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2020.0 DEFENDER (LE), 501-28

**ROOF SHEET METAL REPAIRS**

# REAR ROOF REINFORCEMENT PANEL - 110, VEHICLES WITH: ROOF OPENING PANEL [G2394420]

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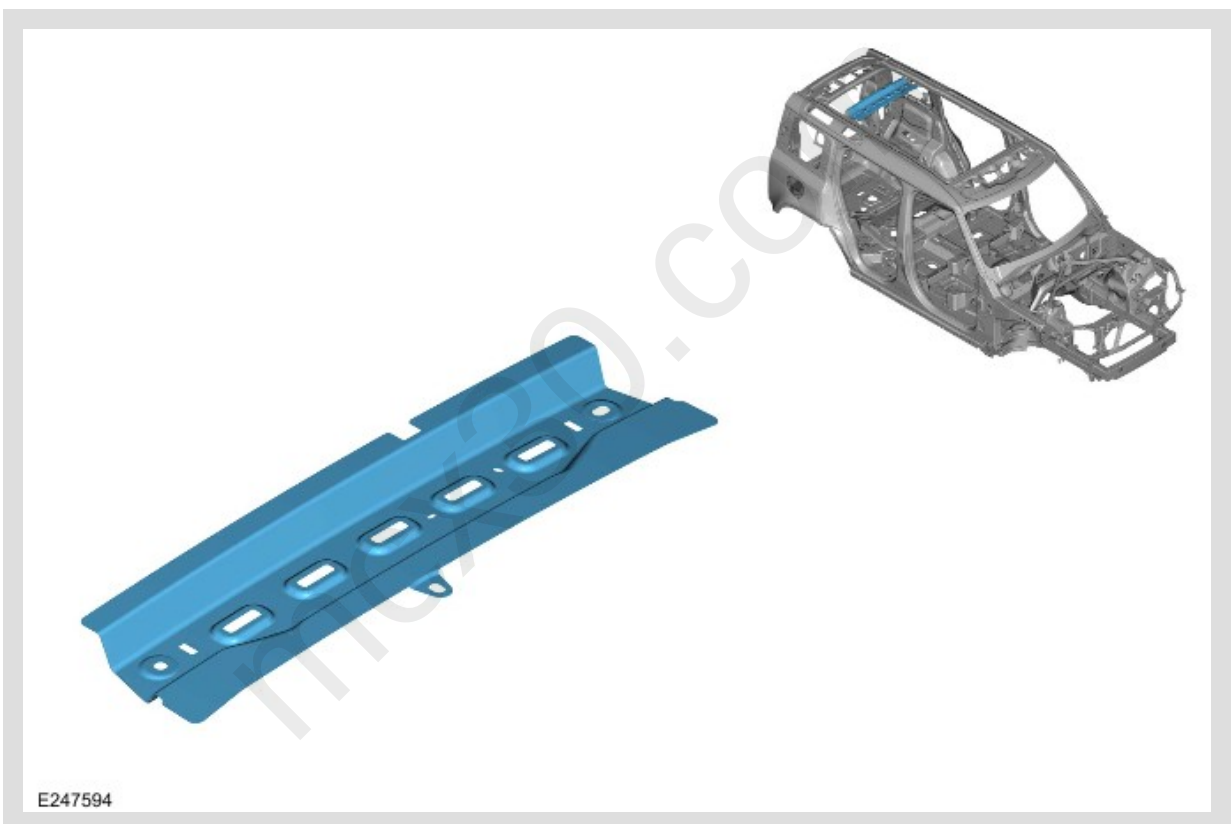
## REMOVAL

 **NOTE:**

In this procedure the rear roof reinforcement panel is installed in conjunction with:

- Rear roof panel.

1.



The rear roof reinforcement 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).

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 rear roof reinforcement 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).

4.

For additional information on the fixings required to complete this procedure

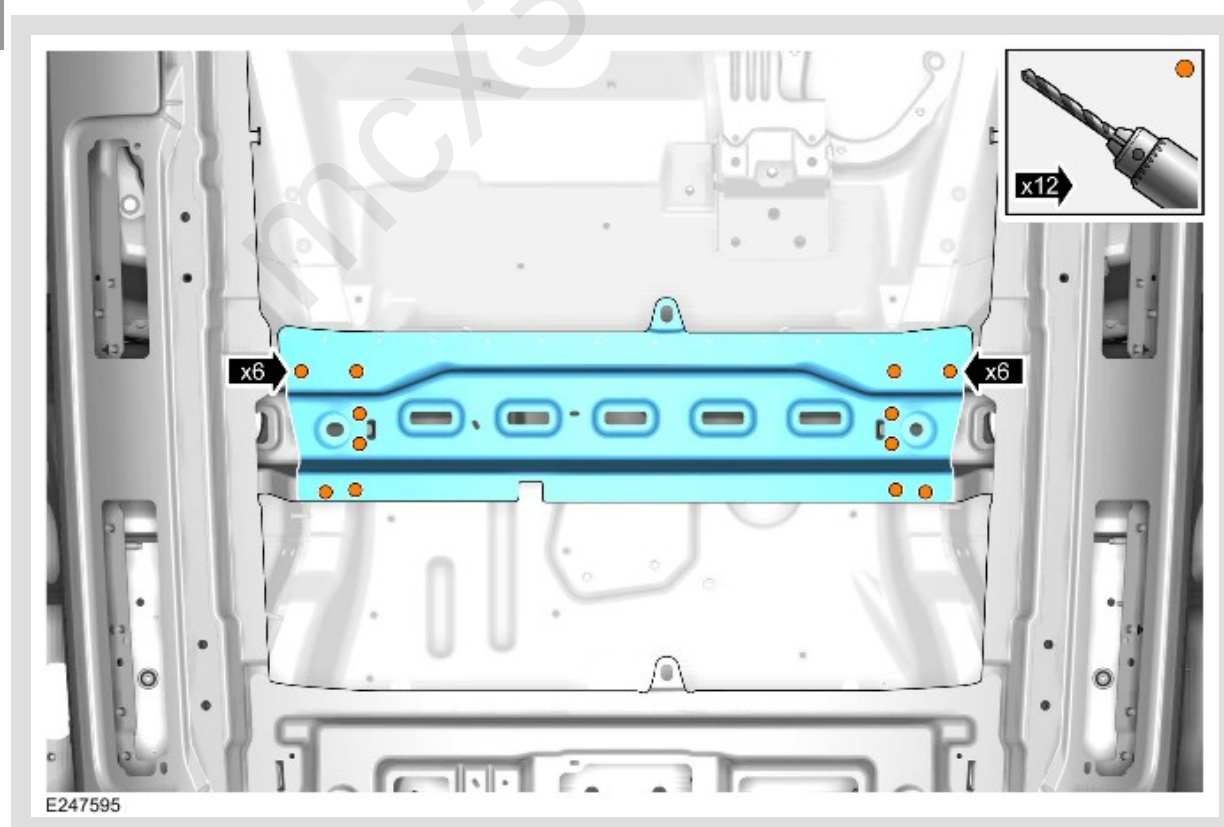
Refer to: [Specifications - 110](#) (501-28 Roof Sheet Metal Repairs, Specifications).

5.

For additional removal information

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

6.



Remove the self piercing rivets as indicated.

7. Carefully separate the joints and remove the rear roof reinforcement panel.

## INSTALLATION

### CAUTION:

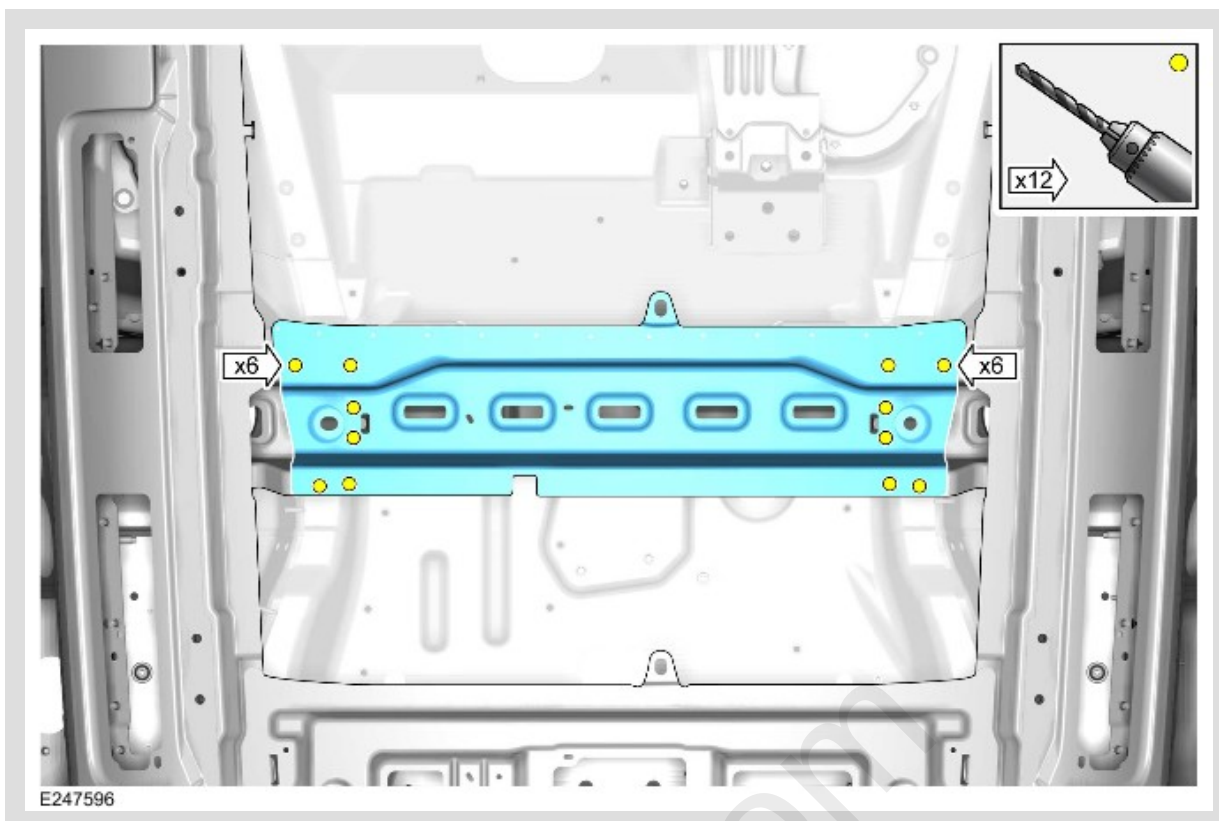
Where structural adhesive is to be applied between surfaces it is essential compression is applied to the joints during the curing period.

### NOTE:

Breakstem Fastener (BSF) installation involves using the Jaguar Land Rover (JLR) approved BSF installation tool and requires a hole diameter of 6.5 mm.

1. Remove the rivet remnants.
2. Dress the flanges where necessary.
3. Offer up the new rear roof reinforcement panel and clamp into position. Check alignment, if correct proceed to next step, if not rectify and check the alignment again before proceeding.

4.



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

5. Remove the new rear roof reinforcement panel.

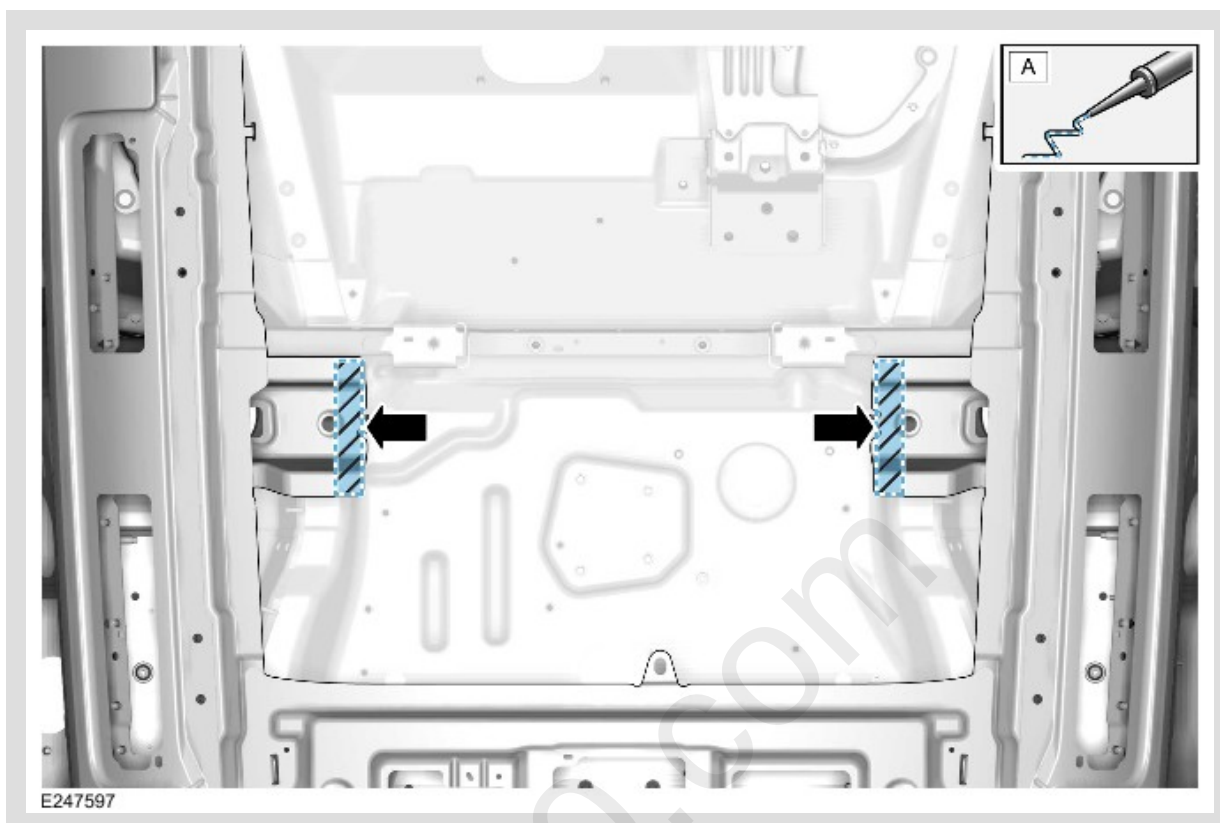
6. Deburr the drilled holes.

7. Clean and prepare the panel surfaces.

8.

 **NOTE:**

Make sure a continuous bead of adhesive surrounds fixing holes.



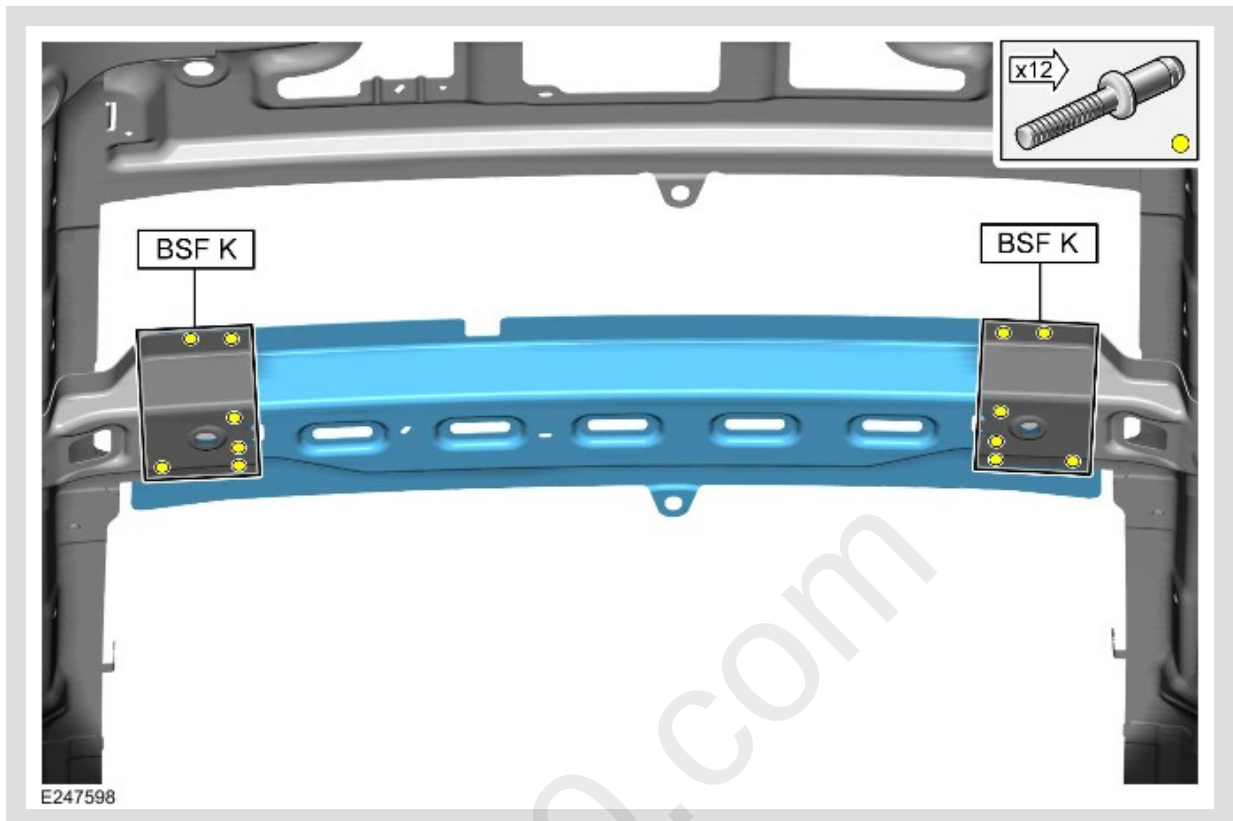
Apply a 5 mm zig zag bead of the Jaguar Land Rover (JLR) recommended bonding material as indicated.

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

10.

 **NOTE:**

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



Install the BSFs as indicated.

11. Remove any excess adhesive.

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

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

14. 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.

15. For additional installation information

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

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