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2020.0 DEFENDER (LE), 501-30

REAR END SHEET METAL REPAIRS

TAILGATE REINFORCEMENT SECTION - 90 (G2452707)

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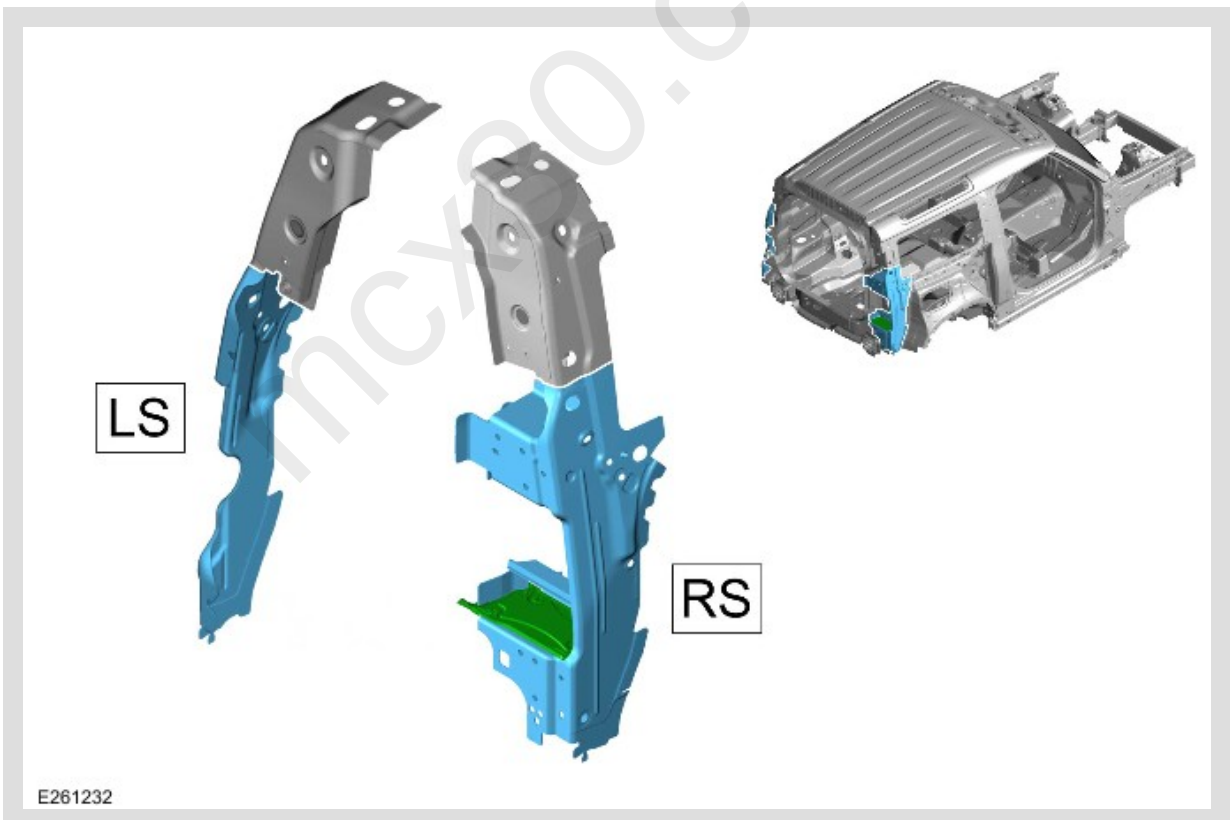
REMOVAL

 NOTE:

In this procedure, the tailgate reinforcement section is installed in conjunction with:

- Quarter panel
- Outer tail lamp outer panel
- Back panel outer
- Rear wheelhouse lower rear extension.

1.



The tailgate reinforcement 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.
- Any joints sealed as part of vehicle manufacture must be sealed as part of the repair.

When installing the tailgate reinforcement section 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, 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: [Quarter Panel - 90](#) (501-30 Rear End Sheet Metal Repairs, Removal and Installation).

6.

For additional removal information

Refer to: [Outer Tail Lamp Outer Panel Left Side - 90](#) (501-30 Rear End Sheet Metal Repairs, Removal and Installation).

Refer to: [Outer Tail Lamp Outer Panel Right Side - 90](#) (501-30 Rear End Sheet Metal Repairs, Removal and Installation).

7.

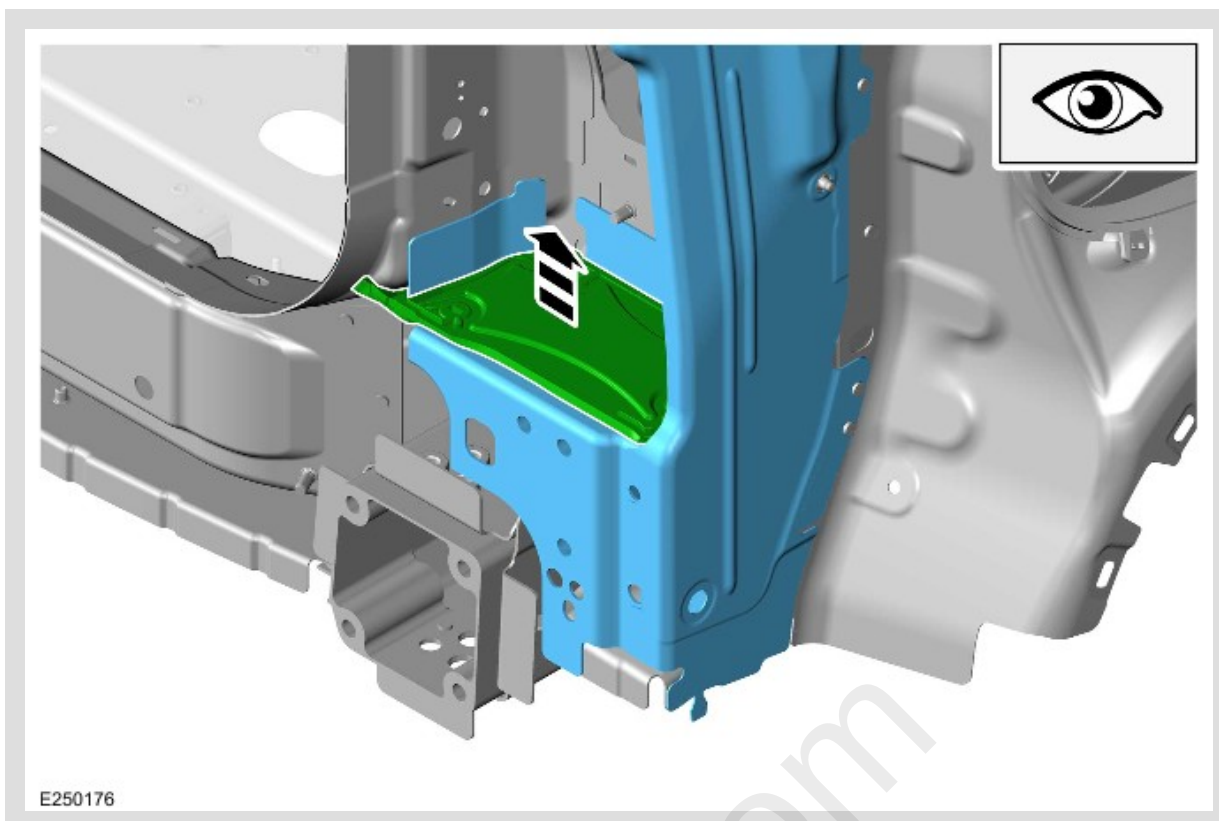
For additional removal information

Refer to: [Back Panel Outer - 90](#) (501-30 Rear End Sheet Metal Repairs, Removal and Installation).

8.

For additional removal information

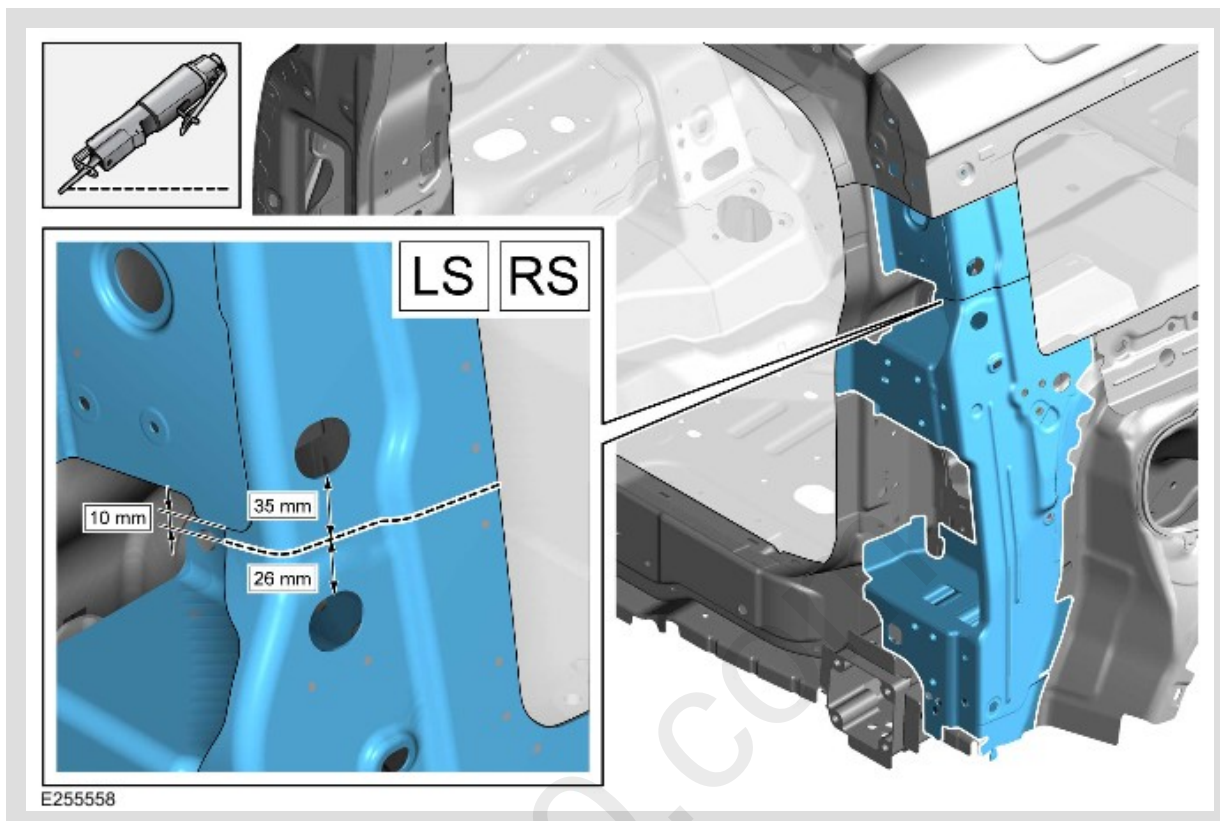
Refer to: [Rear Wheelhouse Lower Rear Extension - 90](#) (501-30 Rear End Sheet Metal Repairs, Removal and Installation).



Remove the Noise, Vibration and Harshness (NVH) material as indicated.

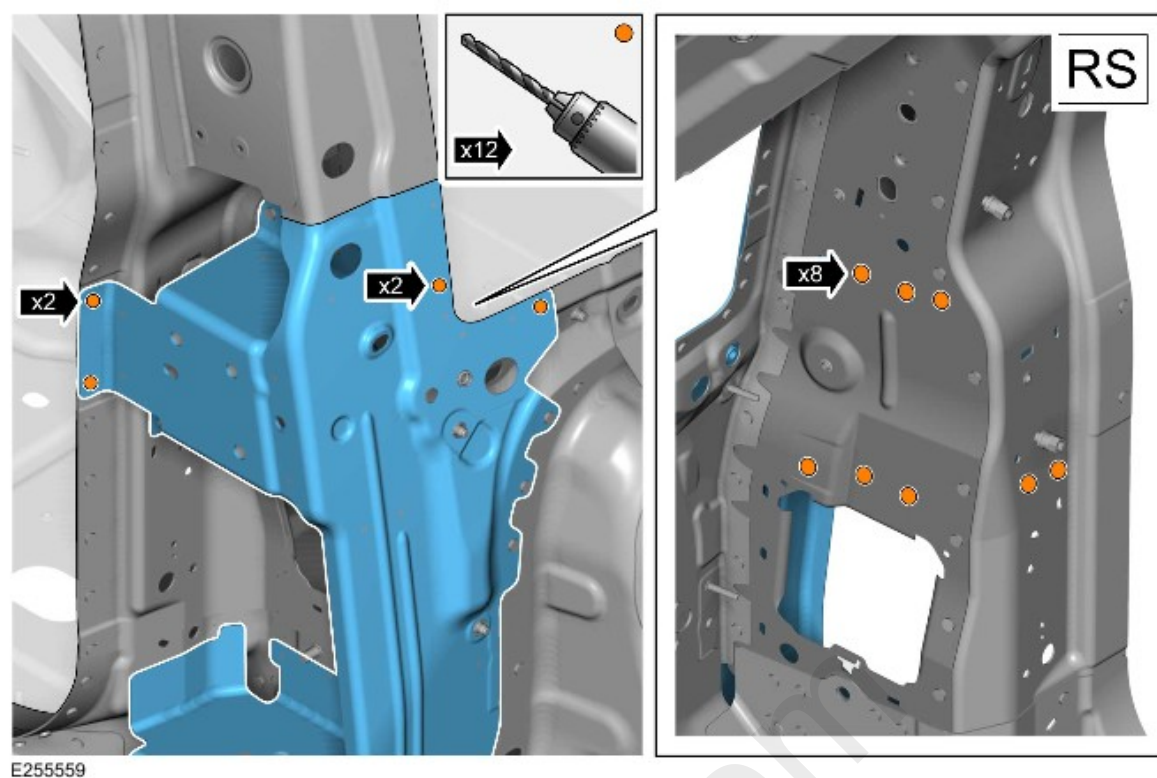
⚠ CAUTION:

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



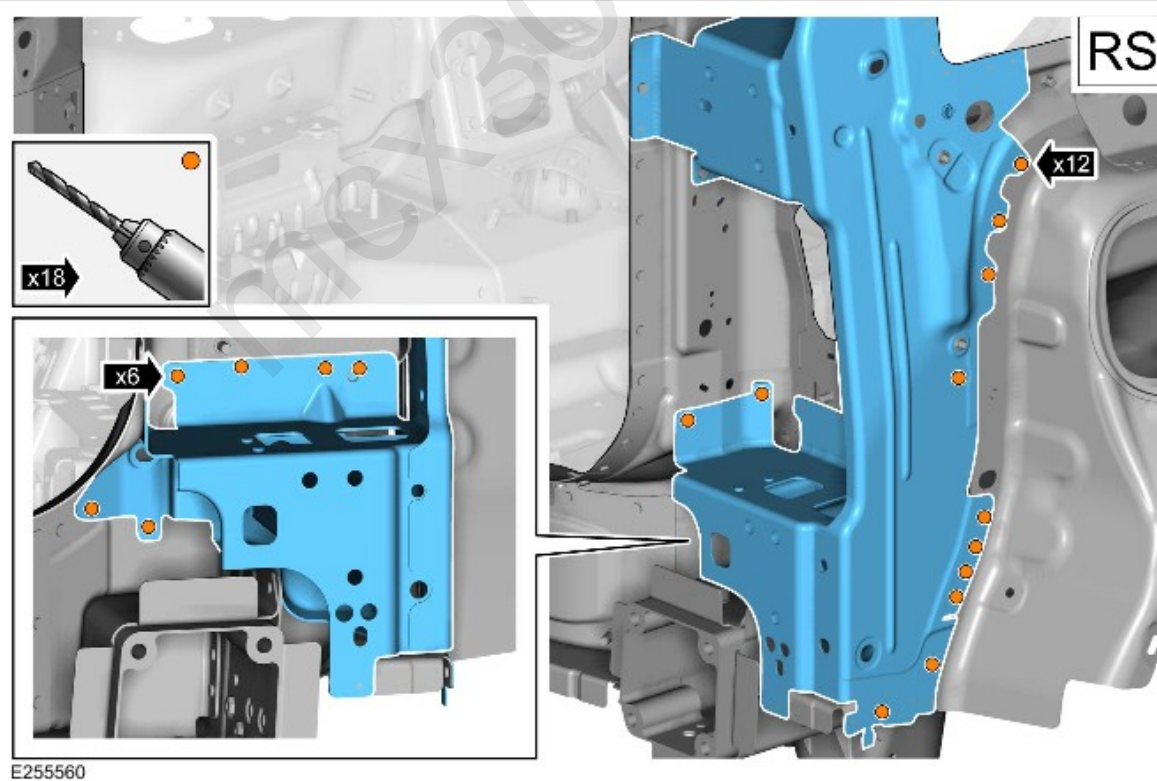
Measure, mark and cut the tailgate reinforcement, where the Metal Inert Gas (MIG) welded butt joint is to be made as indicated.

11.



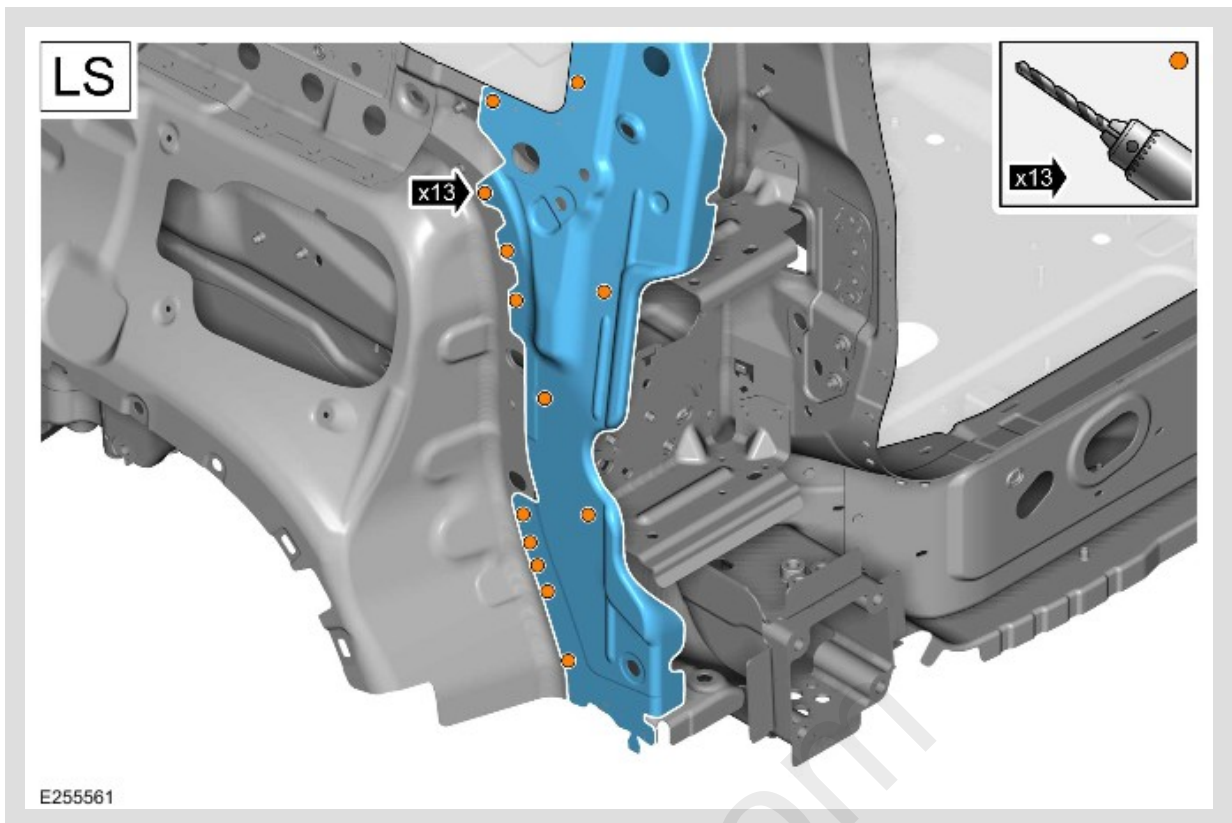
Remove the Self Piercing Rivets (SPRs) as indicated.

12.



Remove the SPRs as indicated.

13.



Remove the SPRs as indicated.

14. Carefully separate the joints and remove the tailgate reinforcement section.

INSTALLATION

⚠ CAUTION:

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

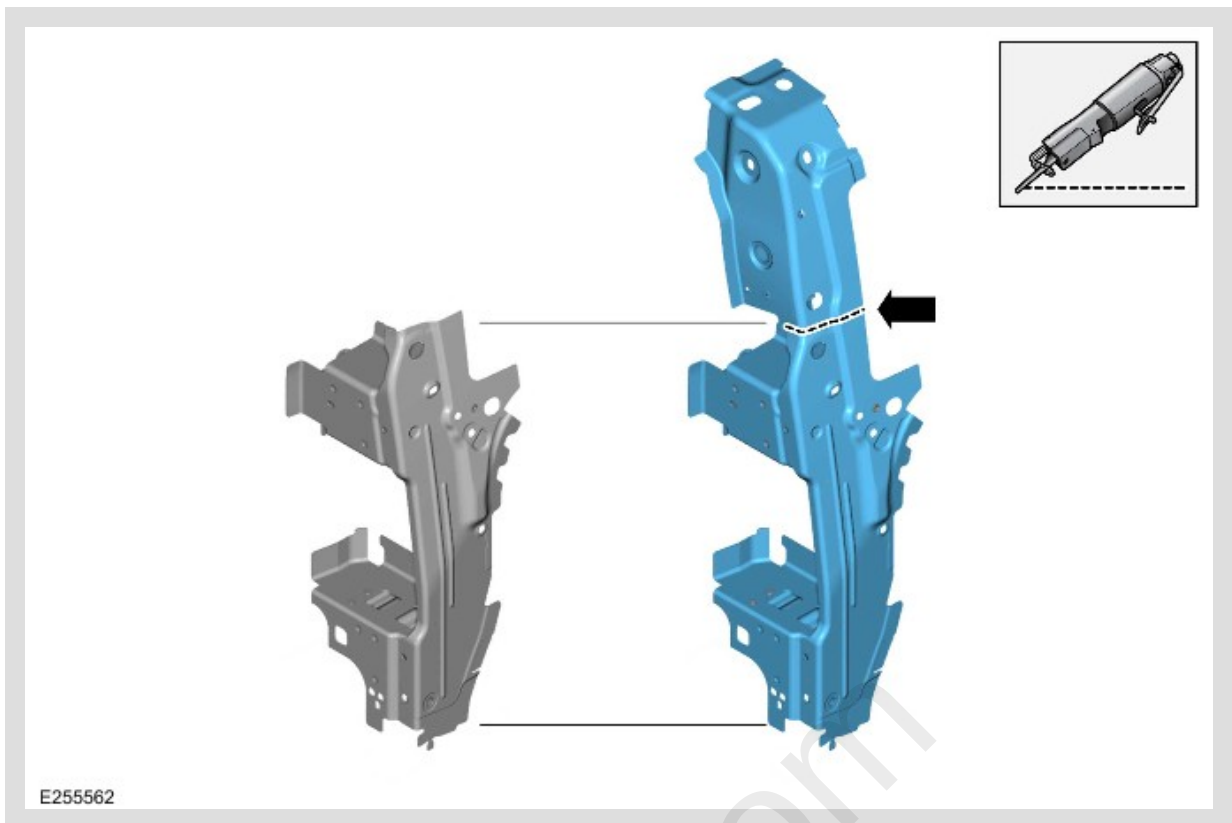
△ NOTES:

- 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.

1. Remove the rivet remnants.

2. Dress the flanges where necessary.

3.

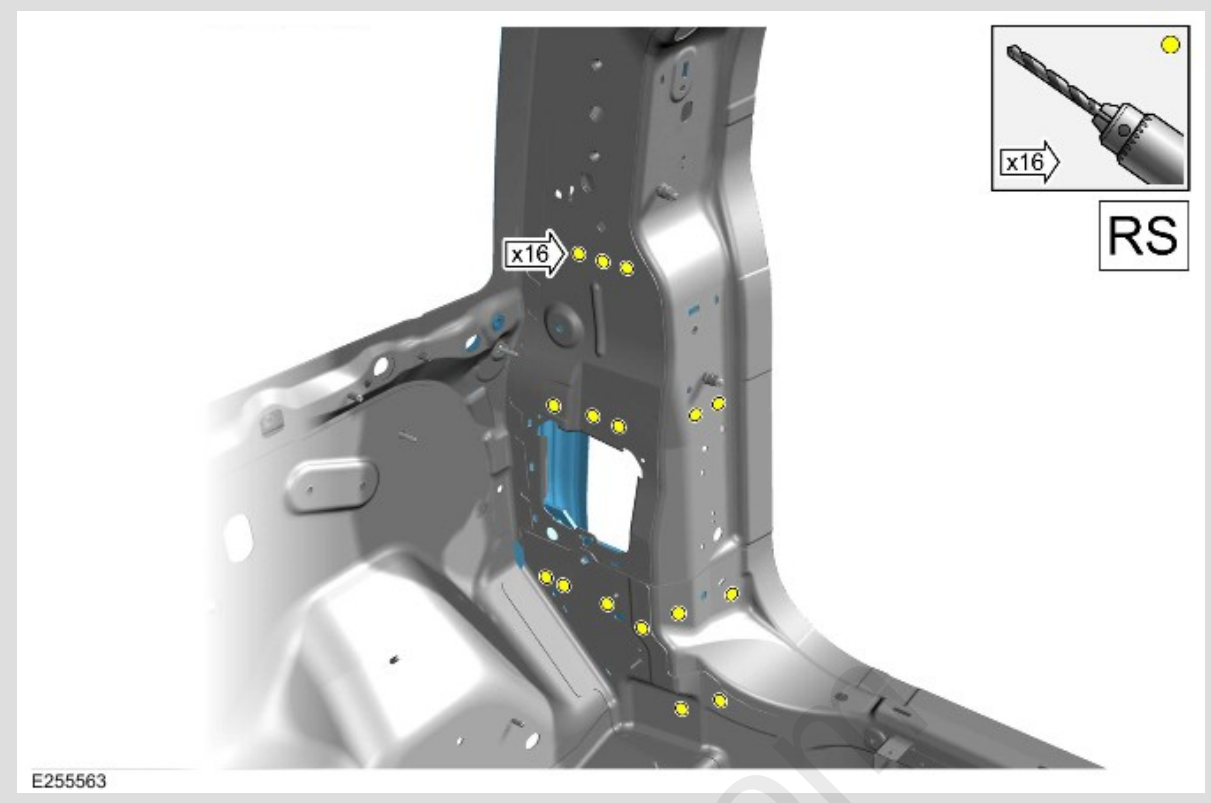


Use the old tailgate reinforcement section as a guide. Measure, mark and cut the new tailgate reinforcement, where the MIG butt joint is to be made as indicated.

4.

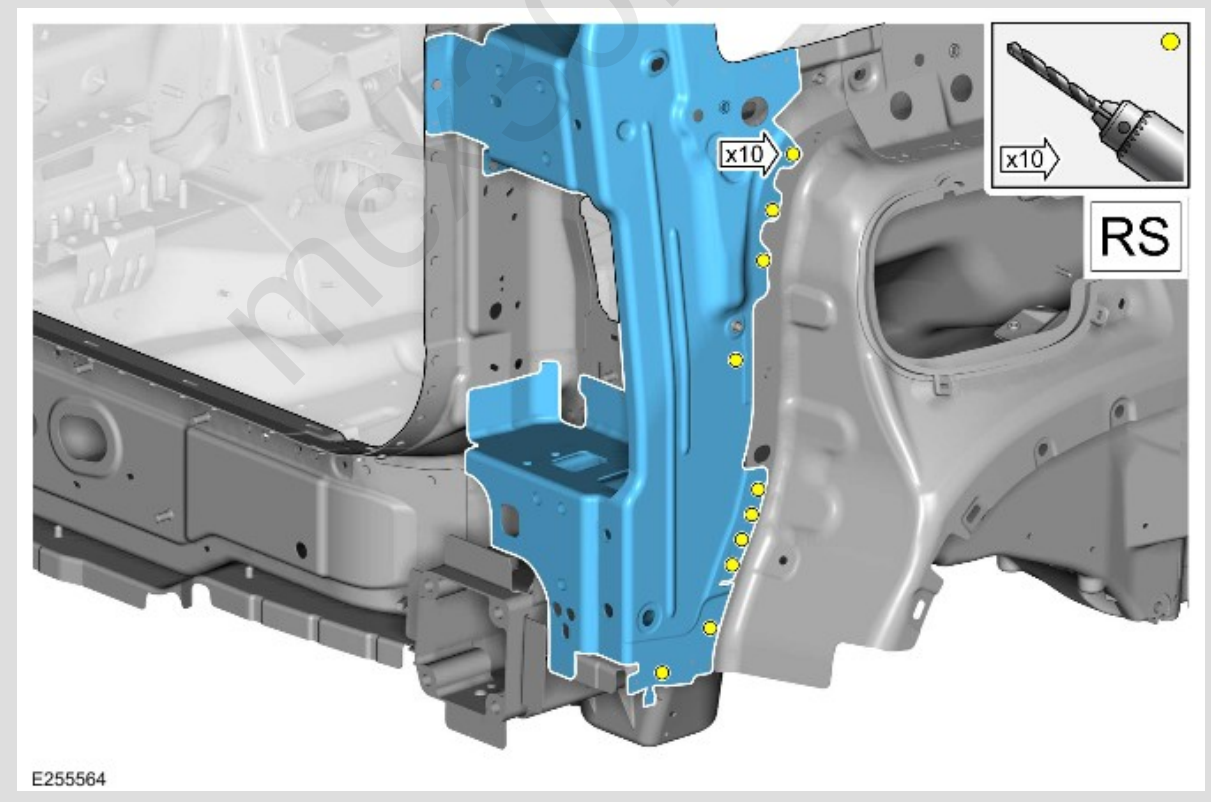
Offer up the new tailgate reinforcement section. Clamp into position. Check alignment, if correct proceed to next step, if not rectify and check the alignment again before proceeding.

5.



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

6.

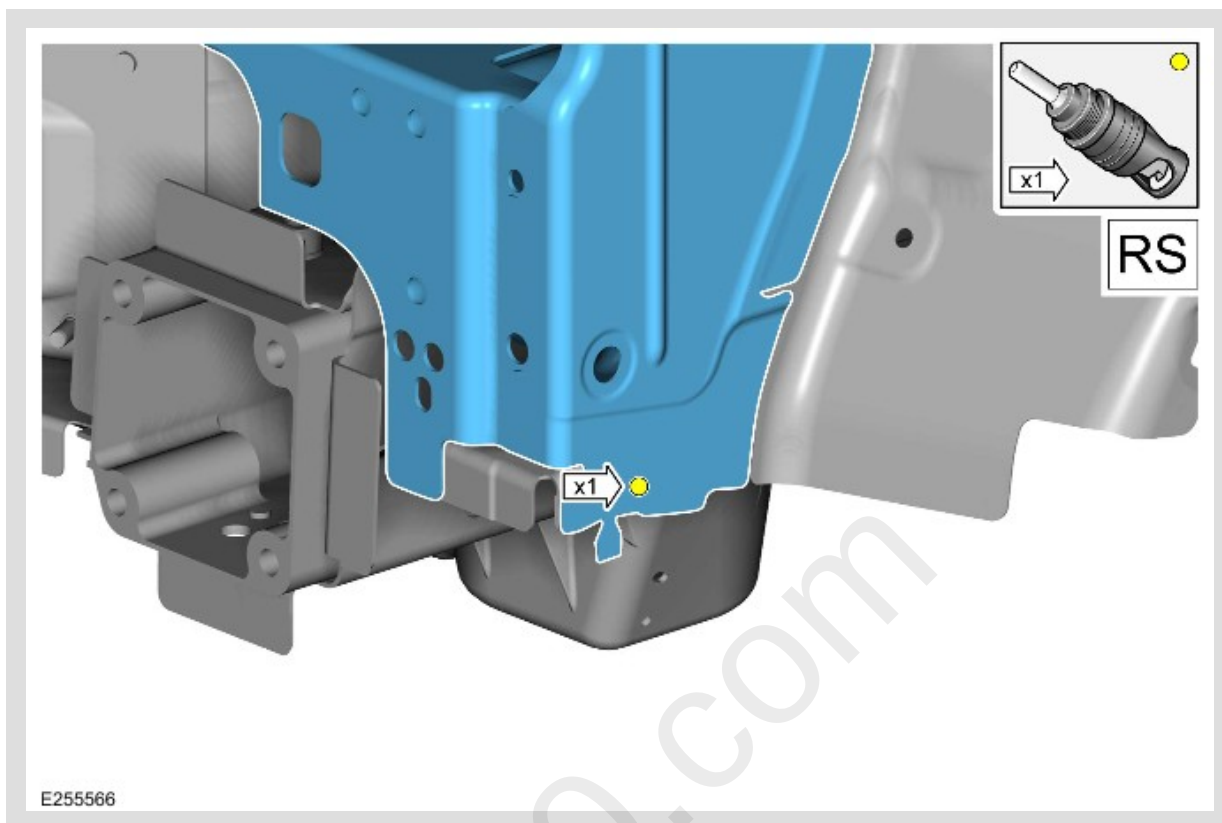


Drill holes where the BSFs are to be installed as indicated.

7.

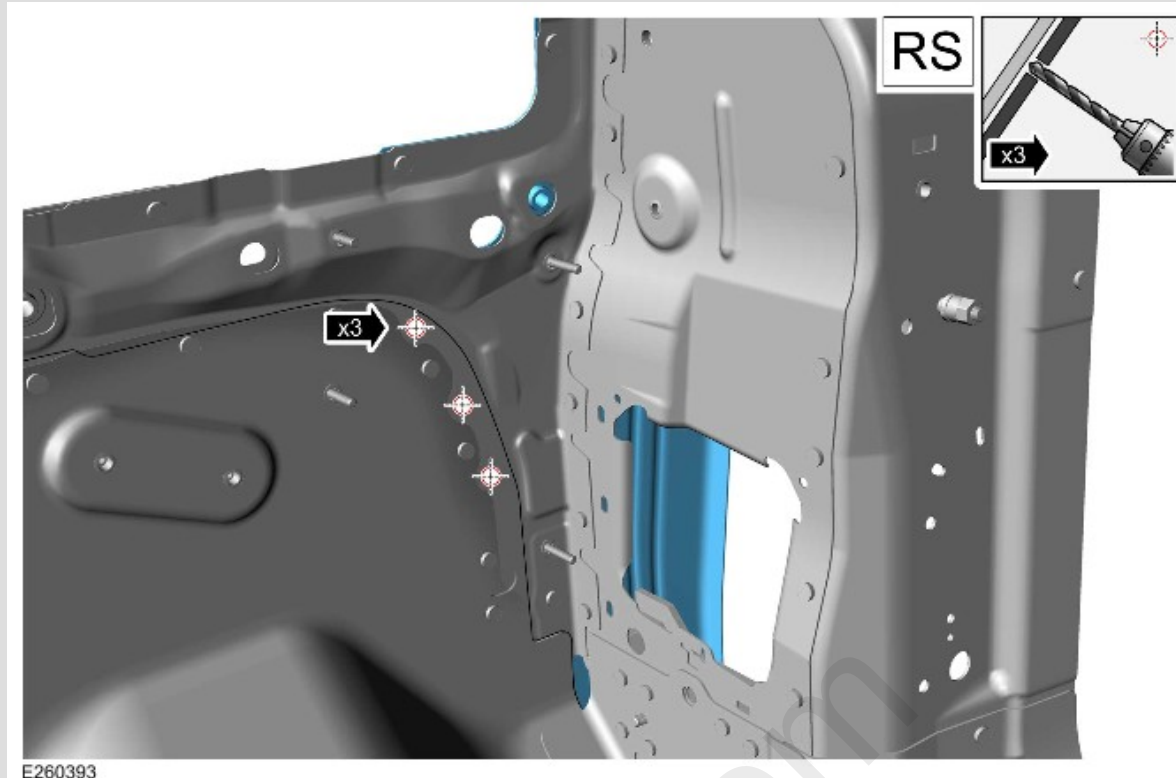
 NOTE:

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



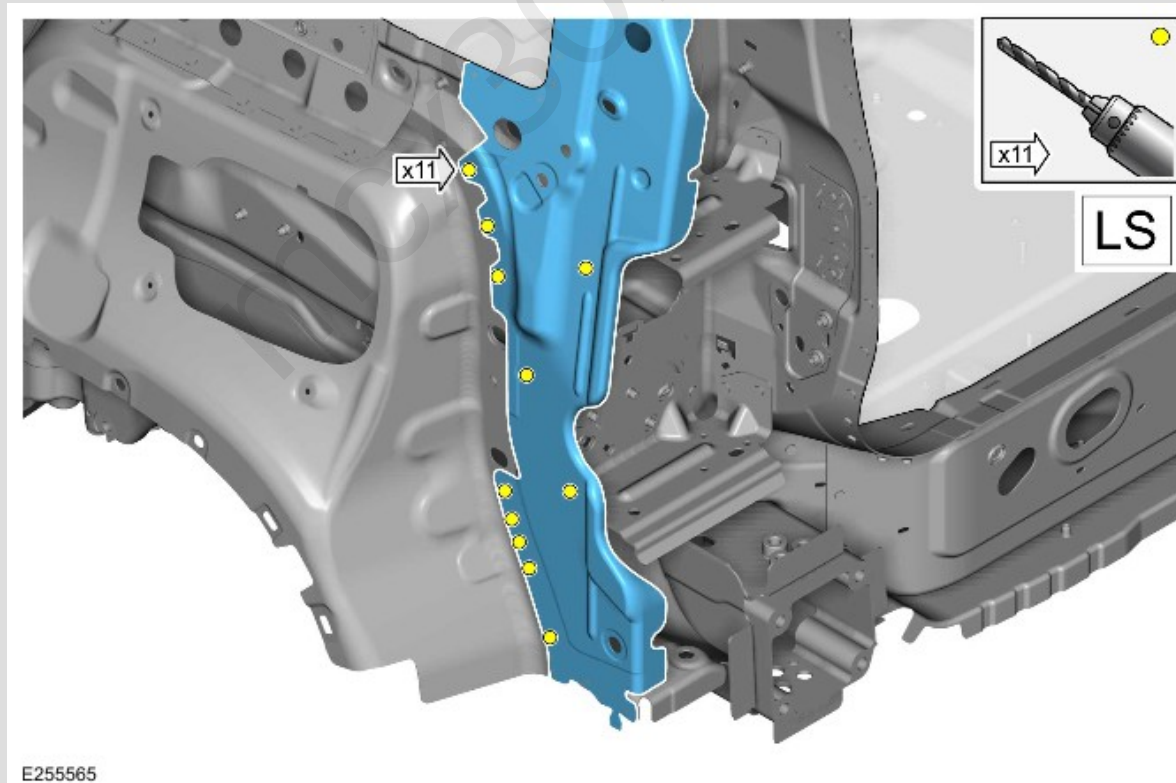
Countersink the hole to a depth of 2 mm as indicated.

8.



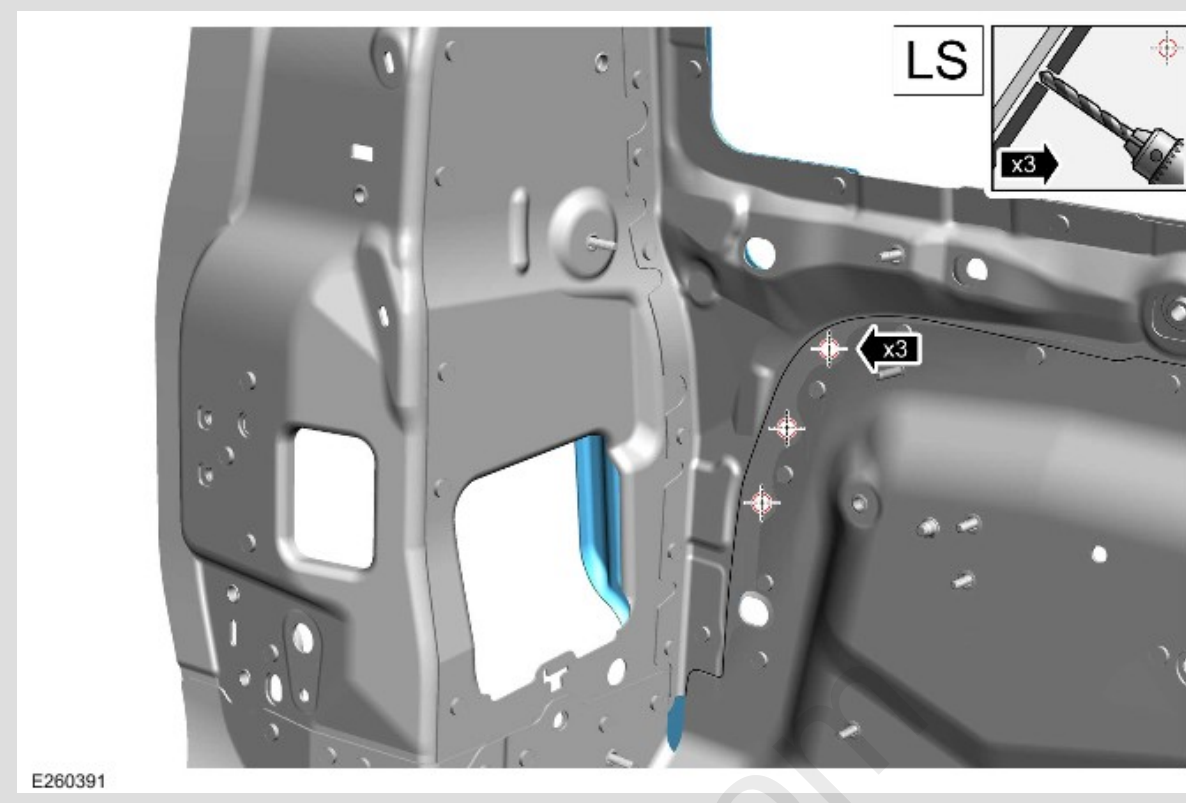
Drill 12 mm clearance holes for BSF access as indicated.

9.



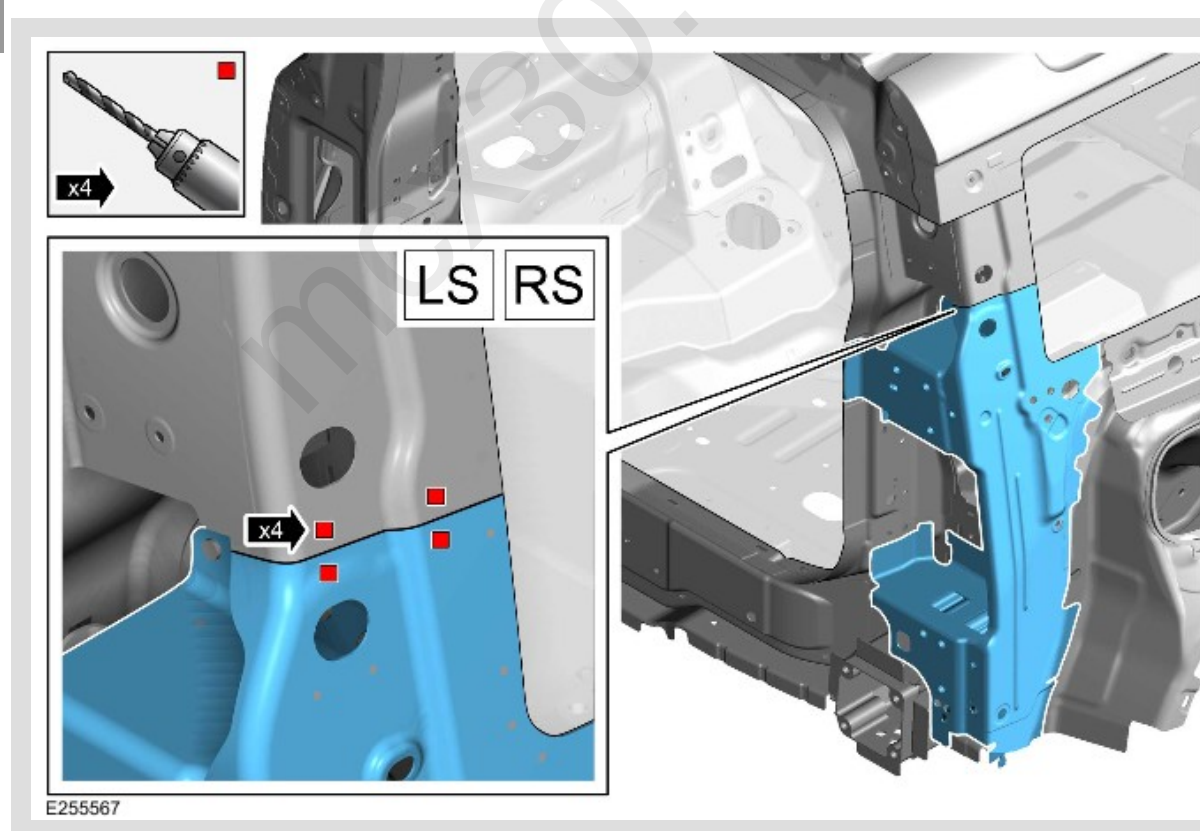
Drill holes where the BSFs are to be installed as indicated.

10.



Drill 12 mm clearance holes for BSF access as indicated.

11.



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

12.

Remove the new tailgate reinforcement section.

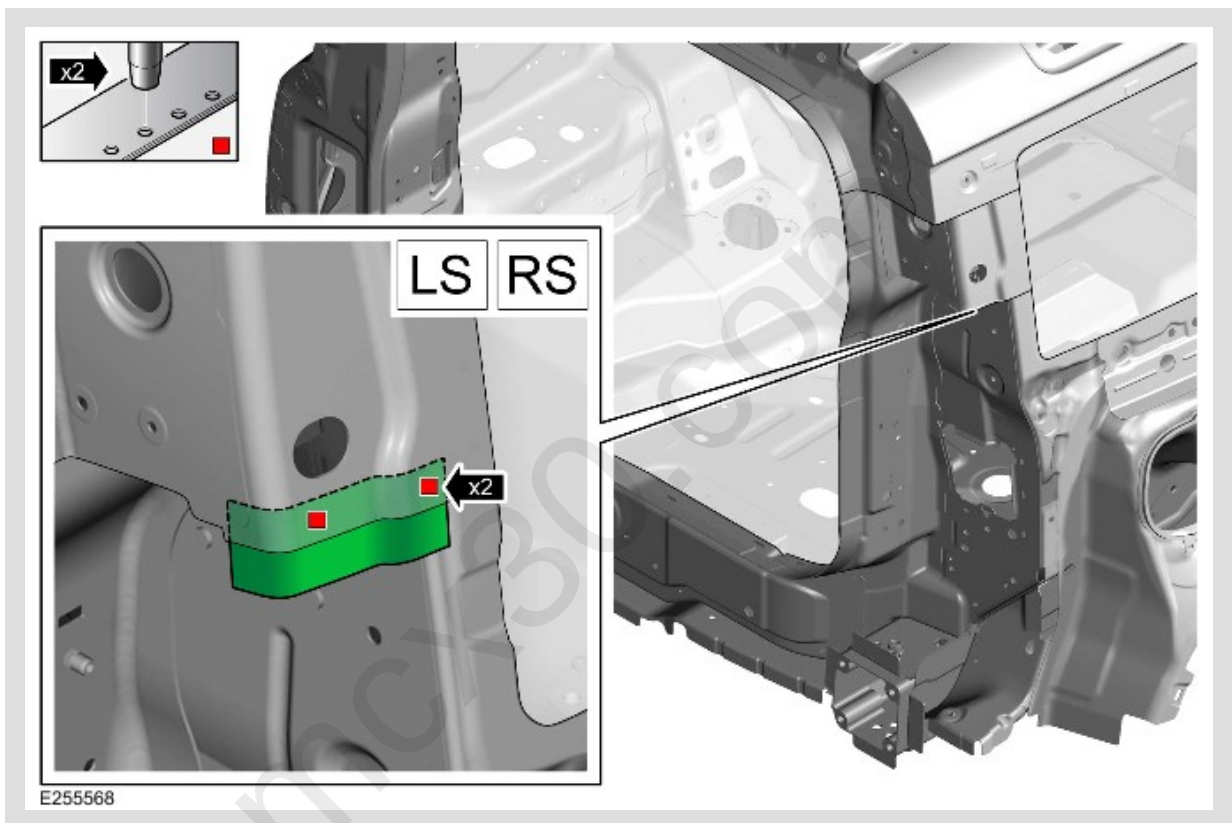
13. Deburr the drilled holes.

14. Measure and cut a backing plate 50 mm wide, 25 mm each side of the MIG butt joint from the tailgate reinforcement section remnant.

15. Cut 2 run on/run off tabs from the tailgate reinforcement section remnant.

16. Clean and prepare the panel surfaces.

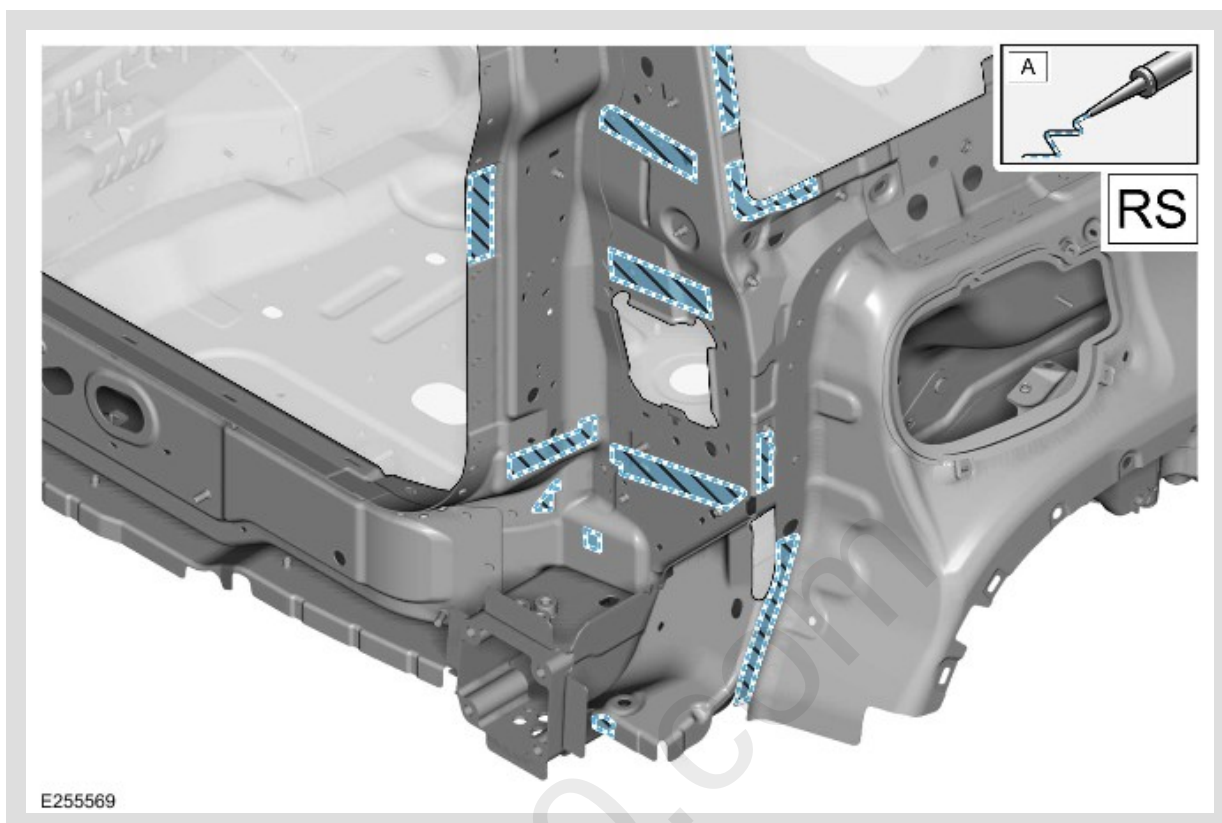
17.



Install and MIG plug weld the backing plate as indicated.

 NOTE:

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

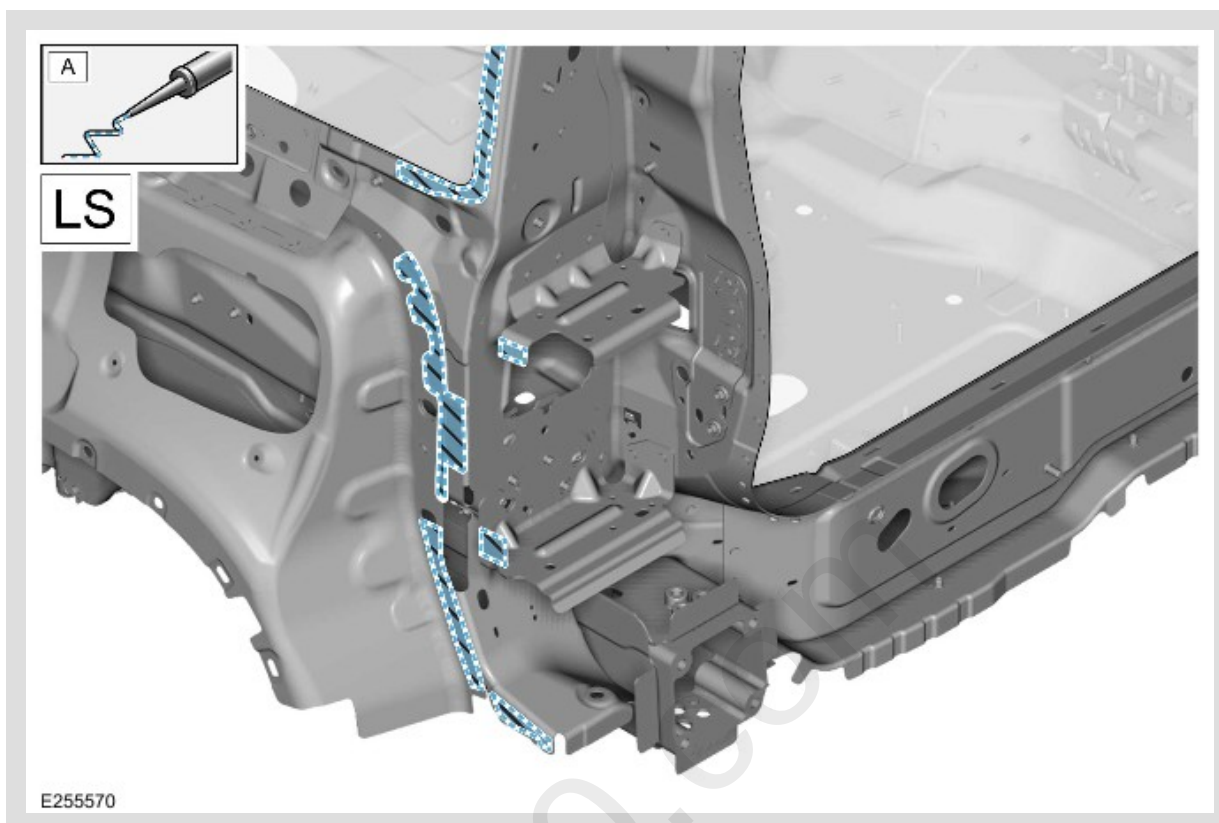


Apply a 5 mm zig zag bead of the JLR recommended bonding material as indicated.

19.

 NOTE:

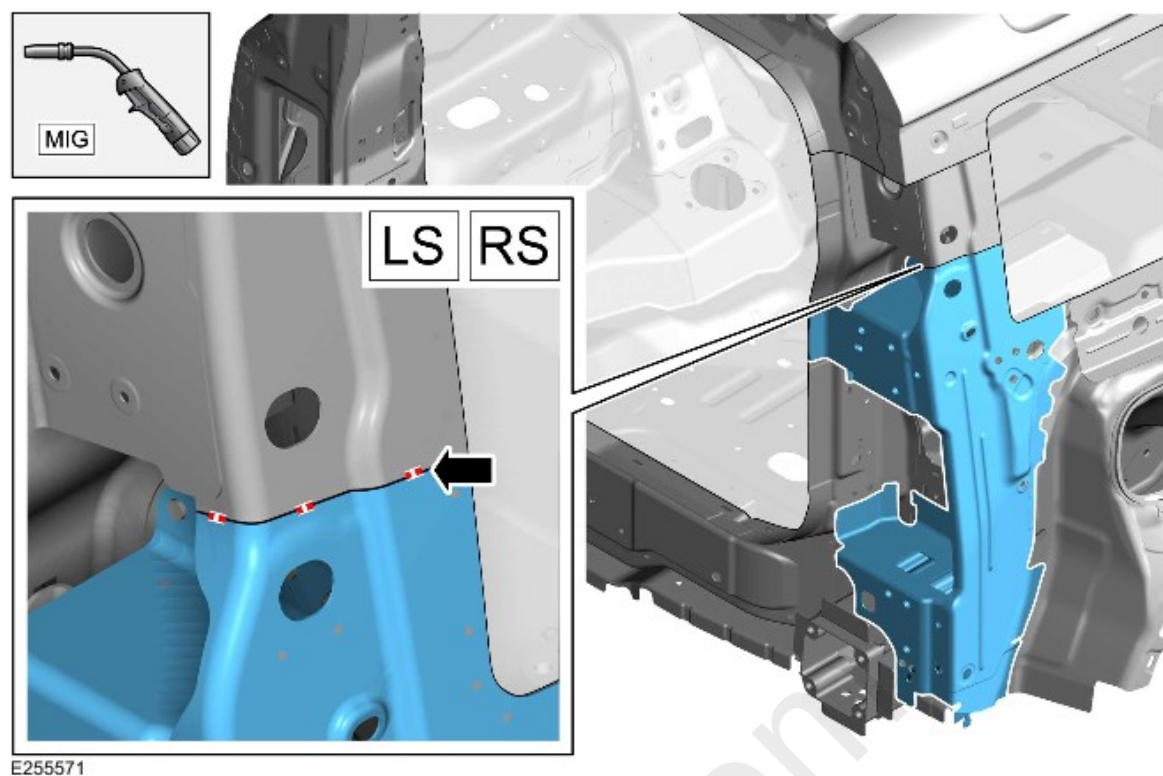
Make sure a continuous bead of adhesive surrounds the fixing holes.



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

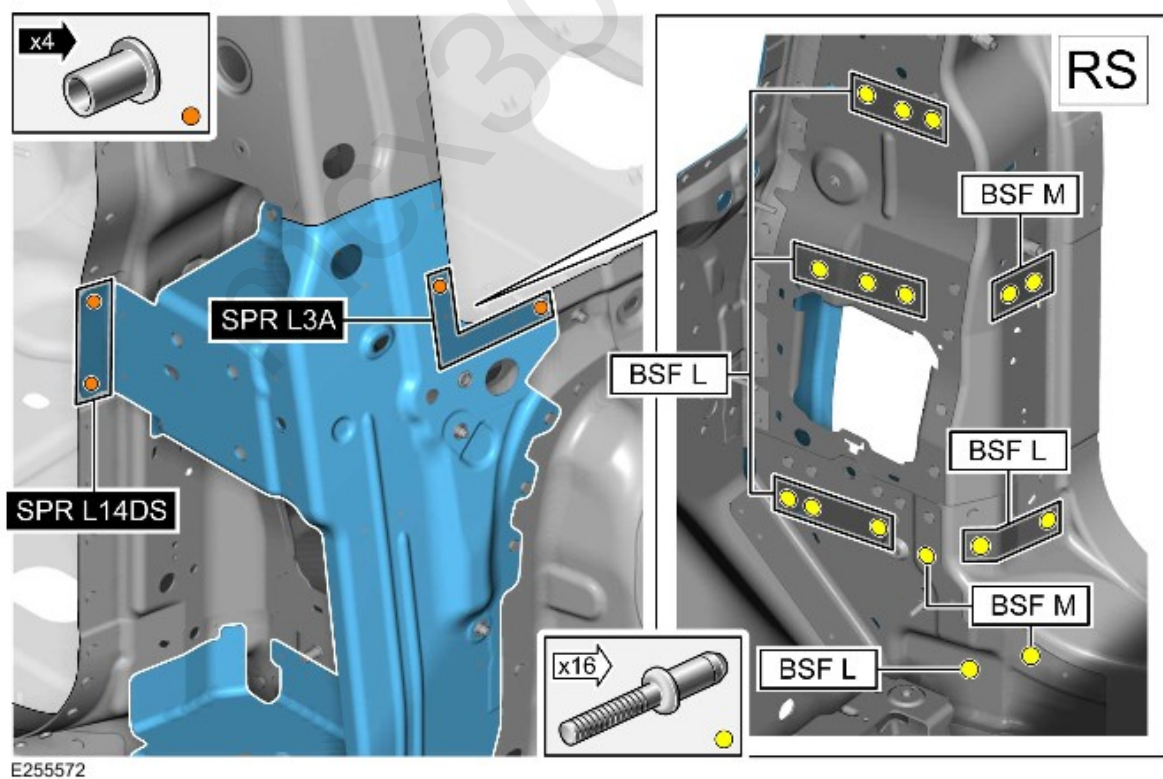
20. Offer up the new tailgate reinforcement section. Clamp into position. Check alignment, if correct proceed to next step, if not rectify and check the alignment again before proceeding.

21.



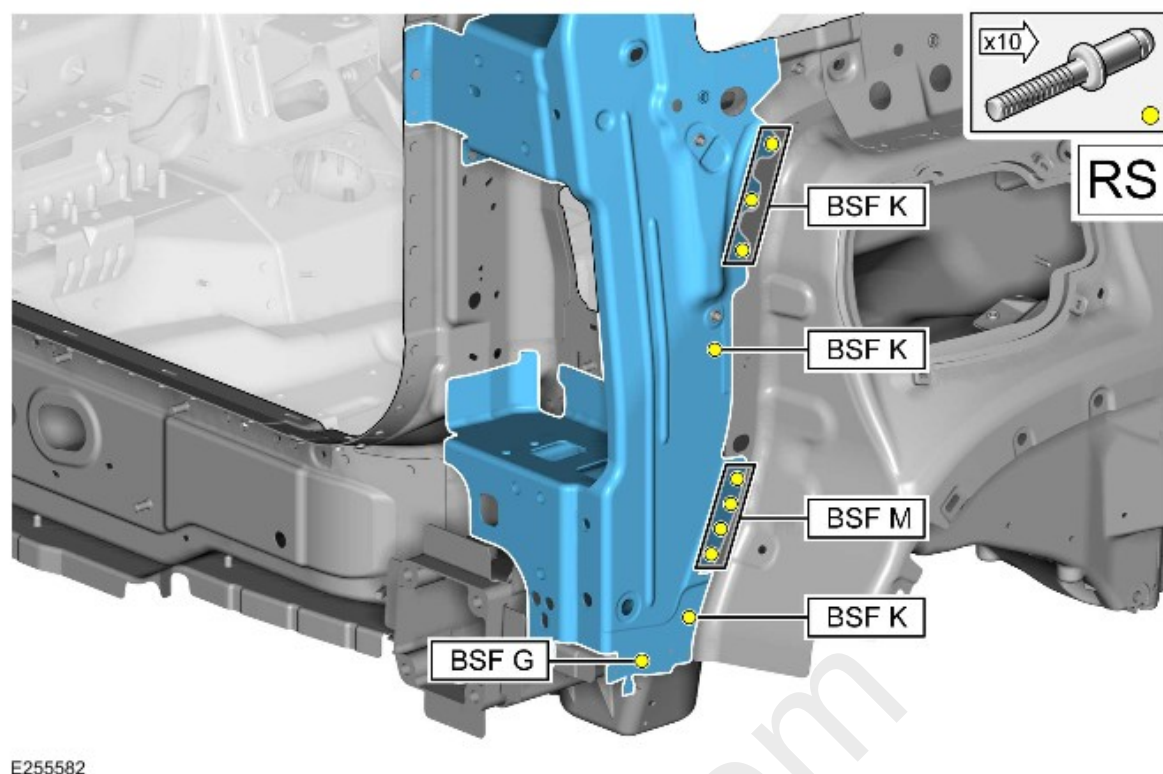
Tack MIG weld the butt joint as indicated.

22.



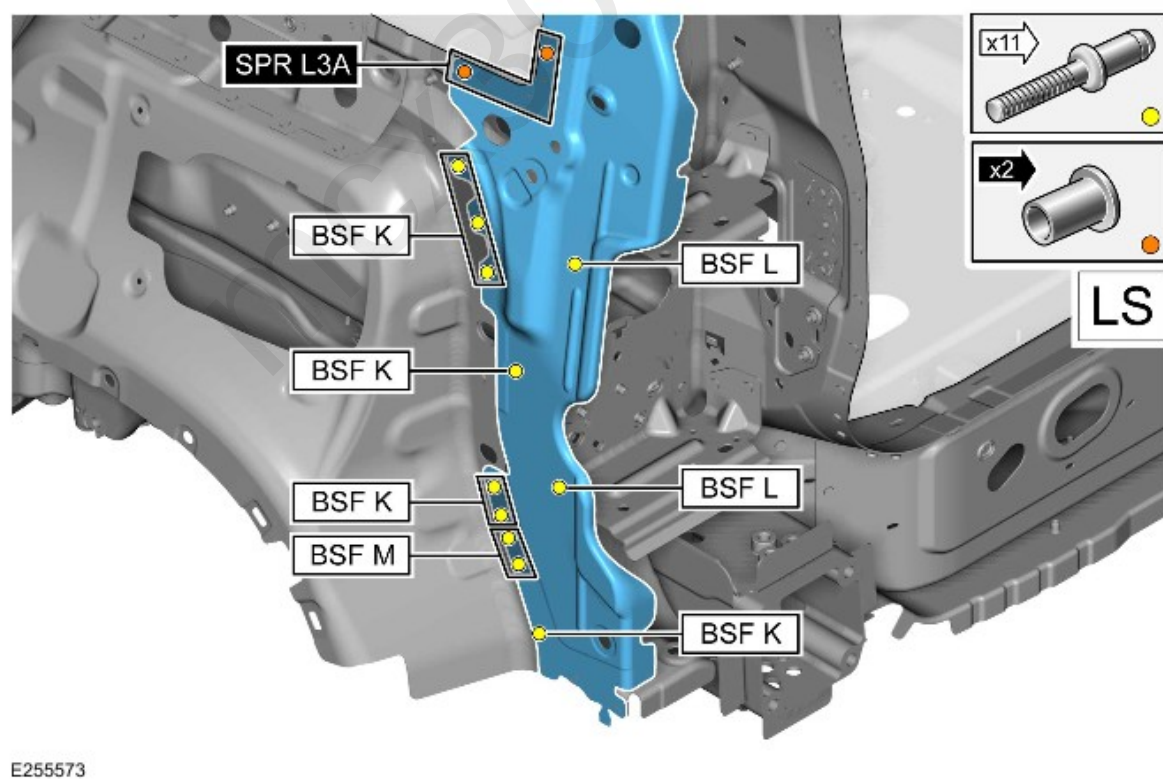
Install the Self Piercing Rivets (SPRs) and BSFs as indicated.

23.



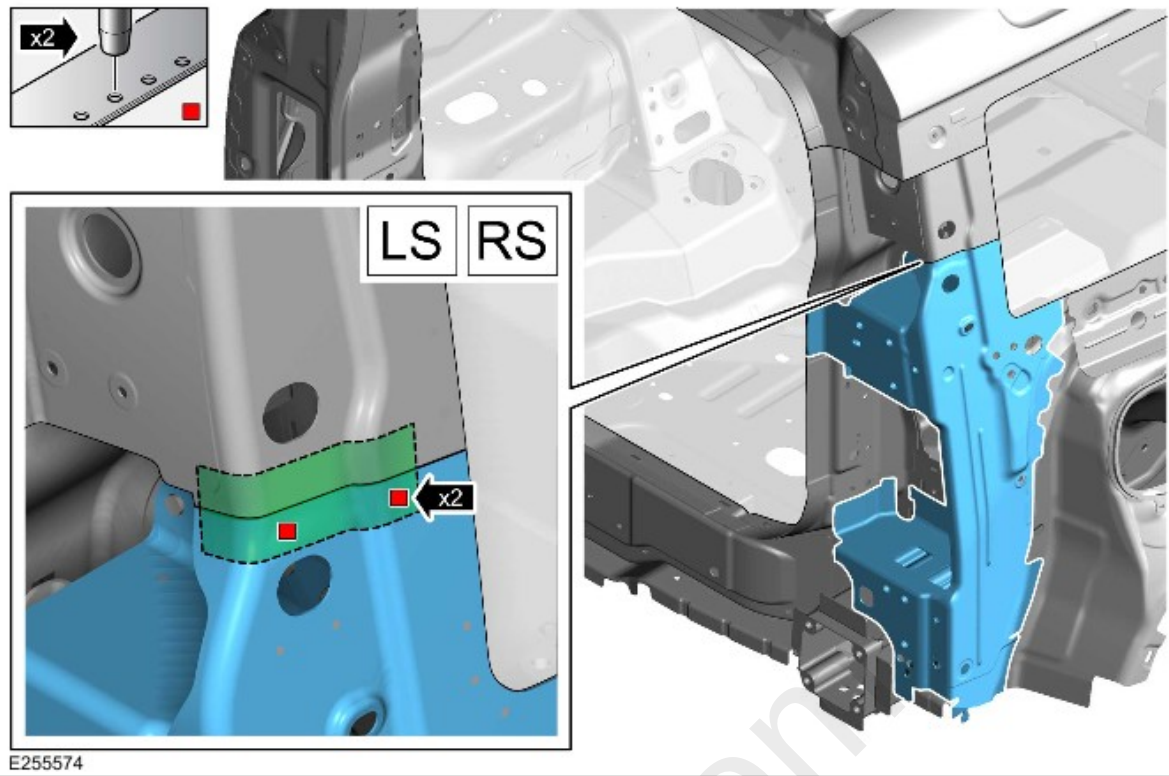
Install the BSFs as indicated.

24.



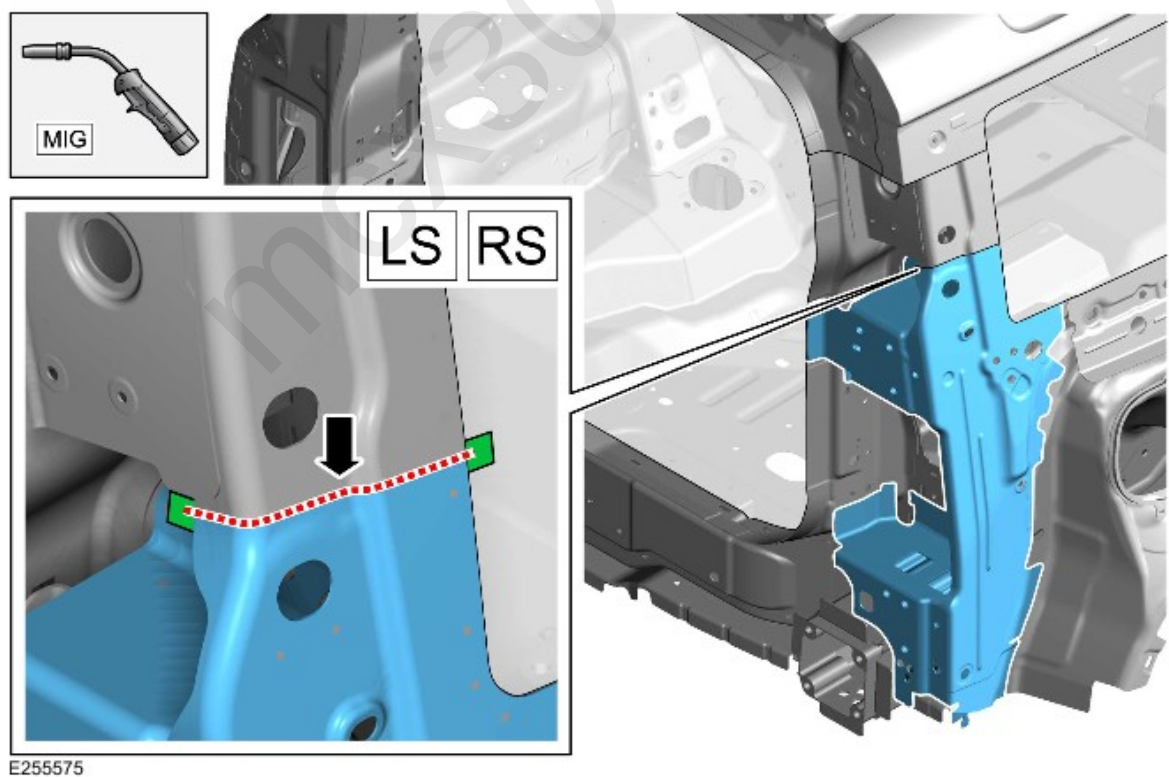
Install the SPRs and BSFs as indicated.

25.



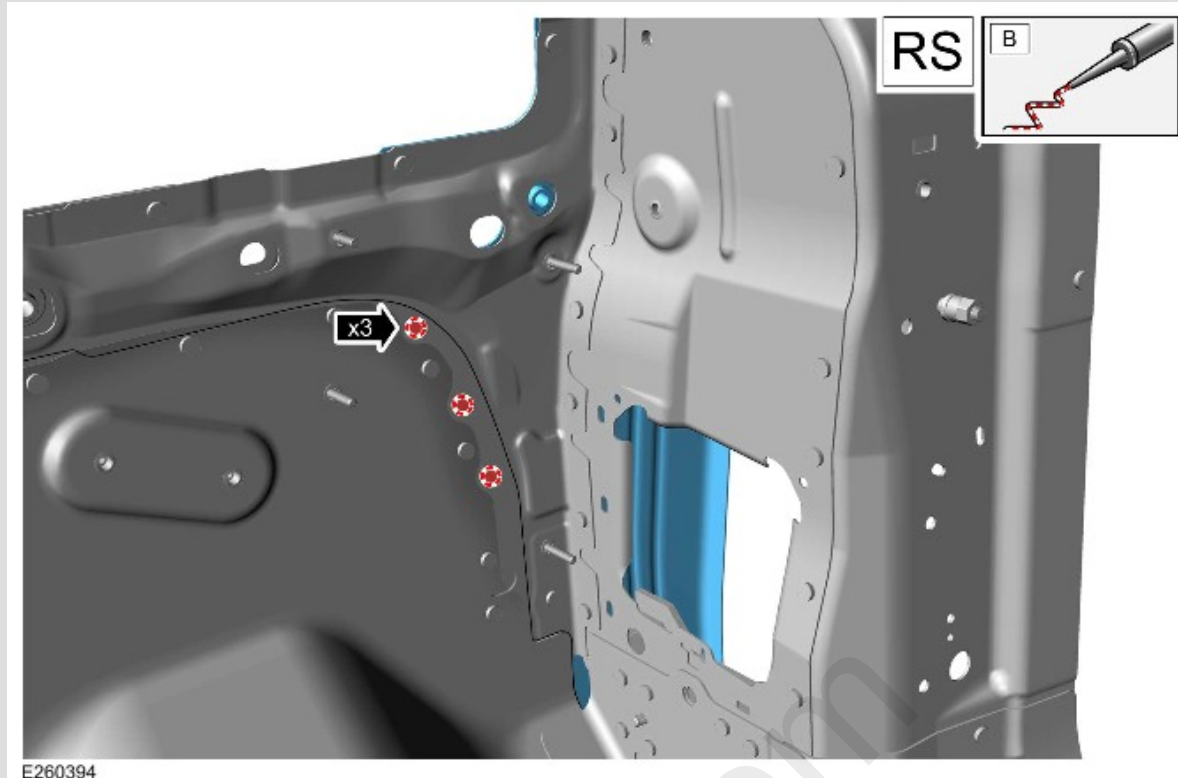
MIG plug weld the backing plates as indicated.

26.



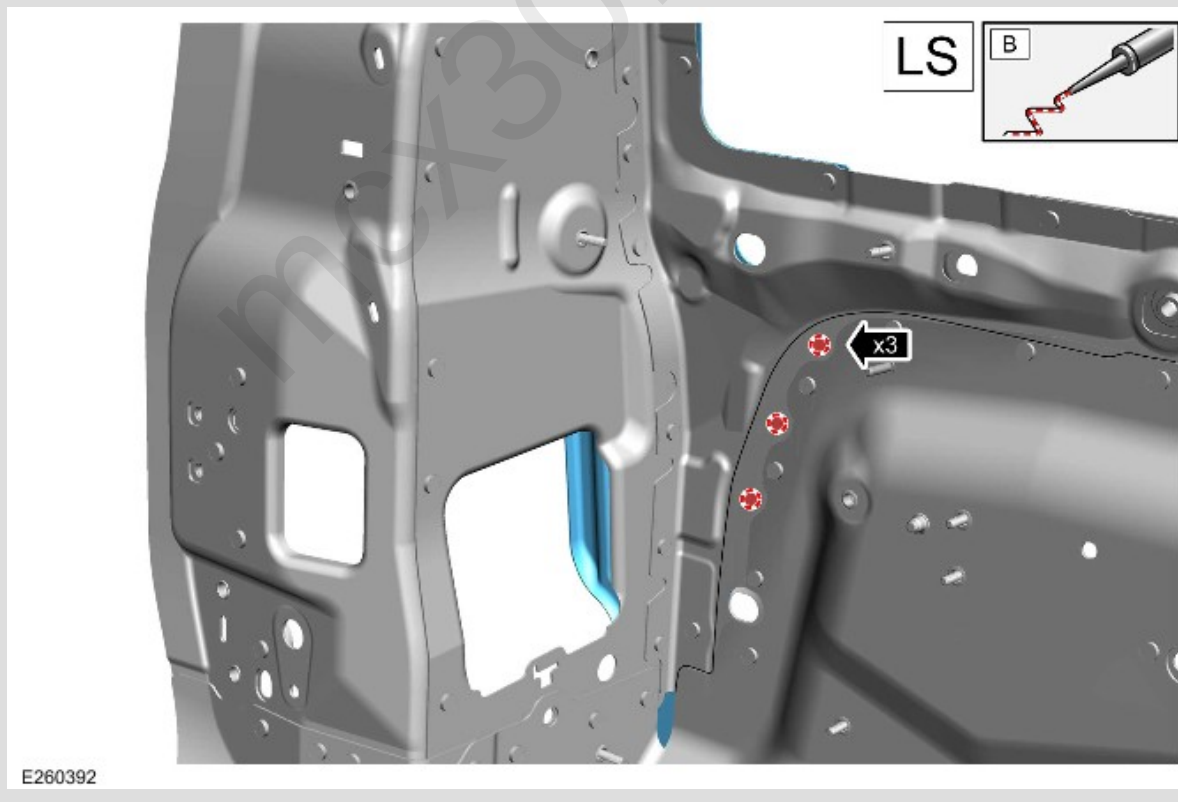
Install the run on/off tabs and MIG weld the butt joints as indicated.

27.



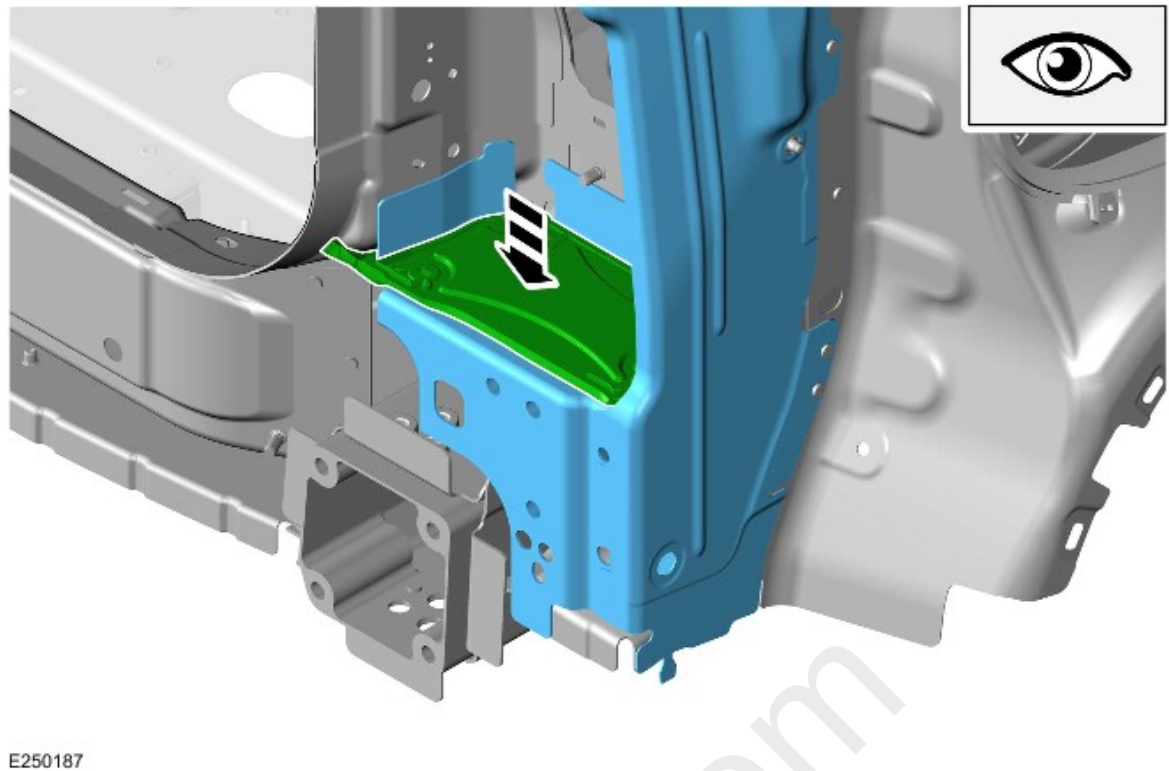
Apply a JLR recommended sealant to the BSF clearance holes as indicated.

28.



Apply a JLR recommended sealant to the BSF clearance holes as indicated.

29.



Install the NVH material as indicated.

30. Dress all welds.

31. Remove the run on/run off tabs.

32. 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.

33. Remove any excess adhesive.

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

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

36. Make sure that all installed BSFs and SPRs are sealed using a JLR recommended sealer.

 NOTE:

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

37. For additional installation information.

Refer to: [Rear Wheelhouse Lower Rear Extension - 90](#) (501-30 Rear End Sheet Metal Repairs, Removal and Installation).

38. For additional installation information.

Refer to: [Back Panel Outer - 90](#) (501-30 Rear End Sheet Metal Repairs, Removal and Installation).

39. For additional installation information.

Refer to: [Outer Tail Lamp Outer Panel Left Side - 90](#) (501-30 Rear End Sheet Metal Repairs, Removal and Installation).

Refer to: [Outer Tail Lamp Outer Panel Right Side - 90](#) (501-30 Rear End Sheet Metal Repairs, Removal and Installation).

40. For additional installation information.

Refer to: [Quarter Panel - 90](#) (501-30 Rear End Sheet Metal Repairs, Removal and Installation).

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