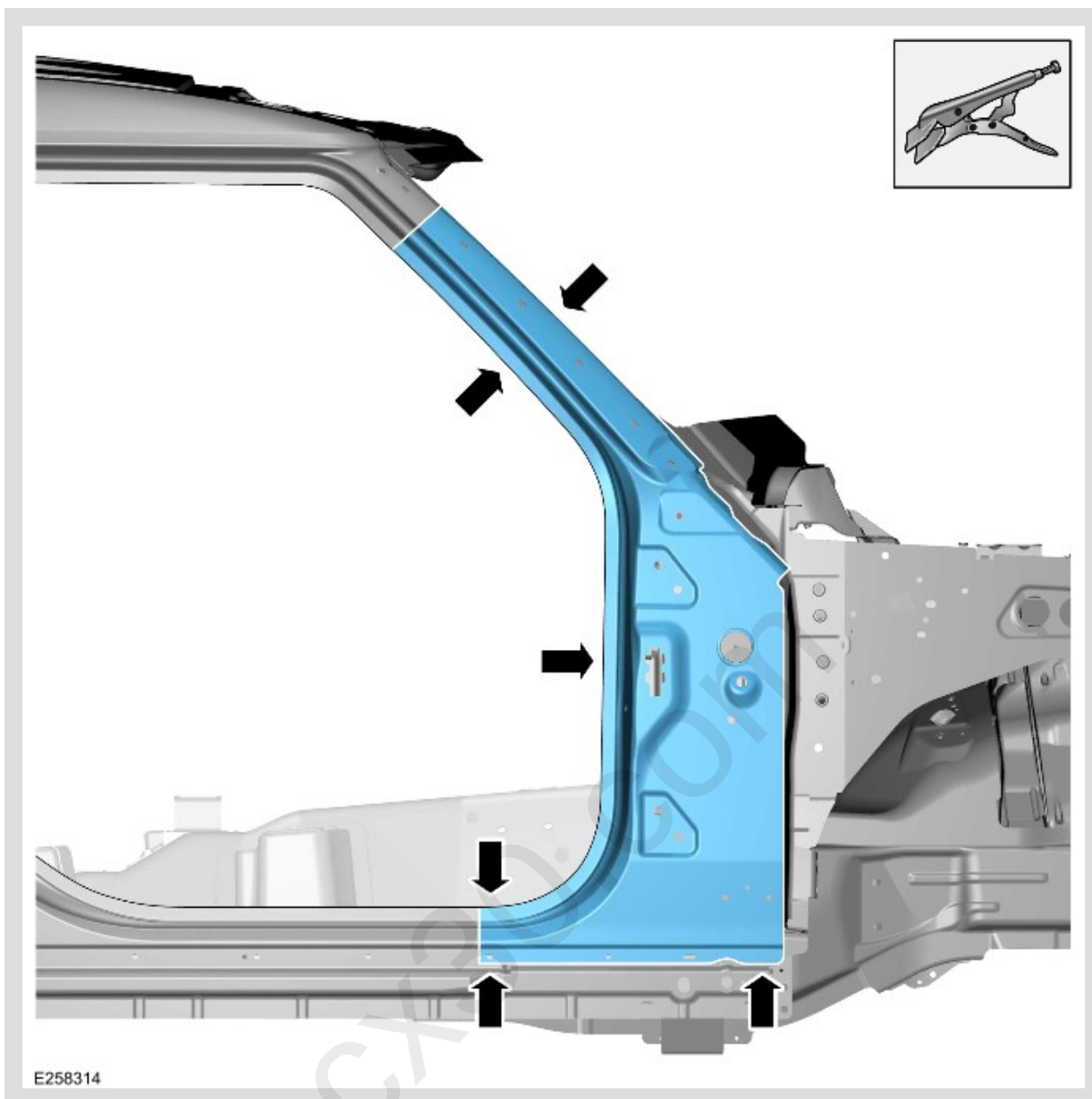
Install and MIG plug weld the backing plates as indicated.

 NOTE:

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

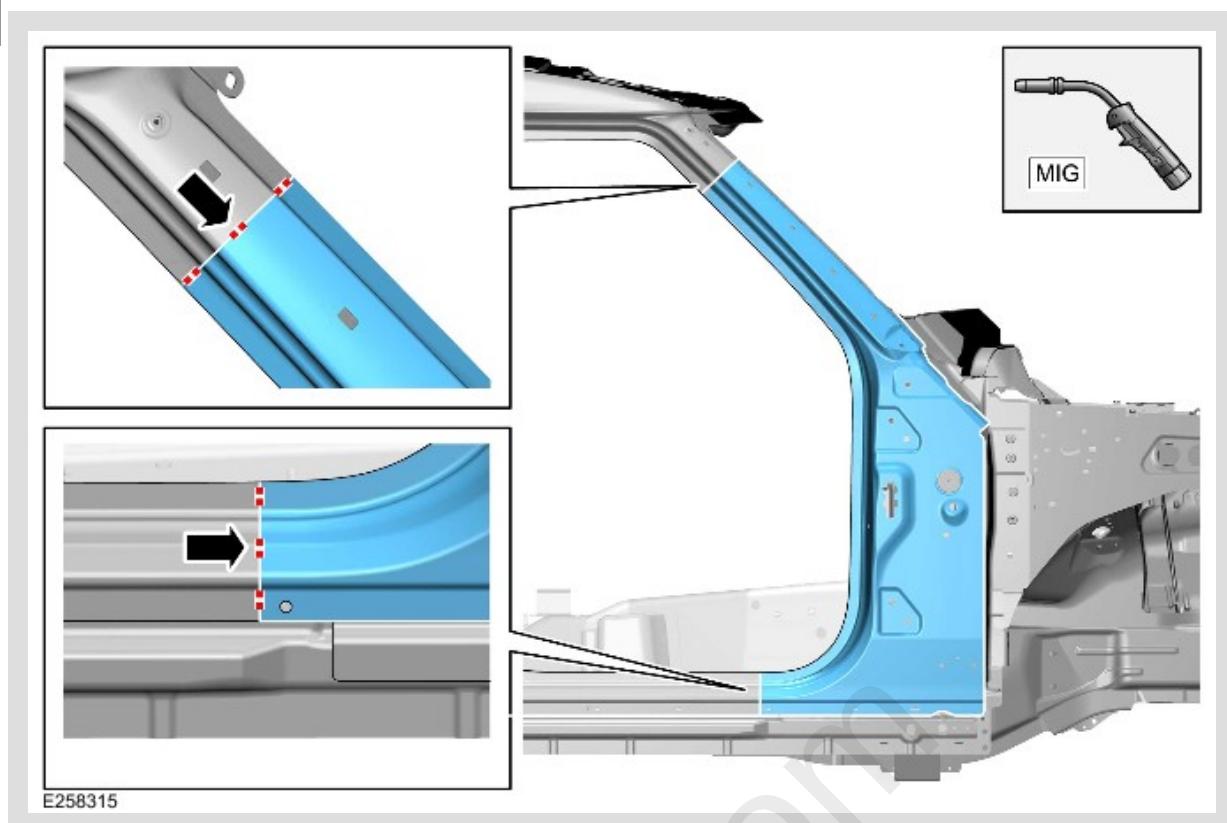


Apply a 5 mm zig zag bead of the JLR recommended bonding material as indicated.



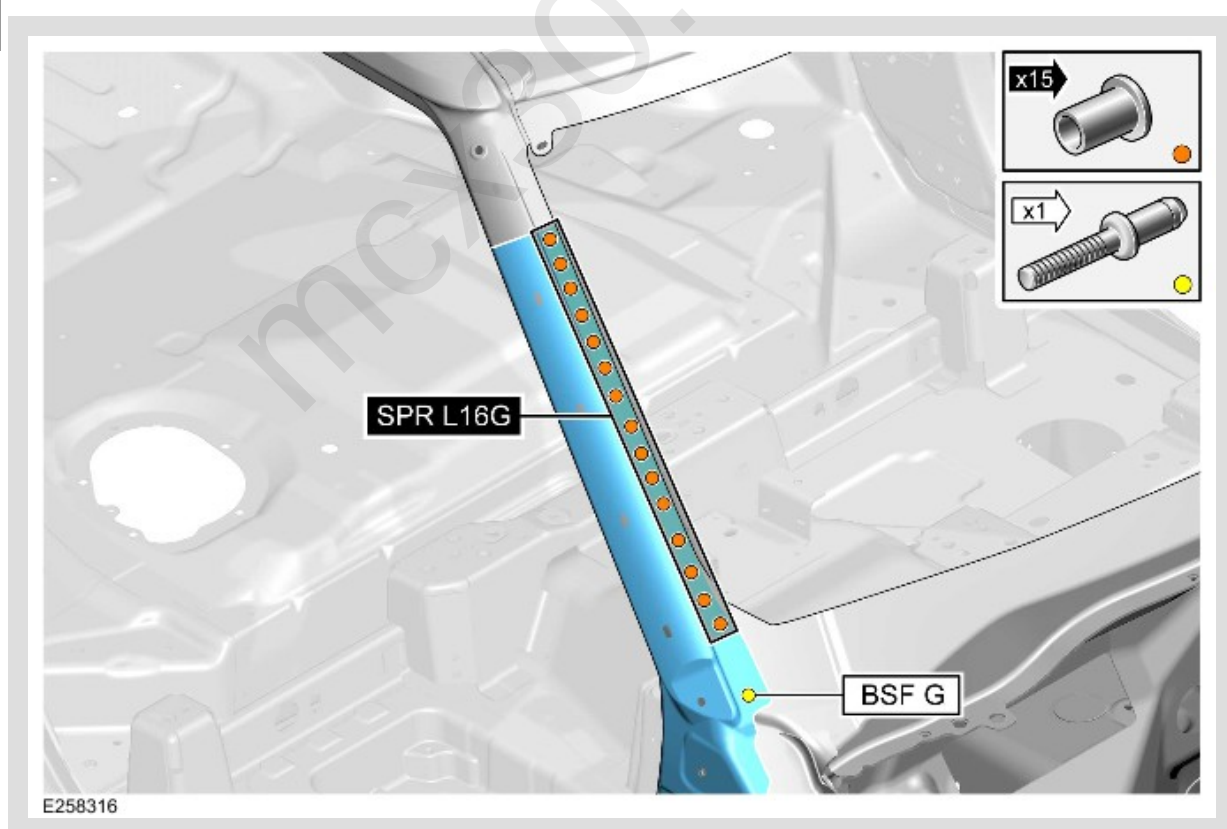
Offer up the new A-pillar outer panel and clamp into position as indicated. Check alignment, if correct proceed to next step, if not rectify and check the alignment again before proceeding.

18.



Tack MIG weld the butt joints as indicated.

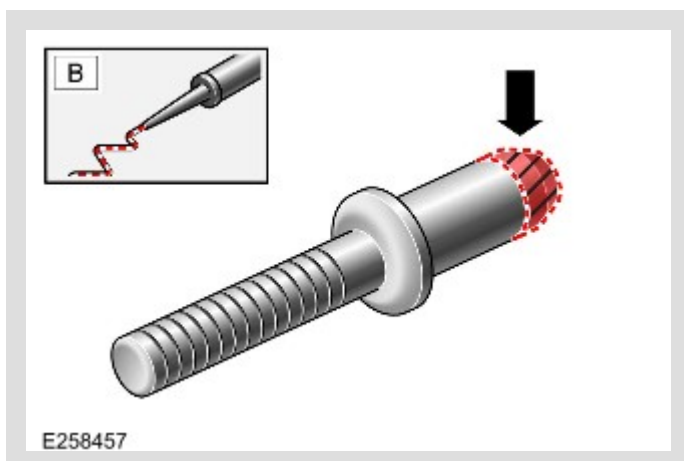
19.



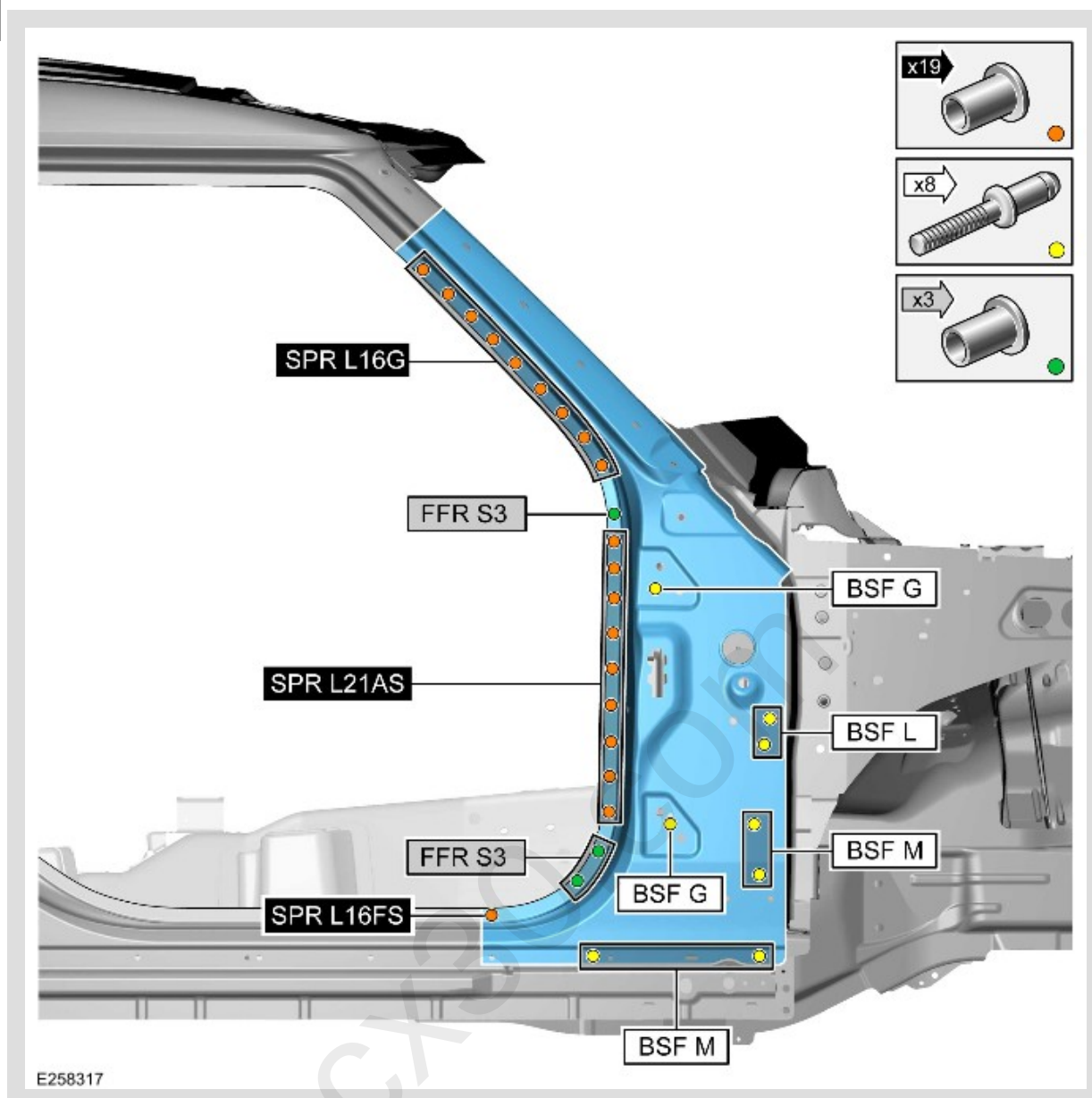
Install the Self Piercing Rivets (SPRs) and BSF as indicated.

NOTE:

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

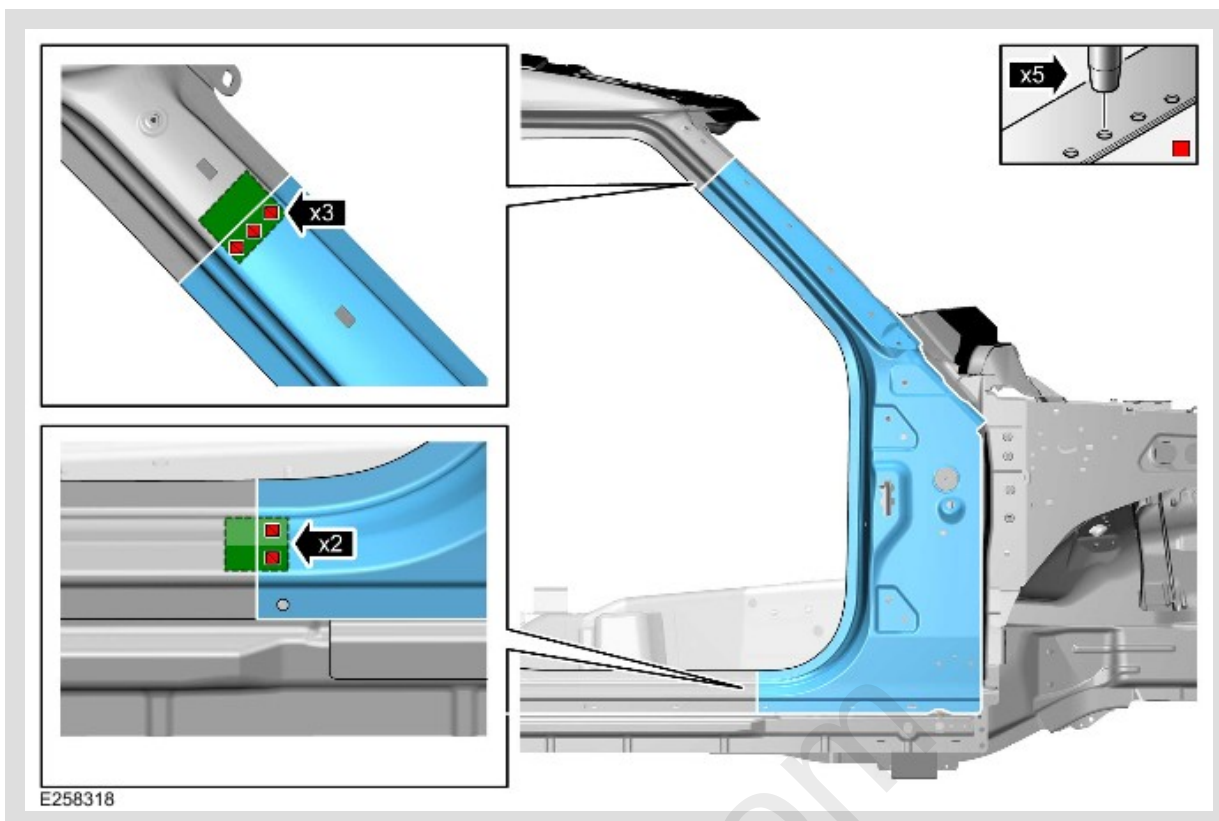


Apply a small amount of JLR recommended flexible sealant to the BSFs before installation as indicated.



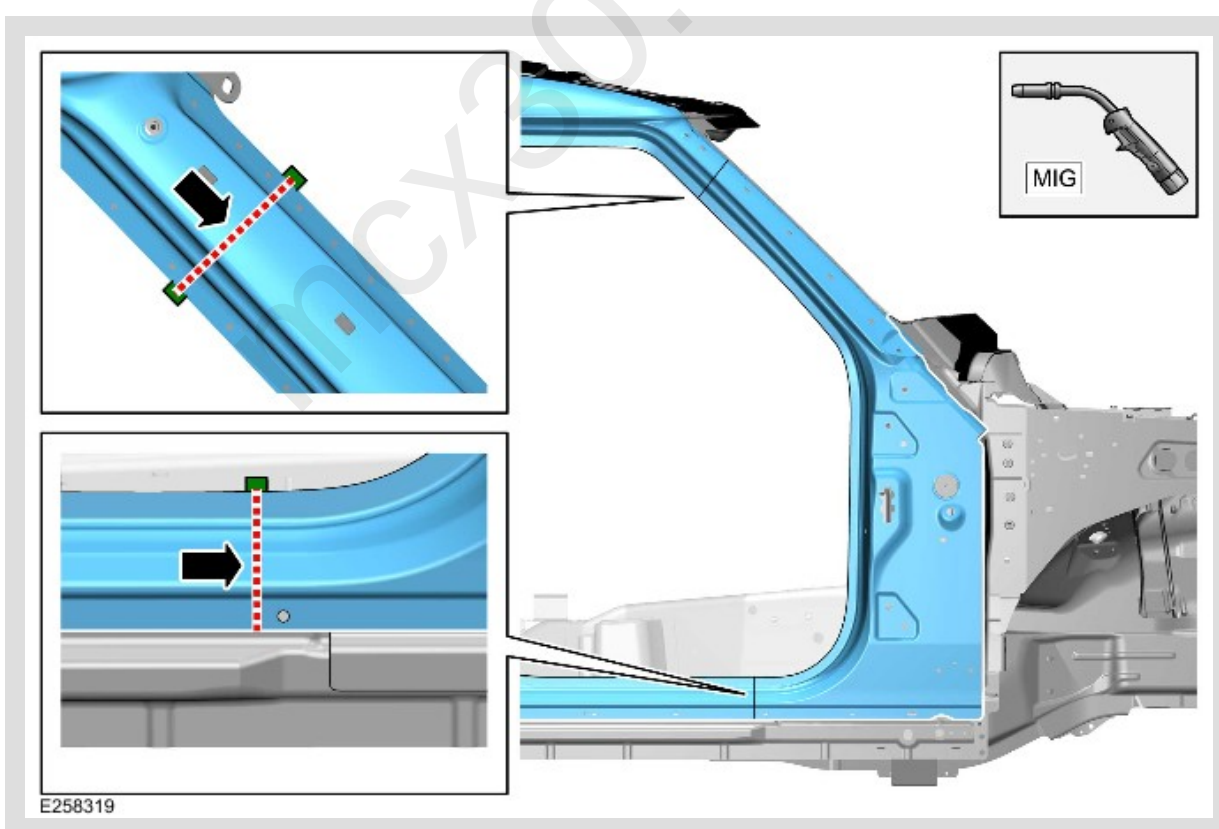
Install the BSFs, FFRs and SPRs as indicated.

22.



MIG plug weld the backing plates as indicated.

23.



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

24. Dress all welds.

25. Remove the run on/run off tabs.

26. Remove any excess adhesive.

27. 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.

28. Install the upper front door hinge and tighten bolts.

Torque: 35Nm

29. Install the lower front door hinge and tighten bolts.

Torque: 35Nm

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

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

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



NOTE:

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

33. For additional installation information

Refer to: [Front Fender Mounting Bracket Lower - 90](#) (501-27 Front End Sheet Metal Repairs, Removal and Installation).

34. For additional installation information

Refer to: [Fixed Side Steps and Side Tubes - Part number: 90: VPLEP0433, VPLEP0391, 110: VPLEP0434, VPLEP0392](#) (102-03 Exterior, Removal and Installation).

Refer to: [Deployable Side Steps - Part number: 110: VPLEP0393, VPLEP0394, VPLEP0422](#), (102-03 Exterior, Removal and Installation).

35. For additional installation information

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

36. For additional installation information

Refer to: [Fender Apron Panel - 90](#) (501-27 Front End Sheet Metal Repairs, Removal and Installation).

37. For additional installation information

Refer to: [Instrument Panel Upper Trim](#) (501-12 Instrument Panel and Console, Removal and Installation).

38. For additional installation information

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

39. For additional installation information

Refer to: [Front Row Seat - Vehicles With: Power Seats](#) (501-10 Seating, Removal and Installation).

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