

PUBLISHED: 05-DEC-2019
2020.0 DEFENDER (LE), 501-27

FRONT END SHEET METAL REPAIRS

FENDER APRON PANEL REINFORCEMENT – 90 (G2452637)

mcx30.com

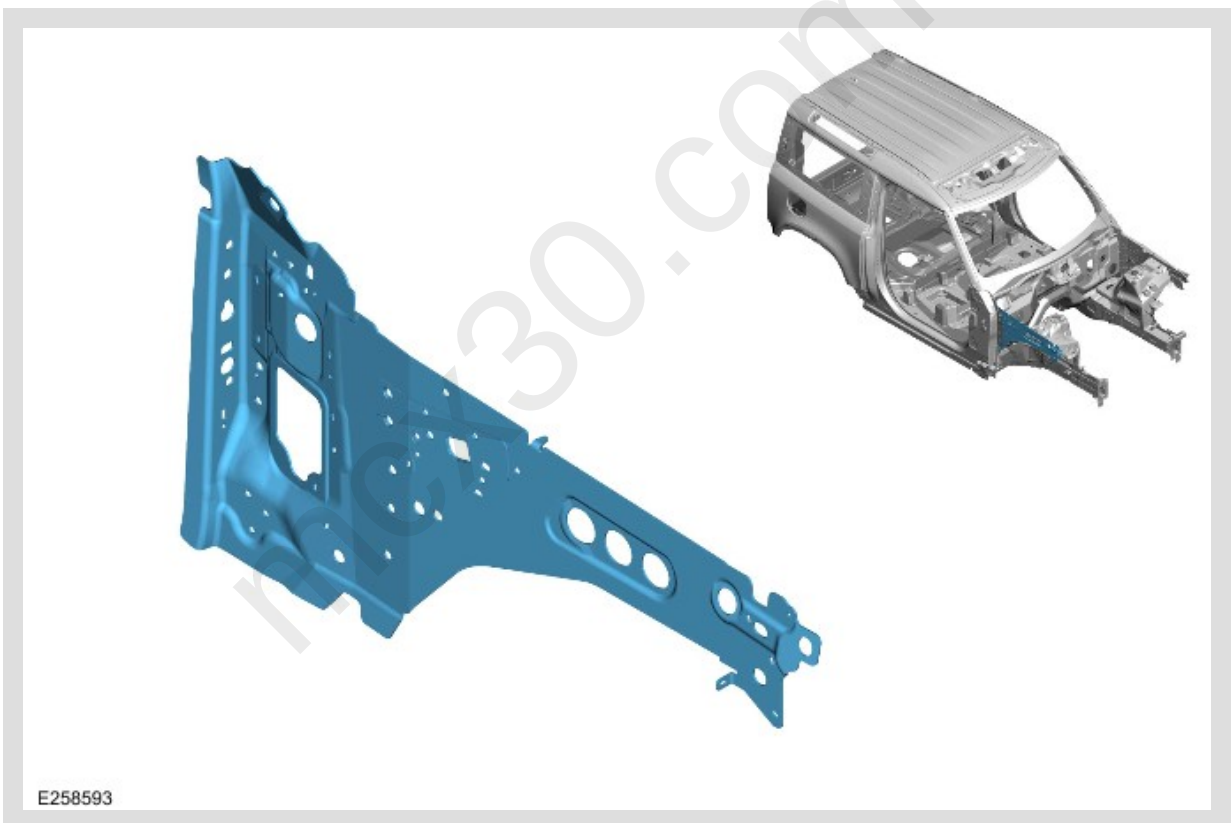
REMOVAL

 NOTE:

The fender apron panel reinforcement is installed in conjunction with:

- Fender apron panel
- Shock absorber and spring assembly

1.



The fender apron panel 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 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 approved SPR tool or 5.3 mm drill bit.
- Any joints sealed as part of vehicle manufacture must be sealed as part of the repair.
- To make sure that the vehicle is correctly aligned it must be placed on a Jaguar Land Rover (JLR) approved alignment jig.

When installing the fender apron panel reinforcement 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](#) (501-27 Front End Sheet Metal Repairs, Specifications).

5.

For additional removal information

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

6.

For additional removal information

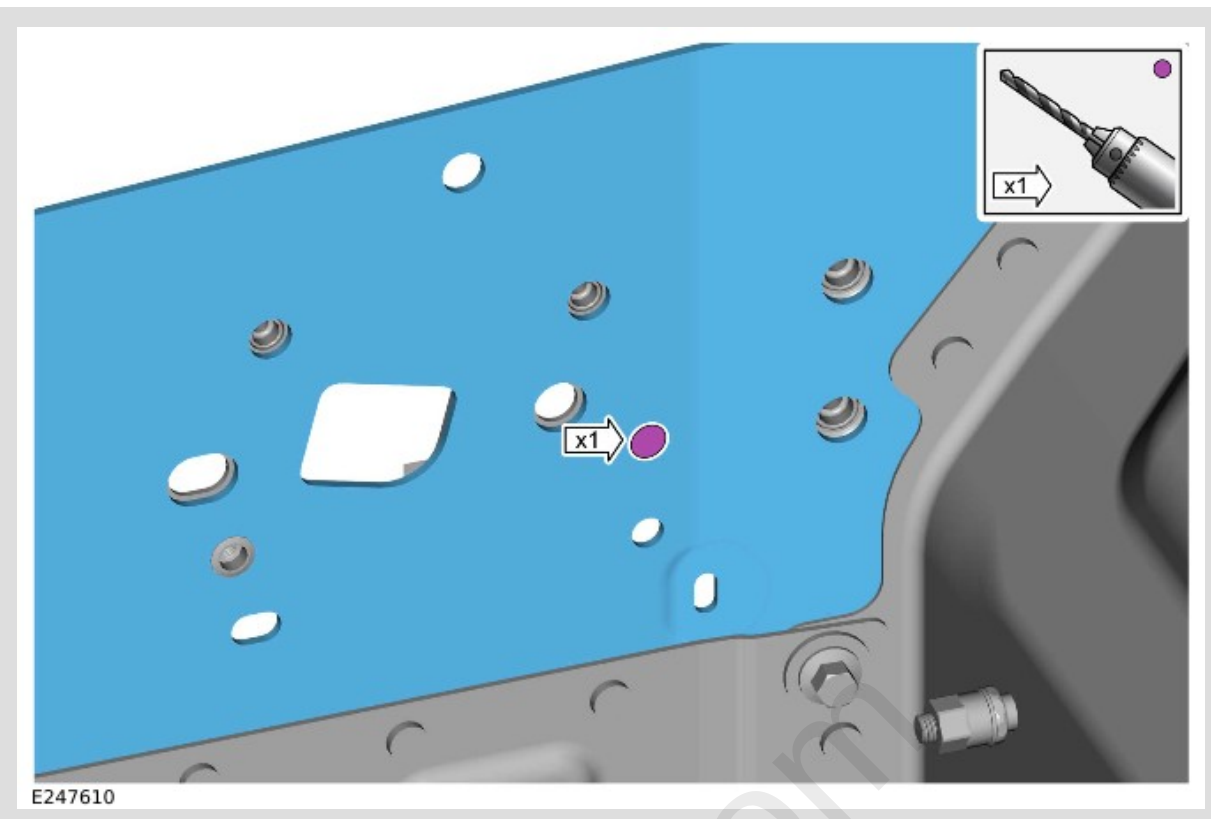
Refer to: [Shock Absorber and Spring Assembly - \[+\] Air Suspension](#) (204-01 Front Suspension, Removal and Installation).

Refer to: [Shock Absorber and Spring Assembly - \[+\] Coil Suspension](#) (204-01 Front Suspension, Removal and Installation).

7.

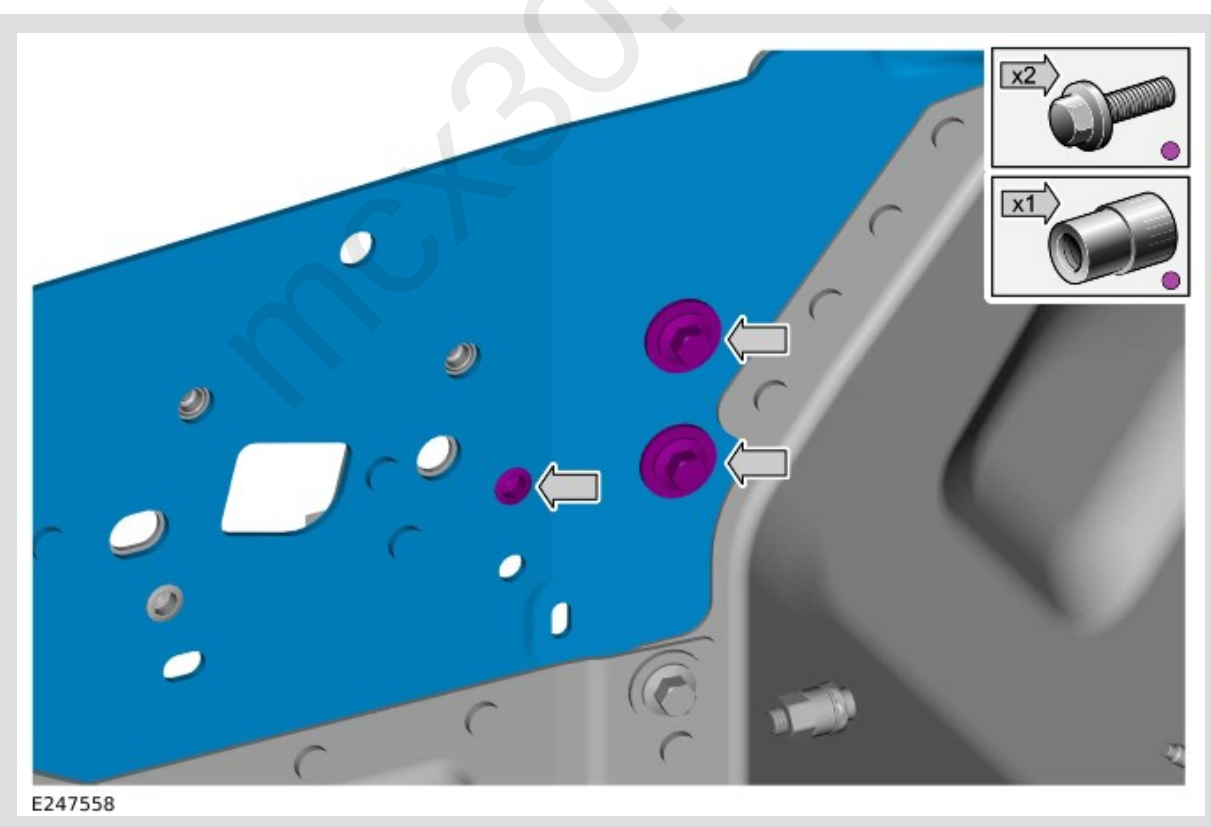
Release and position the wiring harness to one side.

8.



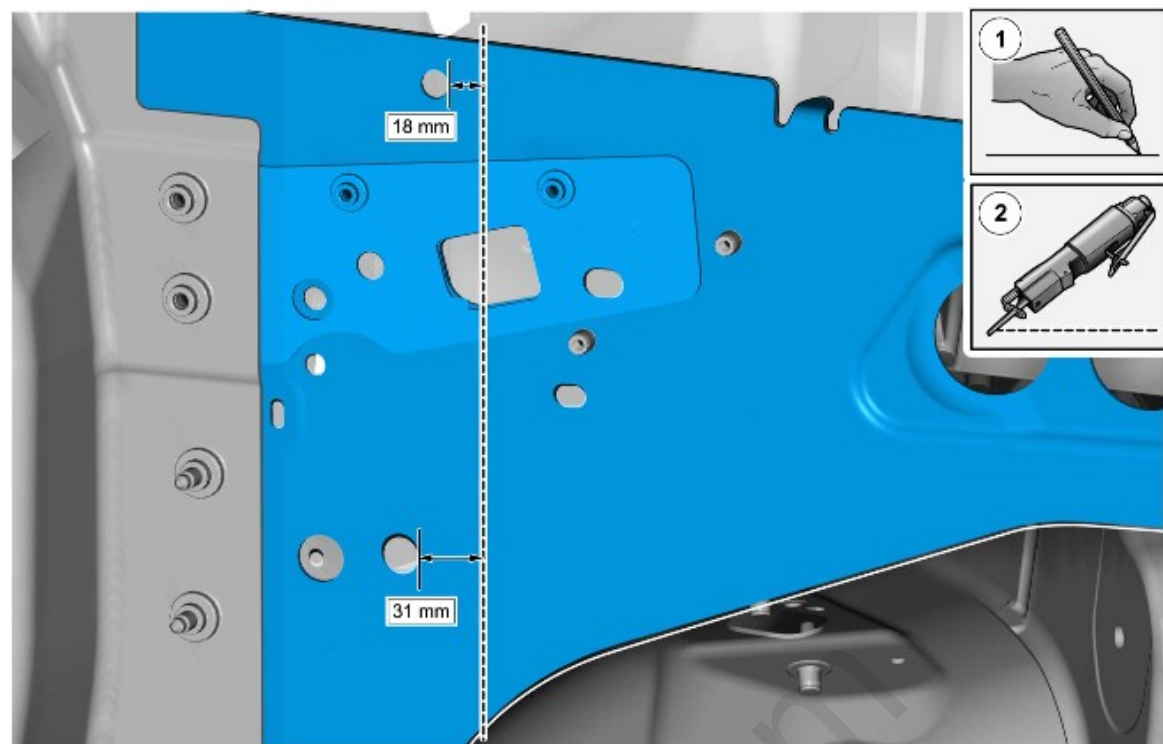
Remove the rivnut center as indicated.

9.



Remove the bolts and rivnut remnant as indicated.

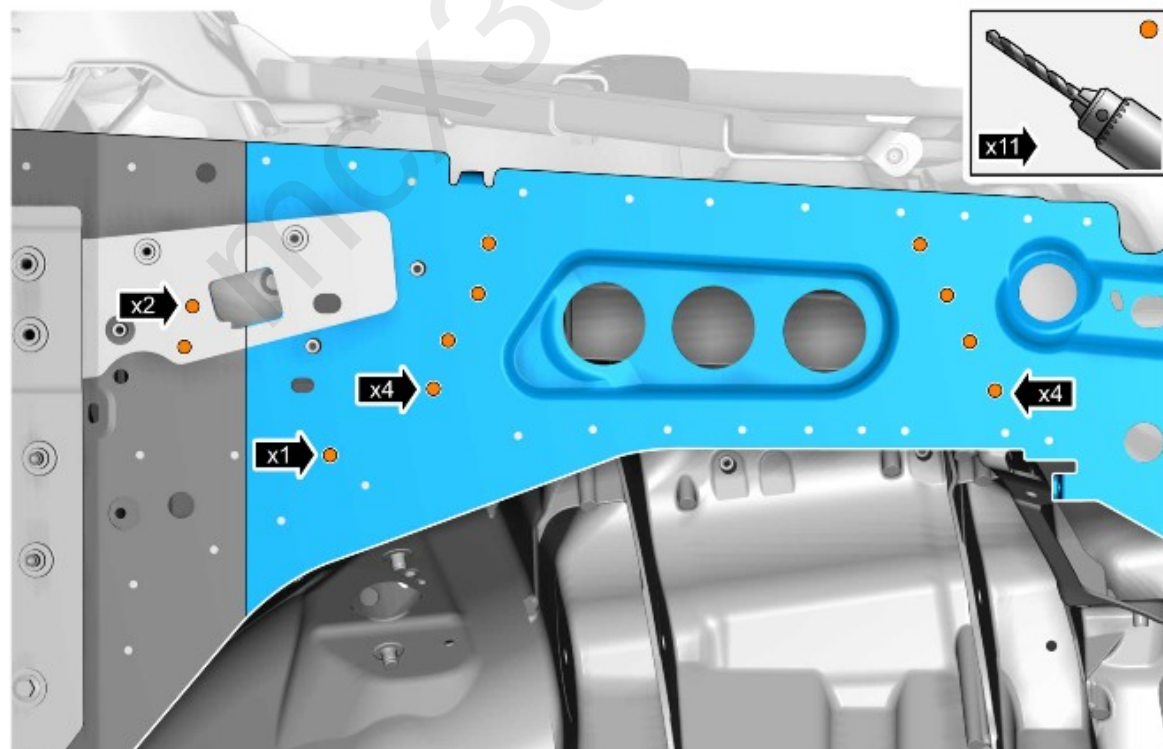
10.



E247559

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

11.

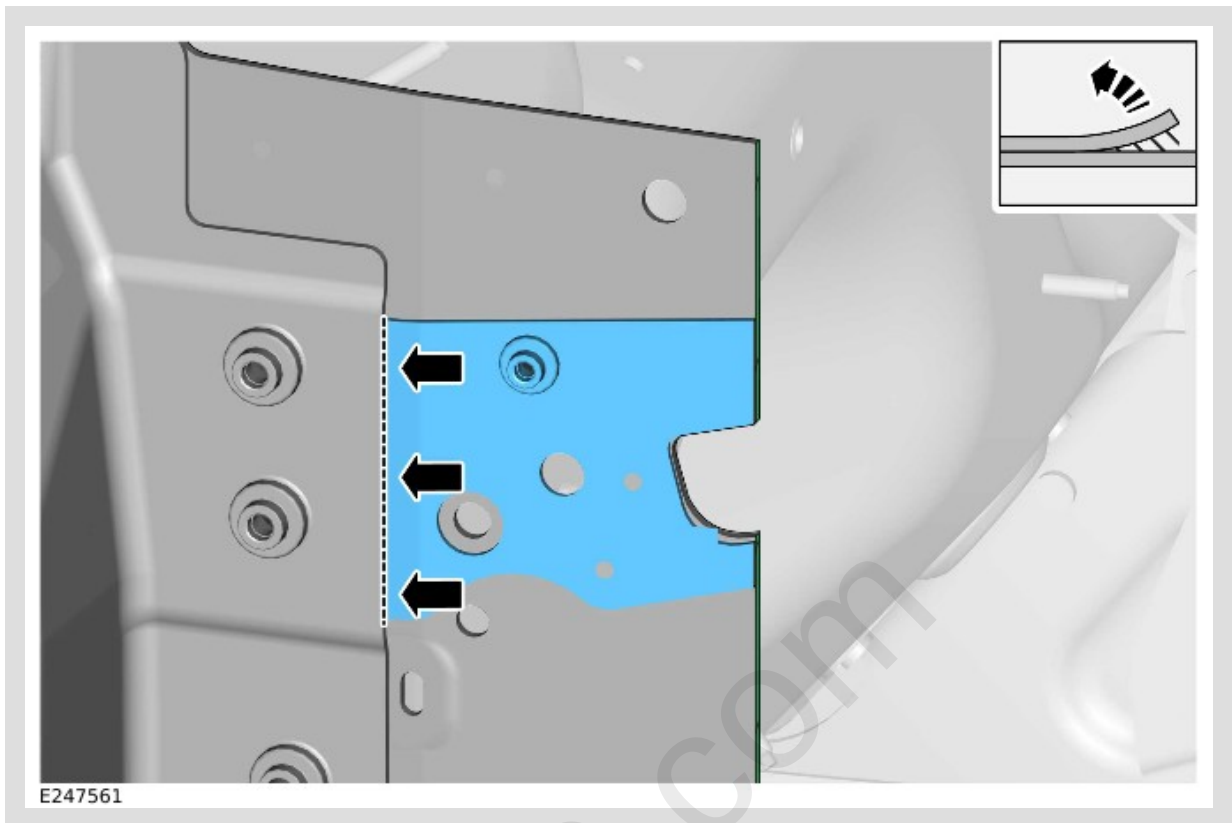


E247560

Remove the self piercing rivets as indicated.

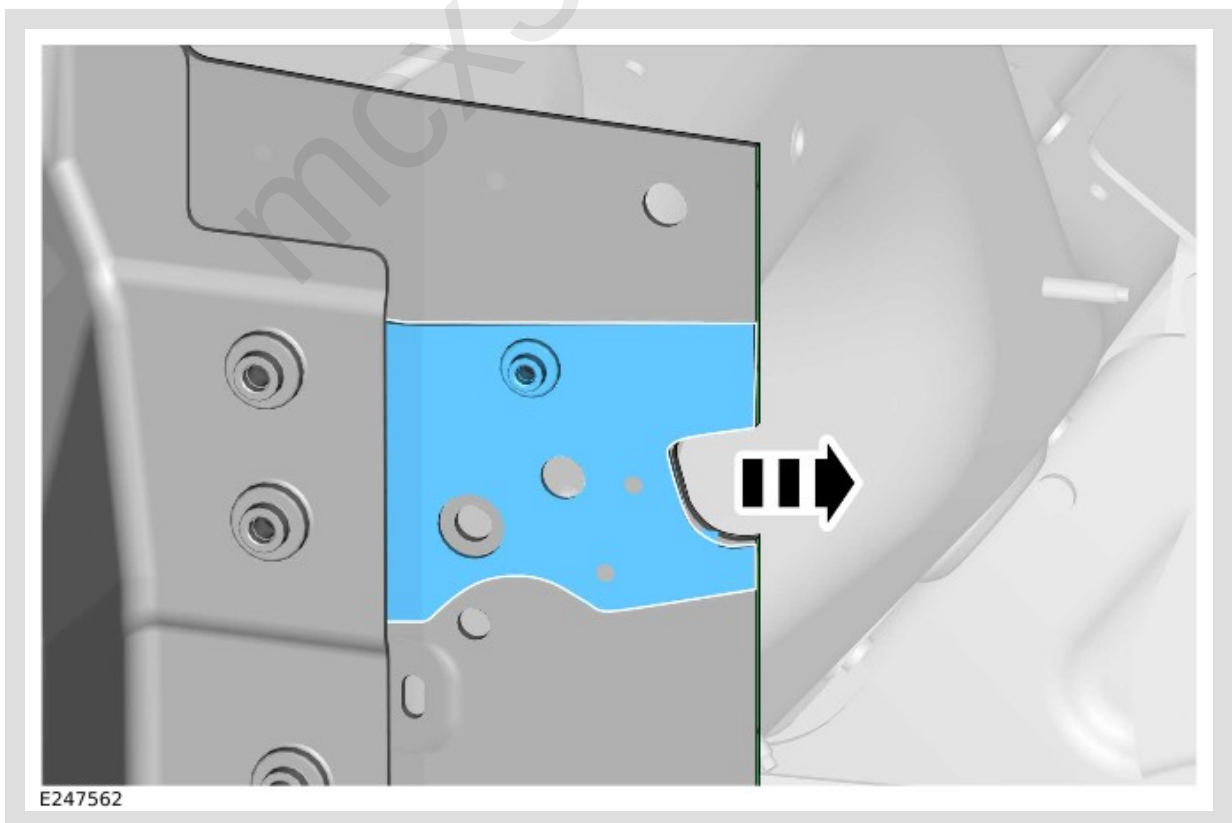
12. Carefully separate the joints and remove the fender apron panel reinforcement section.

13.



Build an expansion space as indicated.

14.



Carefully separate the joints and remove the hinge reinforcement bracket remnants as indicated.

INSTALLATION

⚠ CAUTION:

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

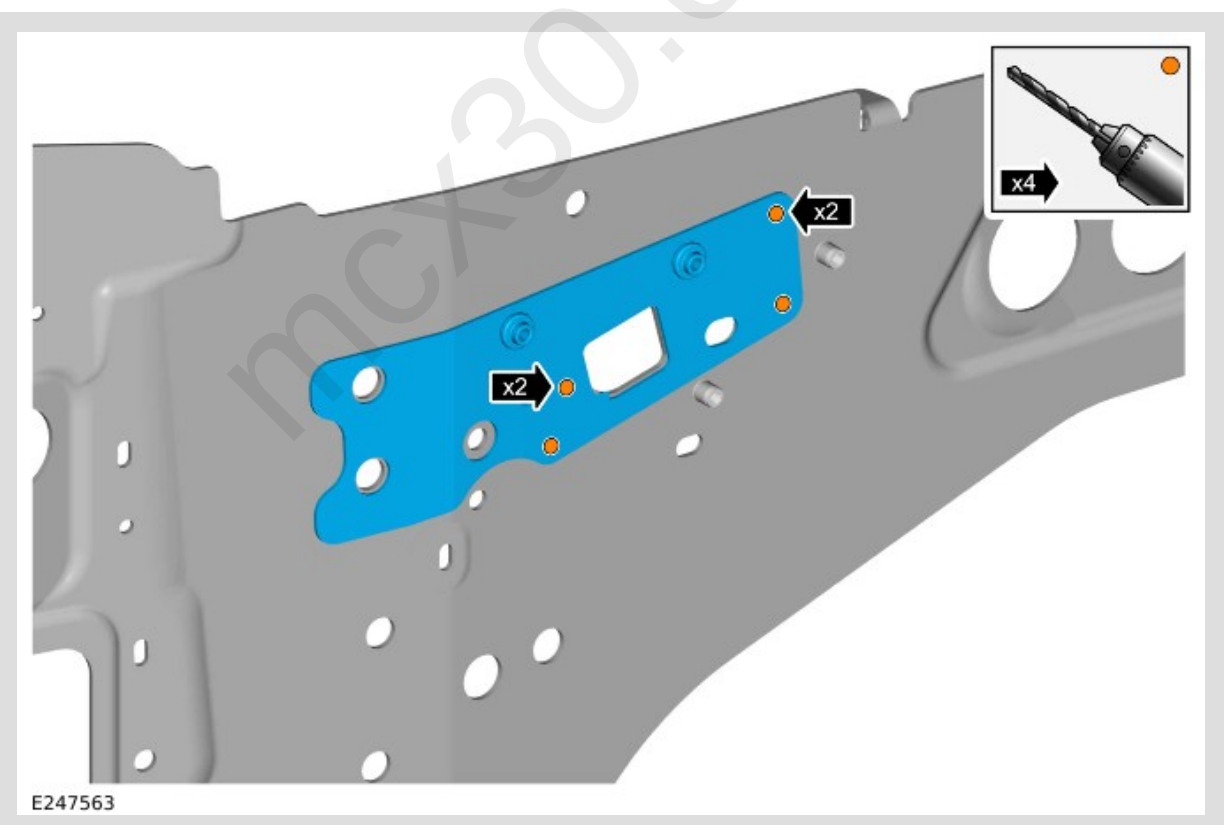
⚠ NOTES:

- Breakstem Fastener (BSF) installation involves using the JLR approved BSF installation tool and requires a hole diameter of 6.5 mm.
- Where Self Piercing Rivet (SPR) removal is instructed use either the JLR approved SPR tool or 5.3 mm drill bit.

1. Remove the rivet remnants.

2. Dress the flanges where necessary.

3.



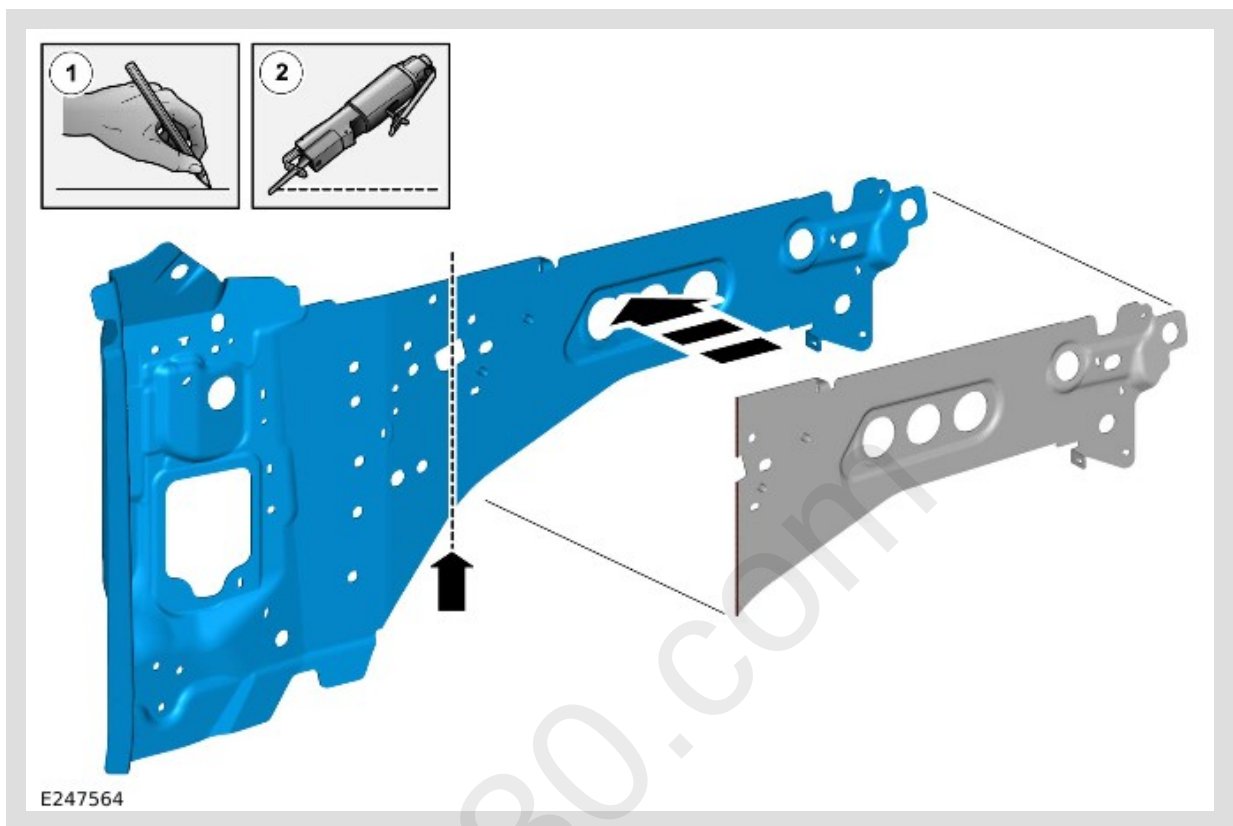
Remove the self piercing rivets from the new fender apron panel reinforcement as indicated.

4. Carefully separate the joints and remove the hinge reinforcement bracket.

5. Remove the rivet remnants.

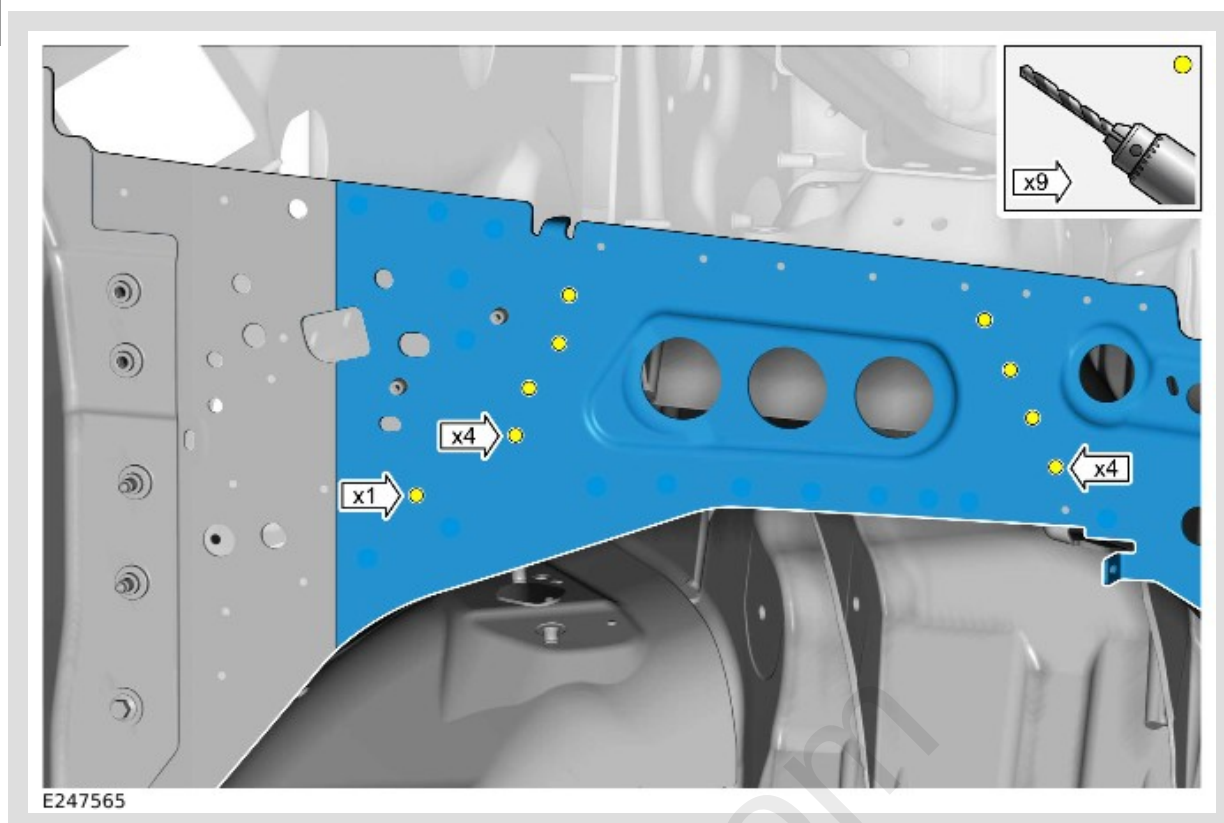
6. Dress the flanges where necessary.

7.



Use the old fender apron panel reinforcement for reference. Measure, mark and cut the new fender apron panel reinforcement, where the MIG welded butt joint is to be made as indicated

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

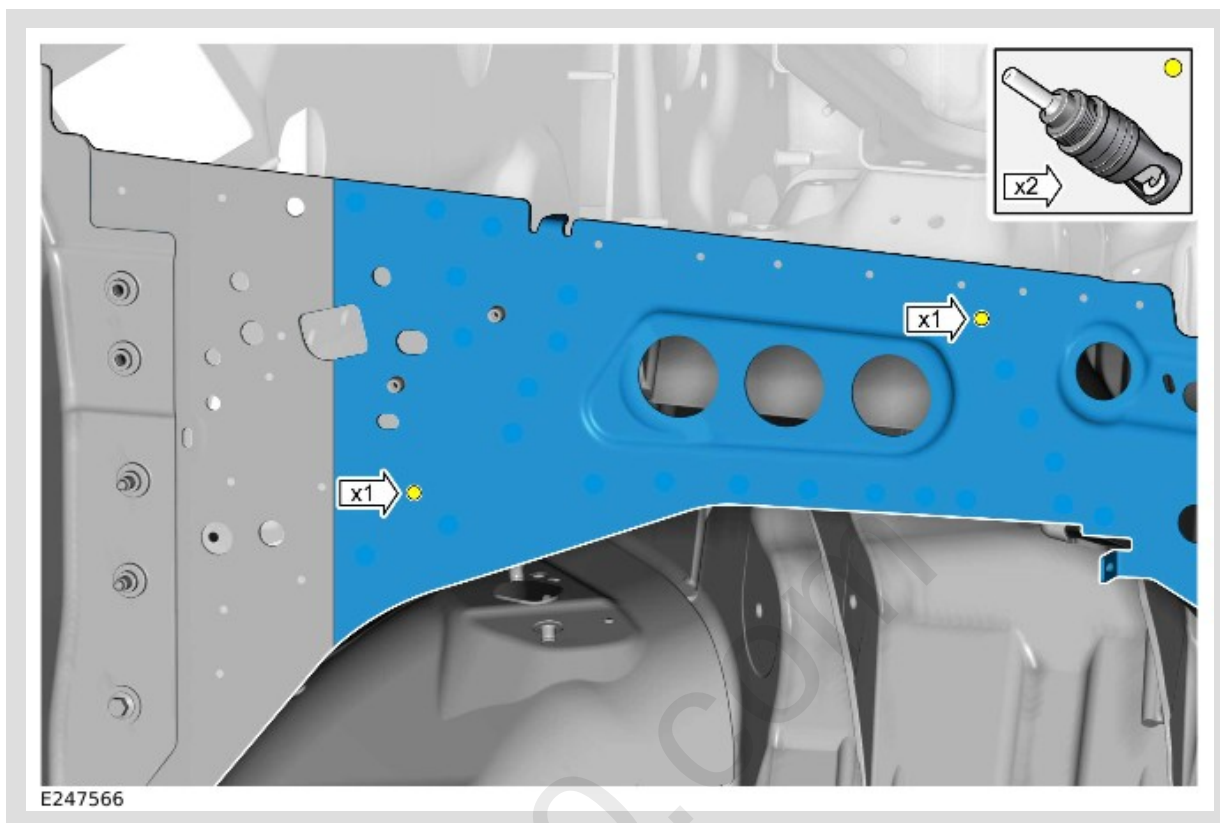


Drill holes where Breakstem Fasteners (BSFs) are to be installed as indicated.

10.

 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.

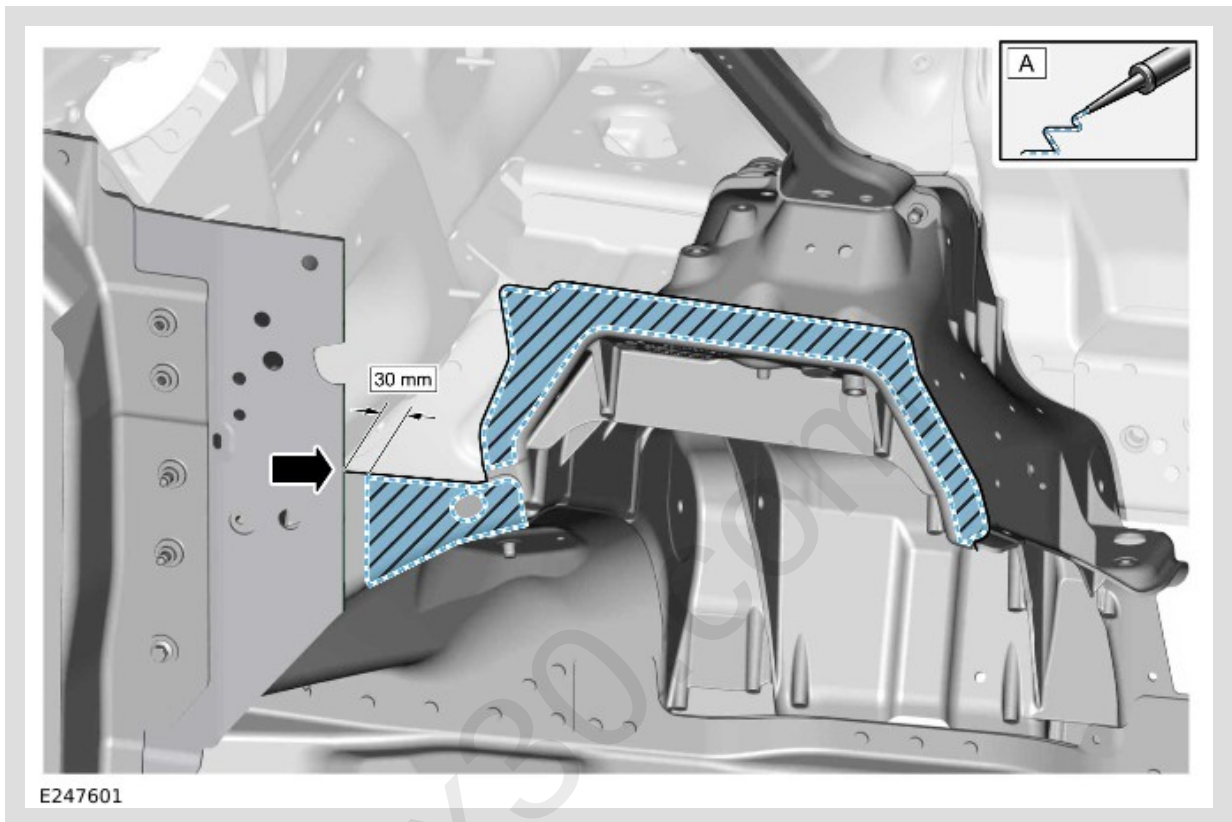
11. Remove the new fender apron panel reinforcement section.

12. Deburr the drilled holes.

13. Clean and prepare the panel surfaces.

NOTES:

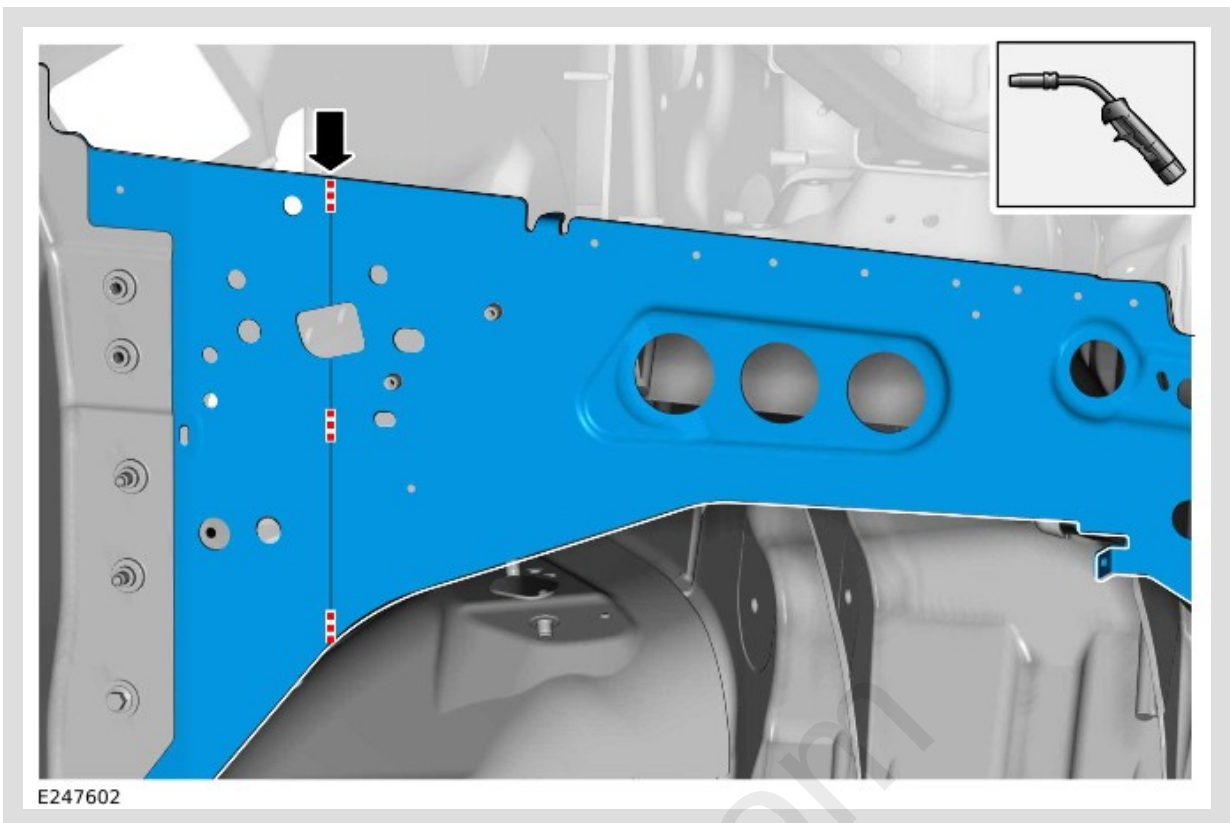
- Make sure a continuous bead of adhesive surrounds fixing holes.
- Apply panel bonding adhesive areas as indicated. Bonding is not to be applied in any areas of MIG welded installation joints, leave a 30mm gap, so it does not affect the MIG welded butt joint on installation.



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

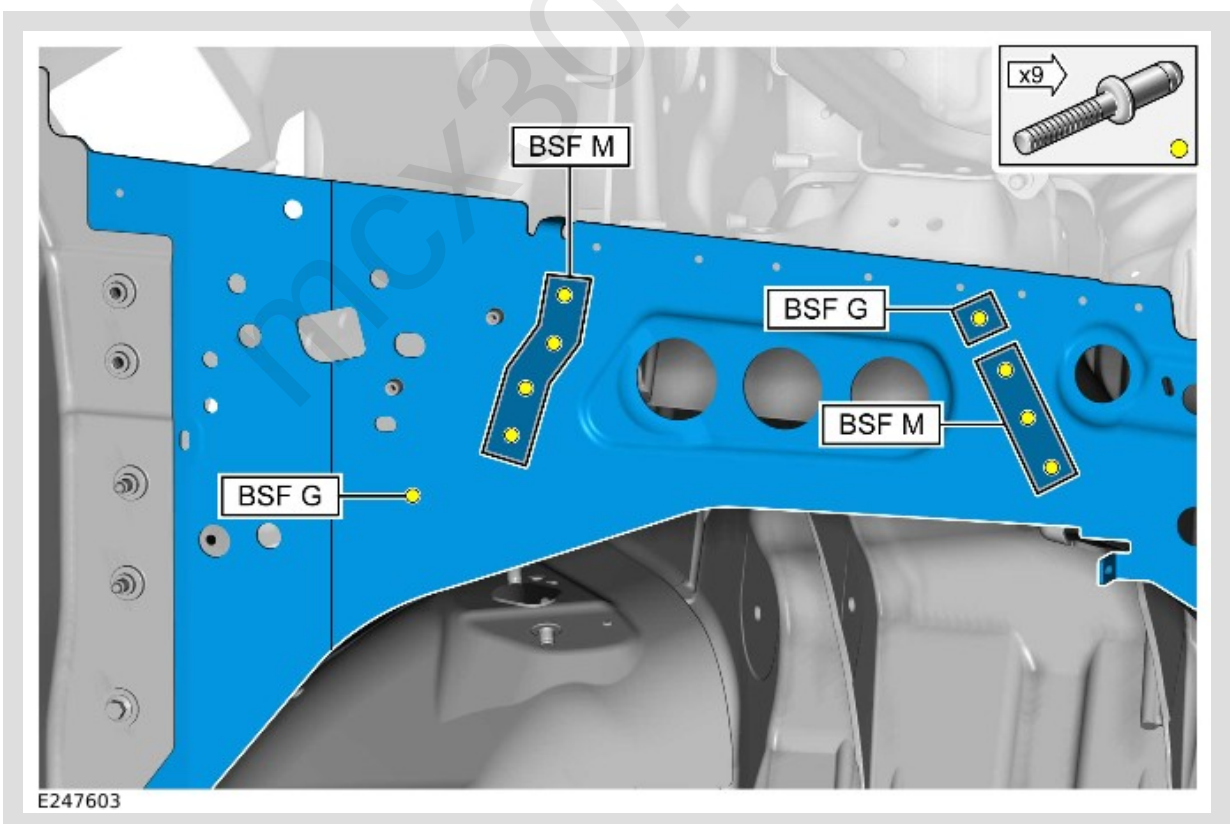
15. Offer up the new fender apron panel reinforcement section and clamp into position. Check alignment, if correct proceed to next step, if not rectify and check the alignment again before proceeding.

16.



Tack MIG weld the butt joint as indicated.

17.



Install the BSFs as indicated.

18.

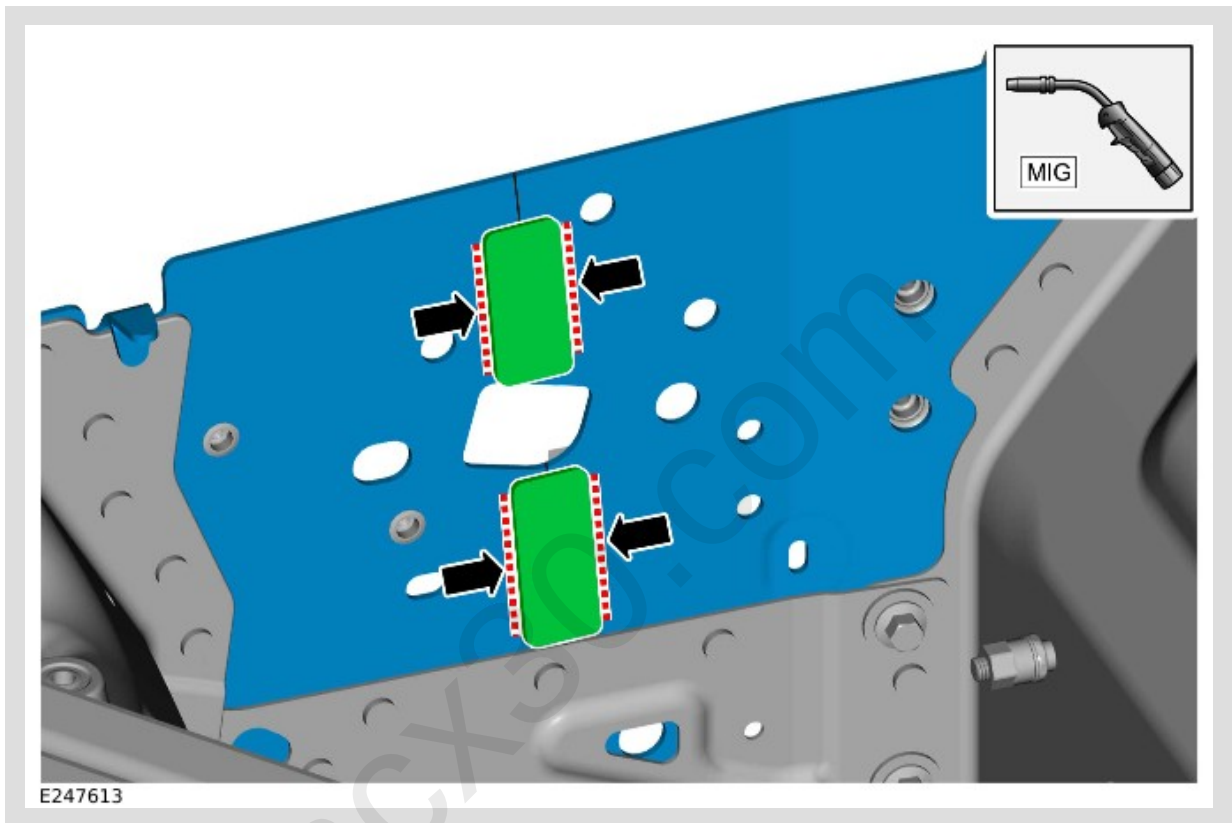
Measure and cut 2 backing plates 50 mm wide, 25 mm each side of the MIG welded butt joint from the fender apron panel reinforcement section remnant.

19. Cut a run on/run off tab from the fender apron panel reinforcement section remnant.

20. Clean and prepare the panel surfaces.

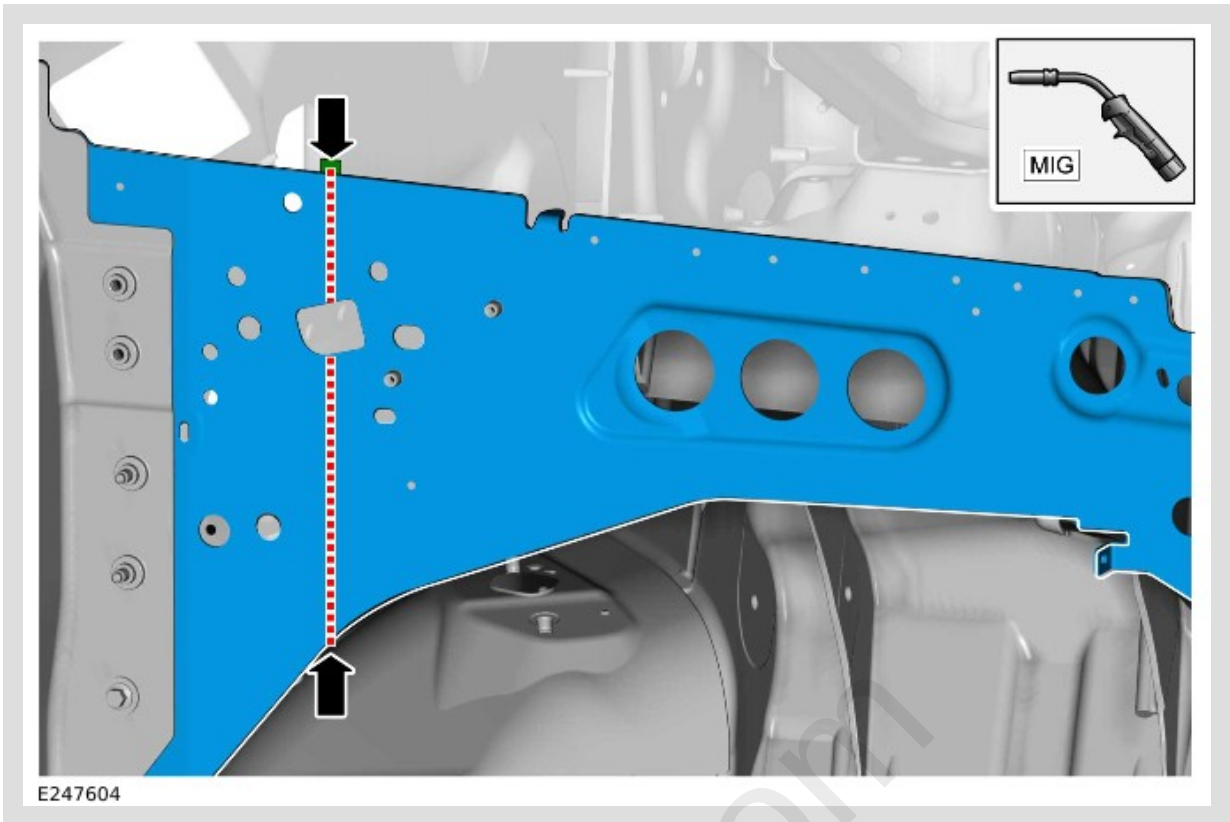
21.  **NOTE:**

Make sure the backing plates are installed from the inside.



MIG weld the backing plates on to the fender apron panel reinforcement as indicated.

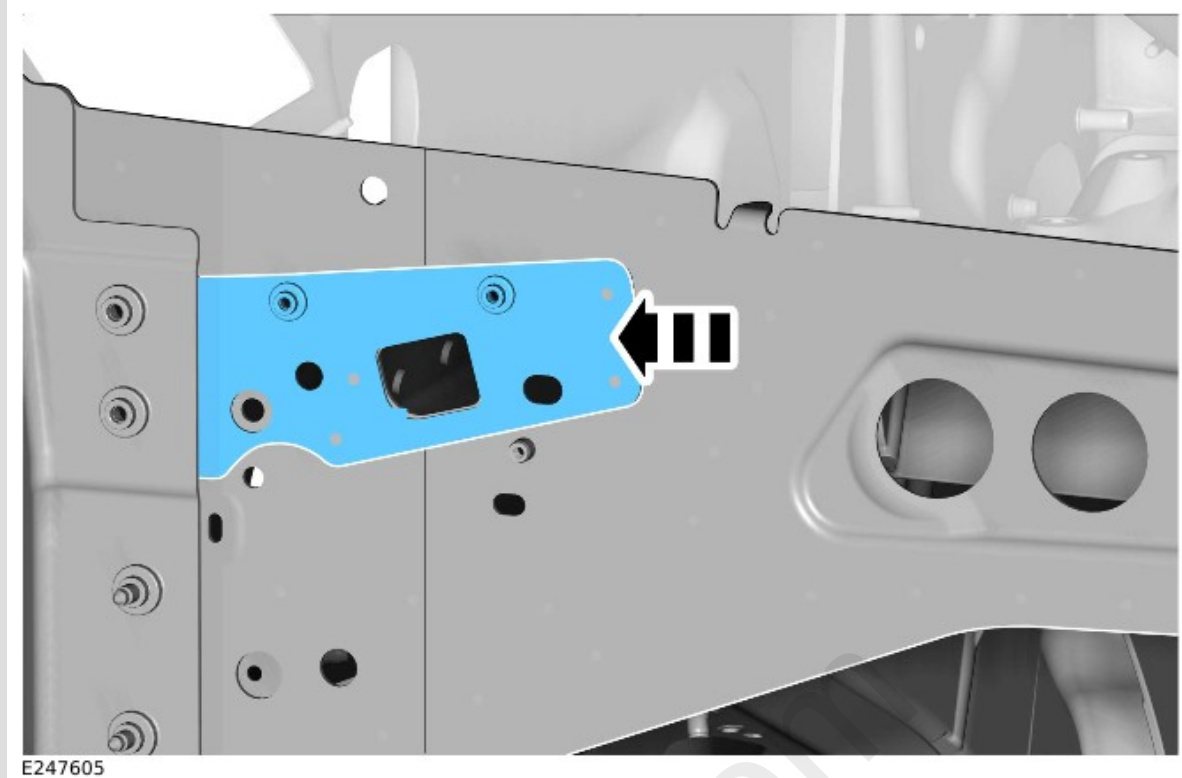
22.



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

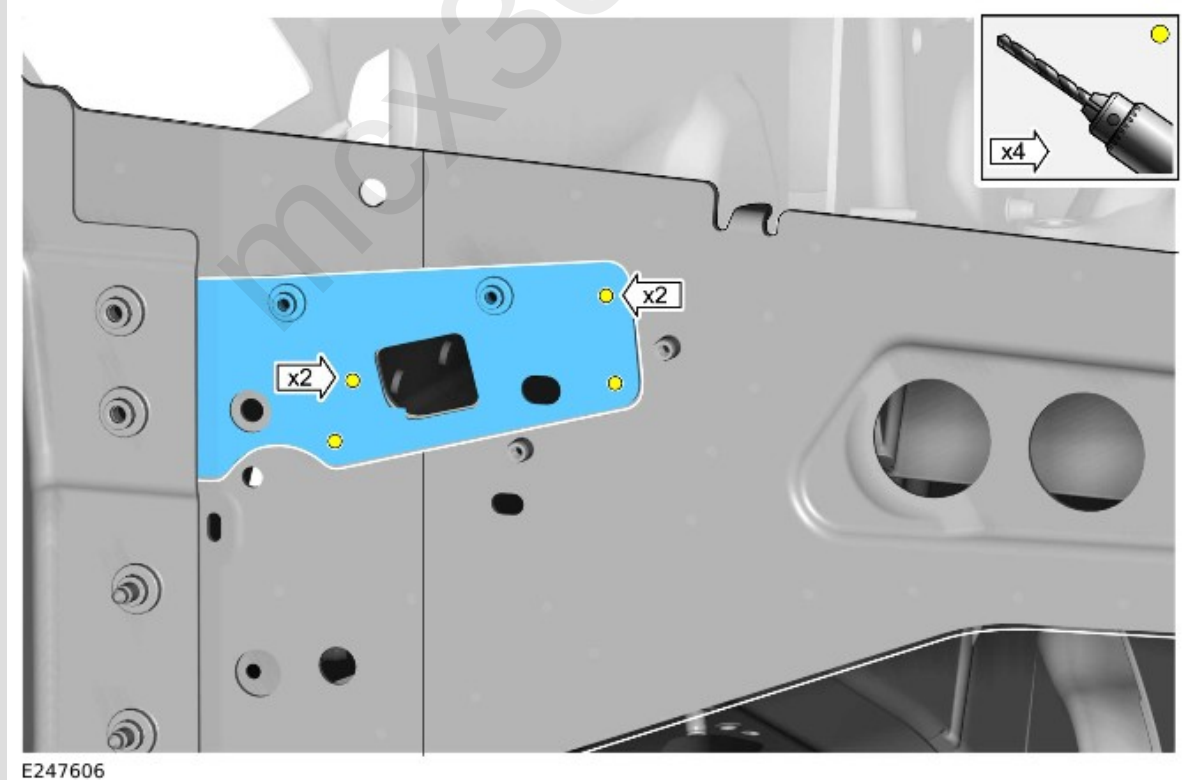
23. Dress all welds.

24.



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

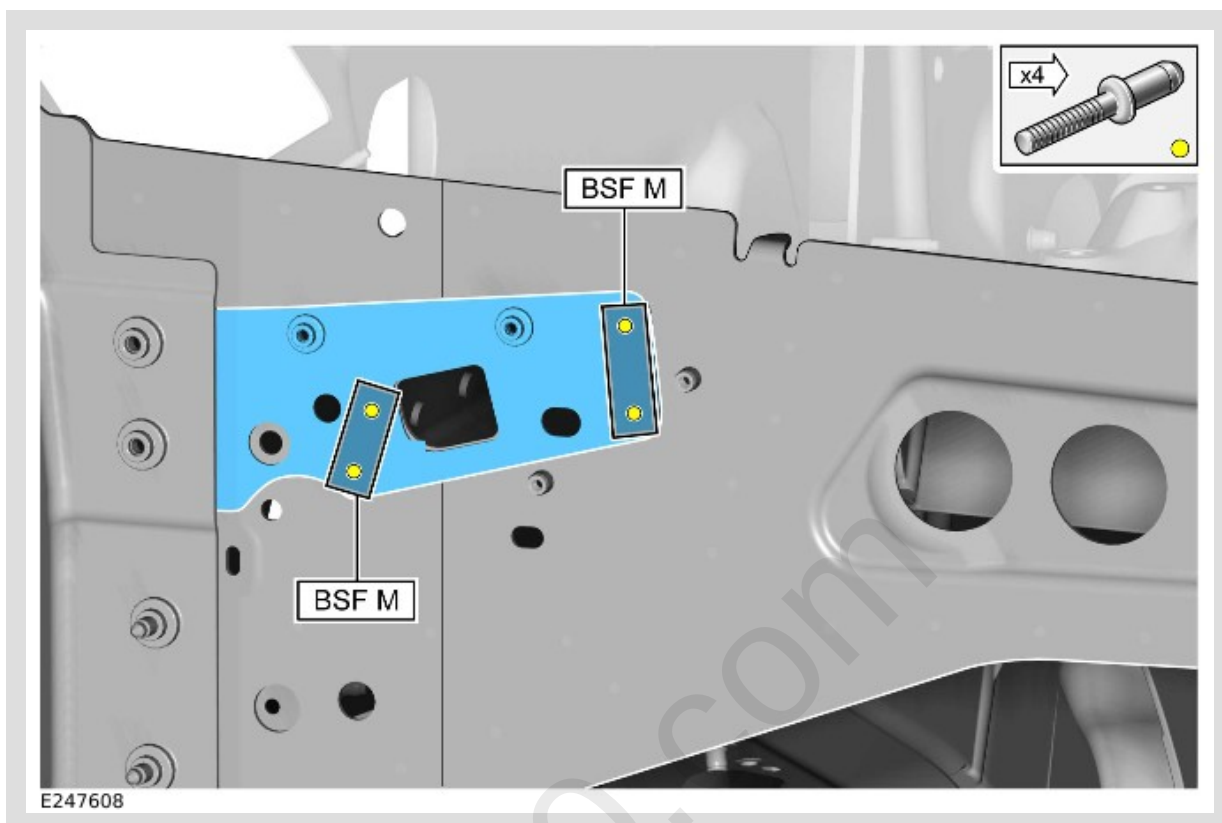
25.



Drill holes where BSFs are to be installed as indicated.

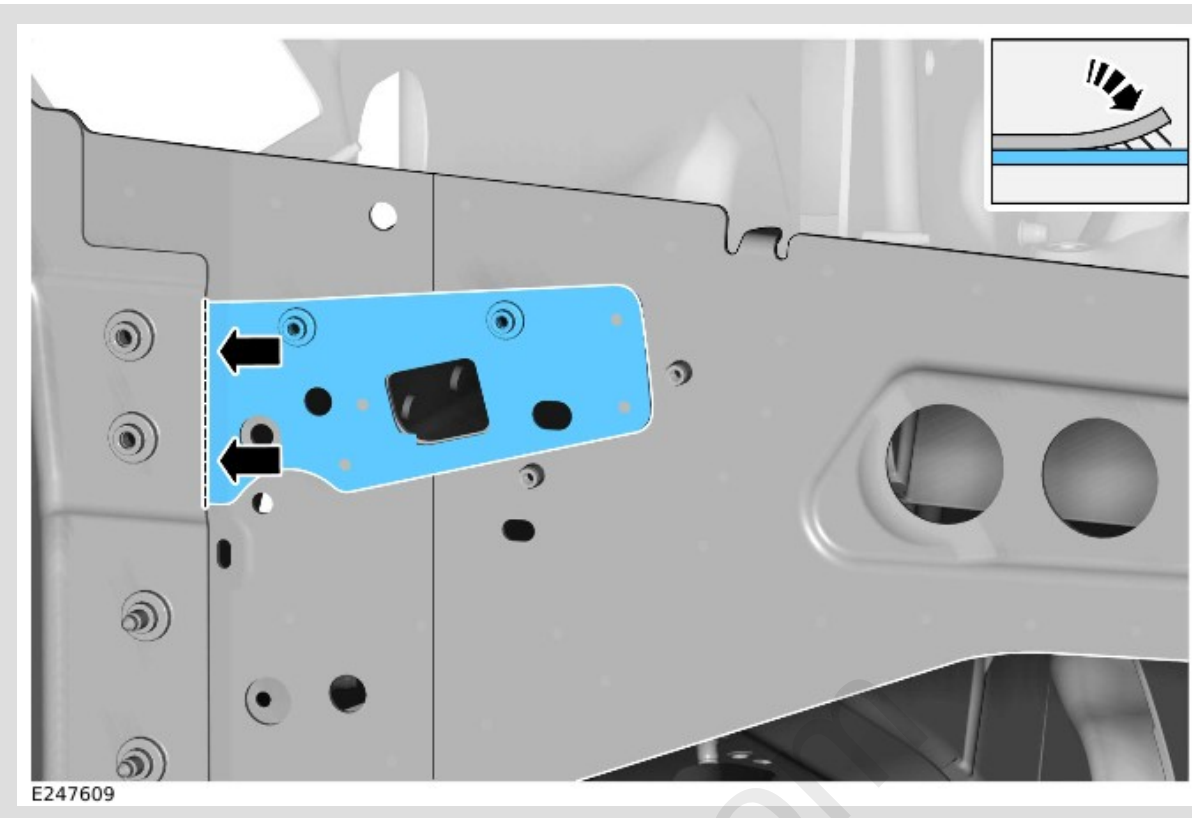
 NOTE:

Make sure that the Breakstem Fasteners (BSFs) are installed from the inside.



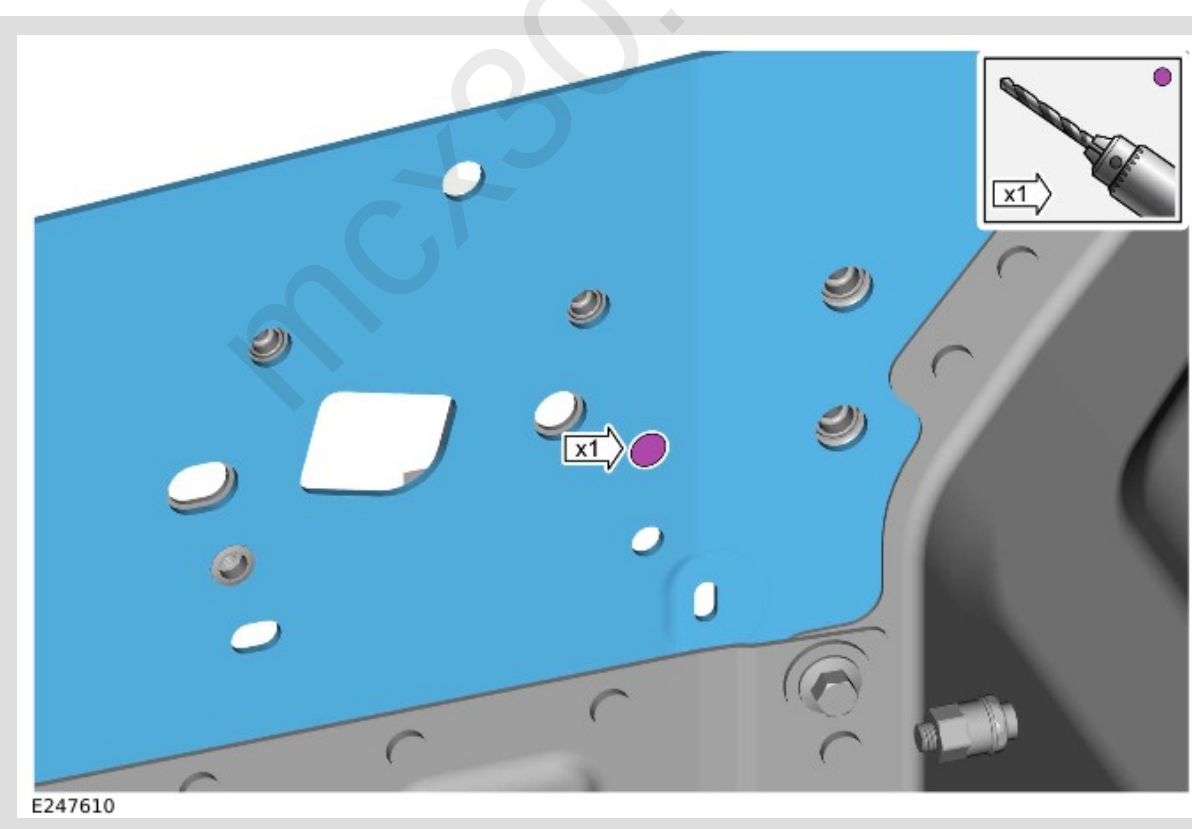
Install the BSFs as indicated.

27.



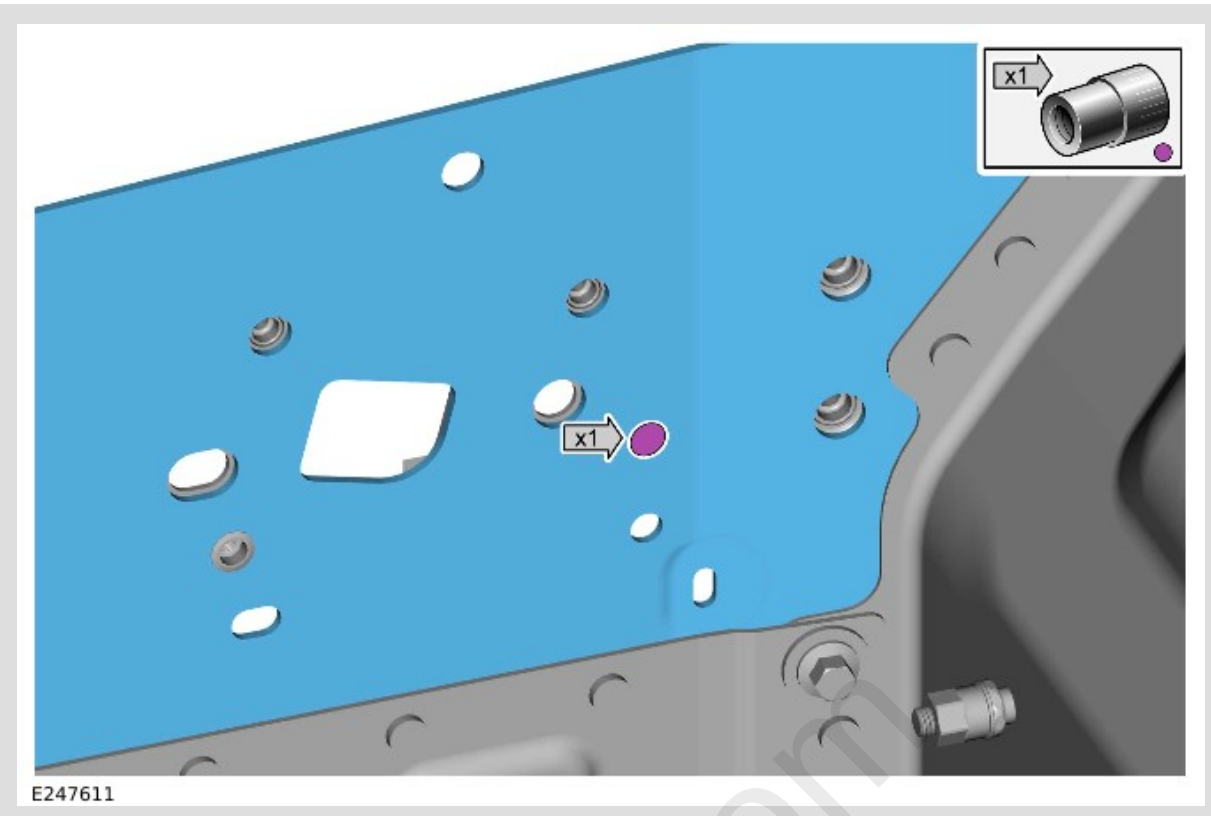
Close the expansion space as indicated.

28.



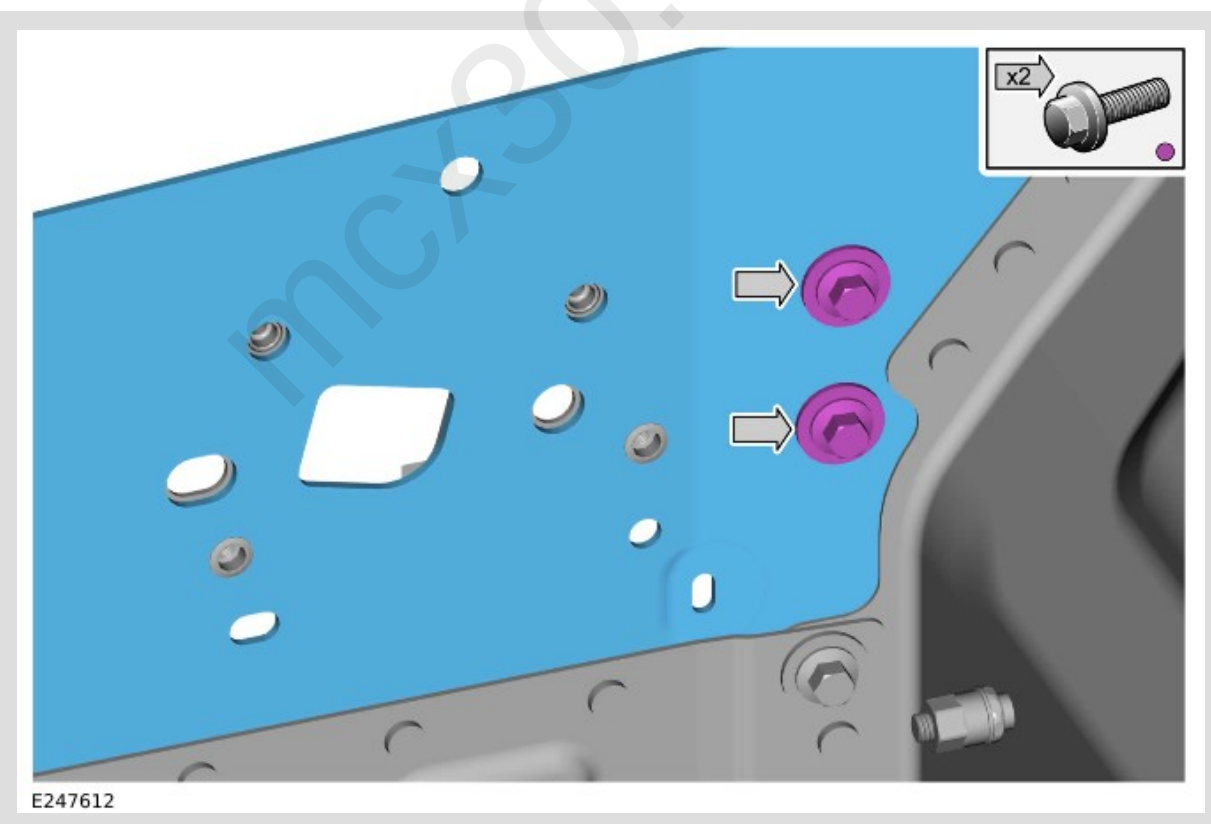
Drill a hole where the rivnut is to be installed as indicated.

29.



Install the rivnut as indicated.

30.



Install the bolts and tighten.

Torque: 25 Nm

31. Remove any excess adhesive.

32. Remove the run on/run off tabs.

33. Complete a non-destructive crack inspection on the MIG welded butt joint. If correct proceed to next step, if not, rectify and recheck before proceeding.

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

35. Make sure that all installed BSFs are sealed using a JLR recommended sealer.

36. 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.

37. For additional installation information

Refer to: [Shock Absorber and Spring Assembly - \[+\] Air Suspension](#) (204-01 Front Suspension, Removal and Installation).

Refer to: [Shock Absorber and Spring Assembly - \[+\] Coil Suspension](#) (204-01 Front Suspension, Removal and Installation).

38. For additional installation information

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