

## Removal and Installation

### General Equipment

Measurement or alignment angle system

#### 1. Replacement Parts

- B-pillar outer panel
- B-pillar inner panel
- B-Pillar reinforcement
- NVH element

#### Removal



#### WARNING:

- A suitably powerful resistance spot welding device with inverter technology should be used for this repair. Observe the welding equipment instructions in sub-section 501-25.
- The welded joints at the front and rear door apertures must only be made by resistance spot welding. MIG puddle welding is not a permissible alternative.


#### 1. General notes

- Necessary removal work: Doors, B-pillar trim panel, rocker panel trim and driver or passenger seat.
- Reposition the carpeting and the wiring harness away from the working area.



#### WARNING:

- The B-pillar reinforcement is made of high-strength steel plate (Usibor 1500).
- A partial replacement in the area of the B-pillar reinforcement is not permissible. The required continuous MIG weld seam in the area of the cut causes structural changes which result in significant loss of strength in the B-pillar reinforcement.
- Due to its strength, the B-pillar reinforcement cannot always be worked on with conventional body tools.
- Additional preparations are required for MIG puddle welding.

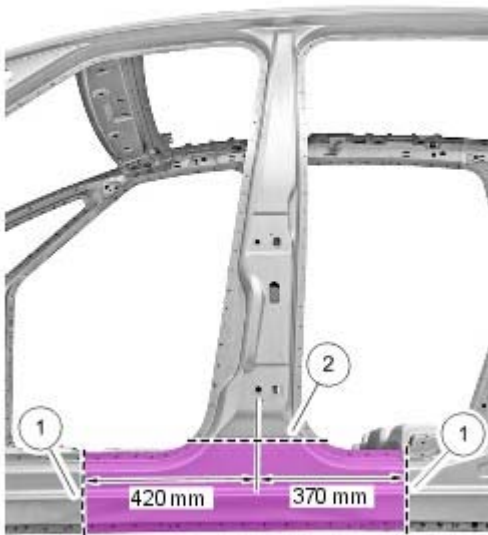
2.  **NOTE:** Due to the inner reinforcements and NVH elements, the specified dimensions for the cuts to be made in the rocker panel area must be complied with.

Outer B-pillar



- **NOTE:** Only cut through the outer panels of the B-pillar - do not damage the inner reinforcement of the rocker panel.

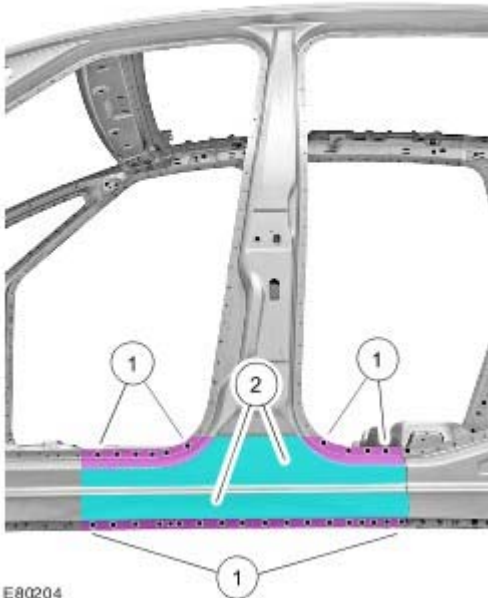
1. Rocker panel cut locations
2. B-Pillar cut location.



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### 3. Outer B-pillar


1. Mill out the spot welds.
2. Heat the bonded areas at the bottom of the B-pillar (approx. 170° C).



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4.  **NOTE:** Only cut through the outer panels. When making the cut at the roof rail, do not damage the inner reinforcement of the A-pillar.

Outer B-pillar

1. Roof rail cut location
2. B-Pillar cut location.



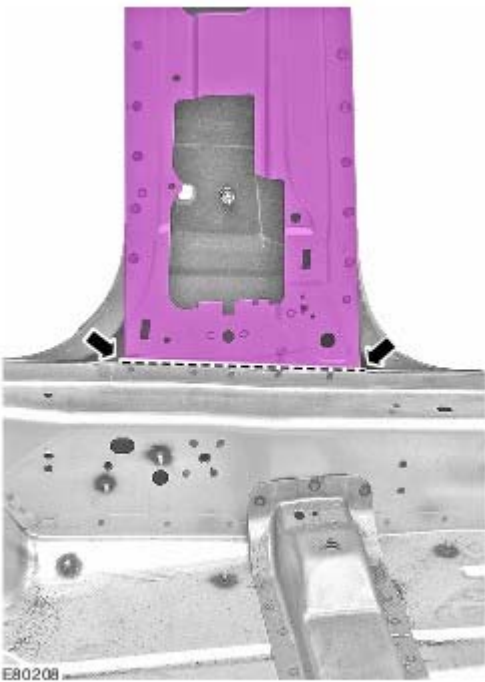
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### 5. Outer B-pillar

- Mill out the spot welds.

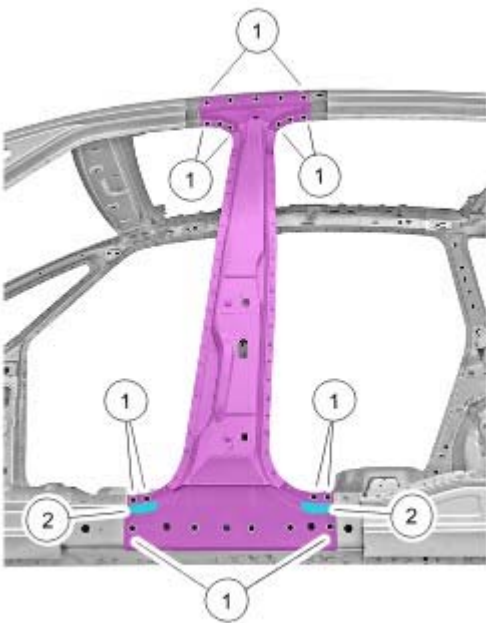
## 6. Inner B-pillar

- Rough cut location.

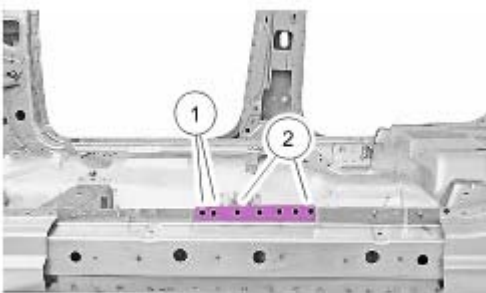


## 7. B-Pillar reinforcement

1. Grind out the spot welds.
2. Heat the bonded areas at the bottom of the B-pillar (approx. 170° C).



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## 8. Residual part on the inside of the B-pillar

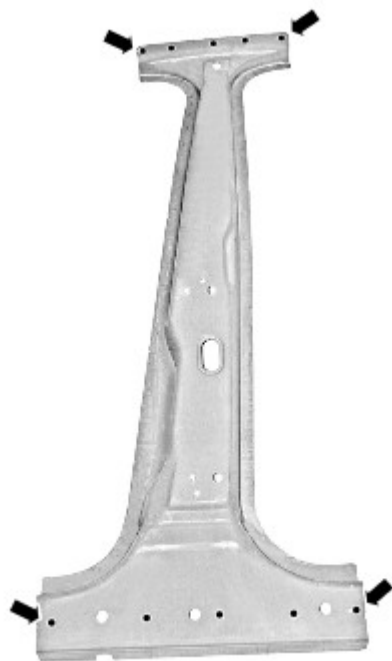
1. Mill out the spot welds (all panel thicknesses).
2. Mill out the spot welds.

## Installation

- **NOTE:** Before resistance spot welding of body panels with a total panel thickness of 3 mm and greater, the welding equipment instructions contained in sub-section 501-25 must be followed.



1.  **NOTE:** To start with the holes need to be pre-milled with a spherical cutter with a small diameter. Afterwards these holes are then milled out to the required diameter with a spindle milling cutter. This method is



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essential in order to ensure that the material in the edge area of the milled holes is not weakened.

#### B-Pillar reinforcement

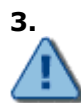
- Mill out the holes for puddle welding (10 mm diameter).



2. **WARNING:**The B-pillar reinforcement is covered with a hot-dip aluminized coating on its entire surface. This coating needs to be fully ground off on the MIG welding flanges on the front and rear using a fibre grinding disc. Any contamination due to parts of the coating in the welding bath will weaken the welded joint.

#### B-Pillar reinforcement

- Clean the contact areas.



3. **WARNING:**The A-pillar reinforcement is covered with a hot-dip aluminized coating on its entire surface. This coating needs to be fully ground off on the MIG welding flanges on the front using a fibre grinding disc. Any contamination due to parts of the coating in the welding bath will weaken the welded joint.

#### A-pillar reinforcement

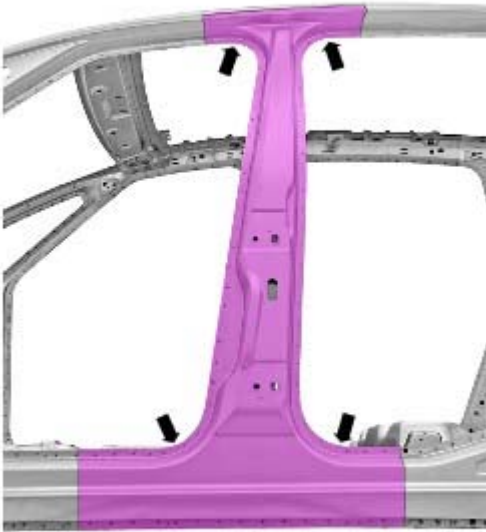
- Clean the contact area.



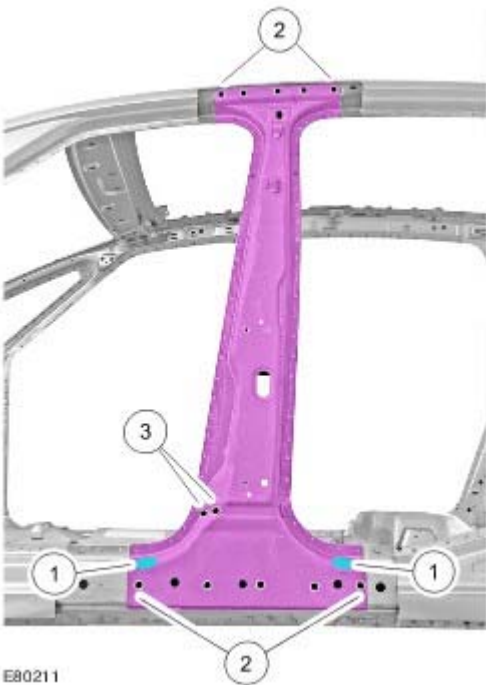
4. **NOTE:**Fit the B-pillar inner panel, B-pillar reinforcement and B-pillar outer panel in the vehicle and secure. Tack-weld the B-pillar inner panel and the the B-pillar reinforcement on the inside with MIG spot welds on the inside of the rocker panel and on the inner part of the roof frame. Take the B-pillar outer panel back off again.

#### B-pillar

- MIG welding from the inside (tack-welding)



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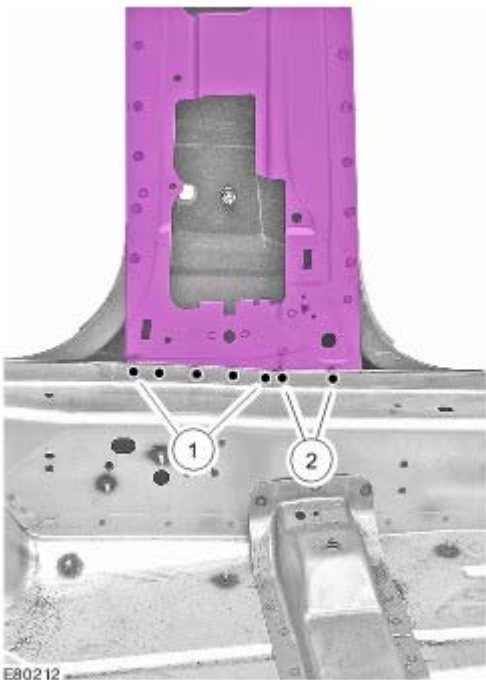
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#### 5. B-Pillar reinforcement

1. Apply PU glass adhesive to the rocker panel reinforcement.
2. Puddle weld.
3. Resistance spot weld.

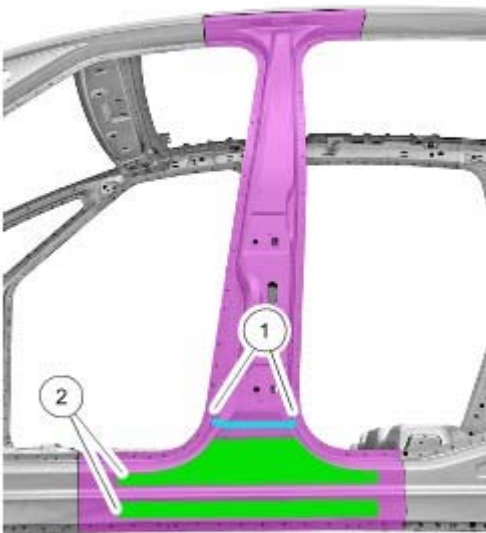
#### 6. Inner B-pillar

1. Resistance spot weld.
2. Puddle weld.



### 7. Outer B-pillar

1. Apply PU glass adhesive to the NVH element and insert the NVH element.
2. Apply PU glass adhesive to the inside of the B-pillar outer panel.




### 8. Outer B-pillar

- Continuous MIG weld seam.

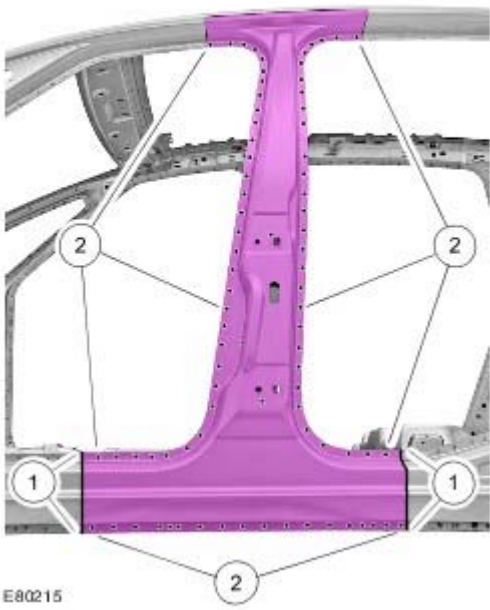


### 9. Outer B-pillar

1. Continuous MIG weld seam.


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2. Resistance spot weld.



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