



## Body Repairs

Audi A3 2013 ➤

Audi A3 Limousine 2014 ➤

Audi A3 Limousine China 2014 ➤

Audi A3 Sportback China 2014 ➤

Edition 02.2019



## Repair Group overview for Body Repairs

### Repair Group

00 - Technical data

50 - Body - front

51 - Body - centre

53 - Body - rear

Technical information should always be available to the foremen and mechanics, because their careful and constant adherence to the instructions is essential to ensure vehicle road-worthiness and safety. In addition, the normal basic safety precautions for working on motor vehicles must, as a matter of course, be observed.



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## 00 – Technical data

### 1 Vehicle identification data

(AKI000290; Edition 02.2019)

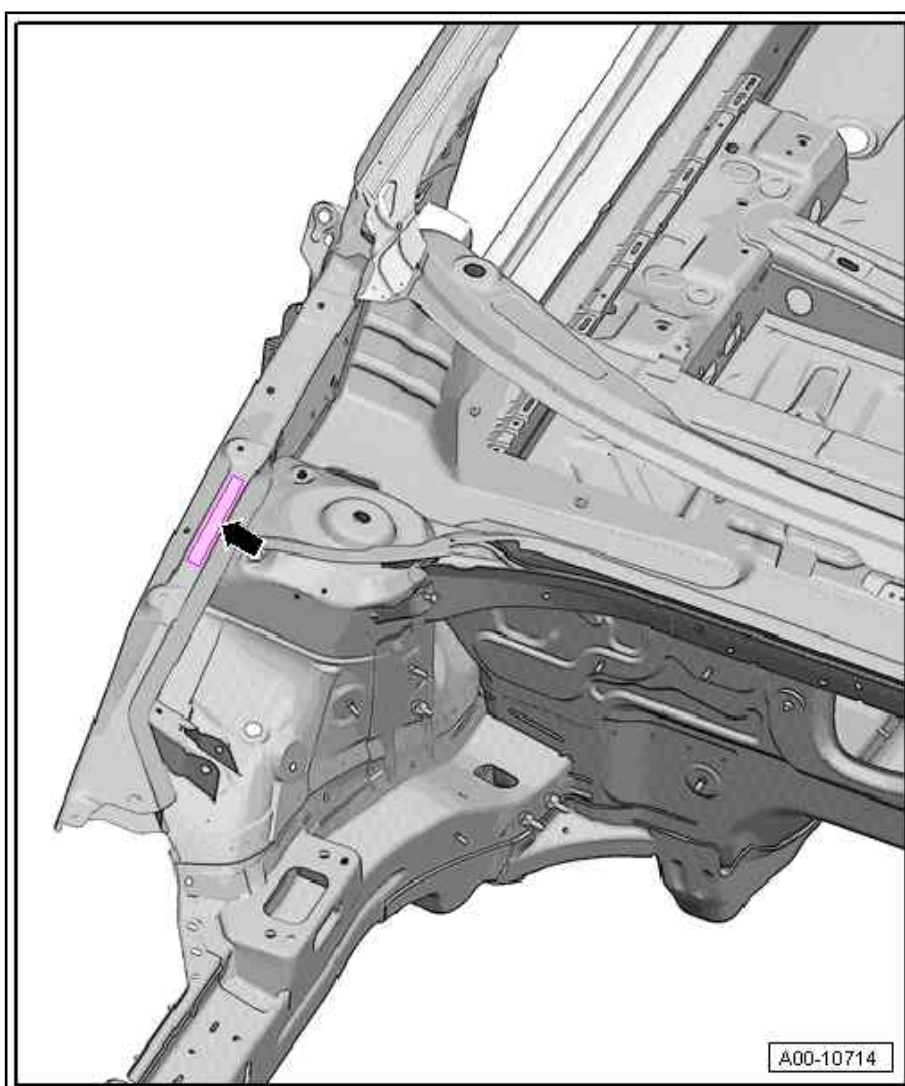
#### 1.1 Vehicle identification number



##### Note

*If the upper longitudinal member is renewed, the repairs must be documented according to the relevant national legislation.*

The vehicle identification number (chassis number) -arrow- is located on the upper longitudinal member on the right side in the direction of travel.





**!** NOTICE

If a component with the vehicle identification number is renewed due to damage, the repairs must be documented according to the market-specific legislation.

Please make sure to comply with the market-specific legislation when renewing a component with the vehicle identification number.

Before installing the new component, stamp the vehicle identification number on using stamped numbers - VAS 6939- and punched letters - VAS 6940- .

## 1.2 Type plate

The type plate is located on the passenger-side door pillar. Vehicles for certain export countries have no type plate.

## 1.3 Vehicle data sticker

The vehicle data sticker is located in the spare wheel well under the luggage compartment floor (left-side in direction of travel).

SORT.NR.	
FAHRZG.-IDENT-NR. VEHICLE-IDENT-NO.	
TYP/TYPE	
MOTORKB./GETR.KB ENG.CODE/TRANS.CODE	
LACKNR./INNENAUSST. PAINT NO./INTERIOR	
M.-AUSST/ OPTIONS	
V53-1283	



## 2 Important notes

This Manual describes only selected repair operations. Where repair operations are not described: separate original joint and repair with replacement panel. Repairs requiring a method different from that used in production are described specifically.

If no description is given for any sub-parts supplied, these should be matched up and butt welded with an SG continuous seam.



### 3 Safety precautions

#### DANGER

Damaged natural gas fuel tanks constitute an explosion risk - risk of death!

- If components at the rear and/or rear side of the vehicle (e.g. bumper cover, rear lid, underbody trim, longitudinal member, rear cross panel, etc.) are removed due to accident damage, the natural gas fuel tanks must be checked for damage.
- Carry out assessment of damage to fuel tanks made of composite fibre materials ⇒ Natural gas engines - general information; Rep. gr. 20 ; Assessing damage to fuel tanks made of composite fibre materials; Assessing damage to fuel tanks made of composite fibre materials .

#### DANGER

Only for vehicles with natural gas technology

When performing welding, cutting or drilling work in the vicinity of components that convey gas, these components must either be removed or safely covered up before performing repairs.

#### NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

#### CAUTION

Allow bonded joint on roof to harden for 60 minutes at approx. 65° to 80° C with radiant heater. Check temperature constantly with temperature sensor.

Always use an extraction system when performing welding and grinding operations.

Welding and grinding must never be performed simultaneously in the same working area.

Working area must be cleaned at regular intervals as necessary to remove dust.

Compressed air must NOT be used to blow out dust deposits.

The extraction system must be cleaned at regular intervals.

In addition, the relevant country-specific accident prevention and industrial safety regulations must be observed.



## **4 Work that requires high-voltage system to be de-energised**

### **4.1 The high-voltage system must be de-energised to perform the following work**

The high-voltage system must be de-energised according to the "Guided Fault Finding" routine and ONLY by this method; refer to chapter "De-energising high-voltage system".

**If performing welding, grinding or cutting work near high-voltage components, the system must be de-energised by a high-voltage technician.**

**When performing body repairs with a straightening jig, the system must be de-energised by a high-voltage technician.**

**Only electrically instructed persons may perform work after the system has been de-energised.**



## 5 Extraction systems for steel/aluminium body repair station ("multi-material-mix" workplace)



### Note

*The extraction units VAS 6572/1 and VAS 6572/2 must be emptied every time before and after use.*

### Fine aluminium dust

Fine particles of aluminium dust are flammable and/or explosive. Extraction systems for aluminium dust must therefore be designed to prevent any external ignition sources from entering the filter or dust collector. The stationary extraction systems used up until 2009 (which are "pure" aluminium extractors, manufactured by Dansk Klimablock / Aeroweld or Nederman) do not have this protection and cannot be modified to include it. All these extraction systems and the systems available on the market for aluminium are of the type that require all ignition sources to be avoided. For this reason, since the possibility of sparks originating from steel parts cannot be entirely ruled out, vehicles with any steel body panels must NOT be repaired at these repair stations.

The mobile extractors VAS 6572/1 used since 2009 (meeting German dust filtration class M) and VAS 6572/2 (class H) have threefold protection against sparks being drawn in if steel is being worked on in the vicinity. This protection consists of a 5-metre long anti-static intake hose, a spark trap and a 5-metre long settling section. This ensures that, even if steel panels are inadvertently sanded or ground, the glowing sparks are cooled well below the temperature required to ignite aluminium dust. The system is TÜV-certified for steel sparks, which are much hotter and glow for longer than aluminium.

A second possible risk is the static charge which can build up in the metal particles due to friction in the intake hoses and pipes and which can be a source of ignition in the same way as a glowing spark. The connections on the extractor system and the intake hoses have Storz C-type fire hose couplings to ensure that only the anti-static "OHM"-type hoses can be connected and no other types of hose will fit.

The third risk is that the extractor itself can be an ignition source affecting the surroundings. However, since these extractors are based on industrial systems, they automatically possess all design features required for zone 22 and to avoid any effects as an ignition source affecting the surroundings. In any case, accident repair methods such as cutting, grinding and welding will generally produce far more ignition sources than are likely to originate from an extraction system.

### Fine steel dust

Steel sparks and steel dust present no risk in themselves. However, in a multi-material-mix workplace it is the flying steel sparks which constitute the greatest risk potential for the aluminium dust powder. For this reason, and in order to meet the requirement of keeping the processes separate, it is essential in all cases to have an extractor for steel that is allocated exclusively to that body workbay. If one were to always use the extractor for aluminium for all types of work (because it has a certified spark trap) this would in effect amount to an extreme test of its ability to prevent an explosion - right next to the person at the workplace! The extractor VAS 6571/1 is similar in design to the basic unit VAS 6572/2, but does not have the 3-stage spark trap. It is also suitable



for use in zone 22. The filter meets the requirements of class "M", which is sufficient for metal dust.



## 6 Galvanised body panels, high-strength and extra-high strength steel



### Note

*Repairs must always be made according to the manufacturer's instructions in the respective Workshop Manual. Ultra-high-strength and hot-formed steel body panels may only be repaired using modern inverter technology, otherwise maximum occupant protection will not be achieved after repairs. Hot-stamped steel panels are used in areas under extreme loading. These panels offer significantly greater strength than conventional high-strength panels for less weight.*



### Note

- ◆ *For lightweight construction, Audi employs several different types of steel: soft steel, high-strength steel, modern high-strength steel, ultra-high strength steel and hot-formed ultra-high strength steel.*
- ◆ *Cutting and joining of these components by butt welding is only permissible at the specified locations. There is a stipulated repair method for this repair work.*
- ◆ *Spot welding is only permissible using resistance spot welders approved by AUDI AG.*

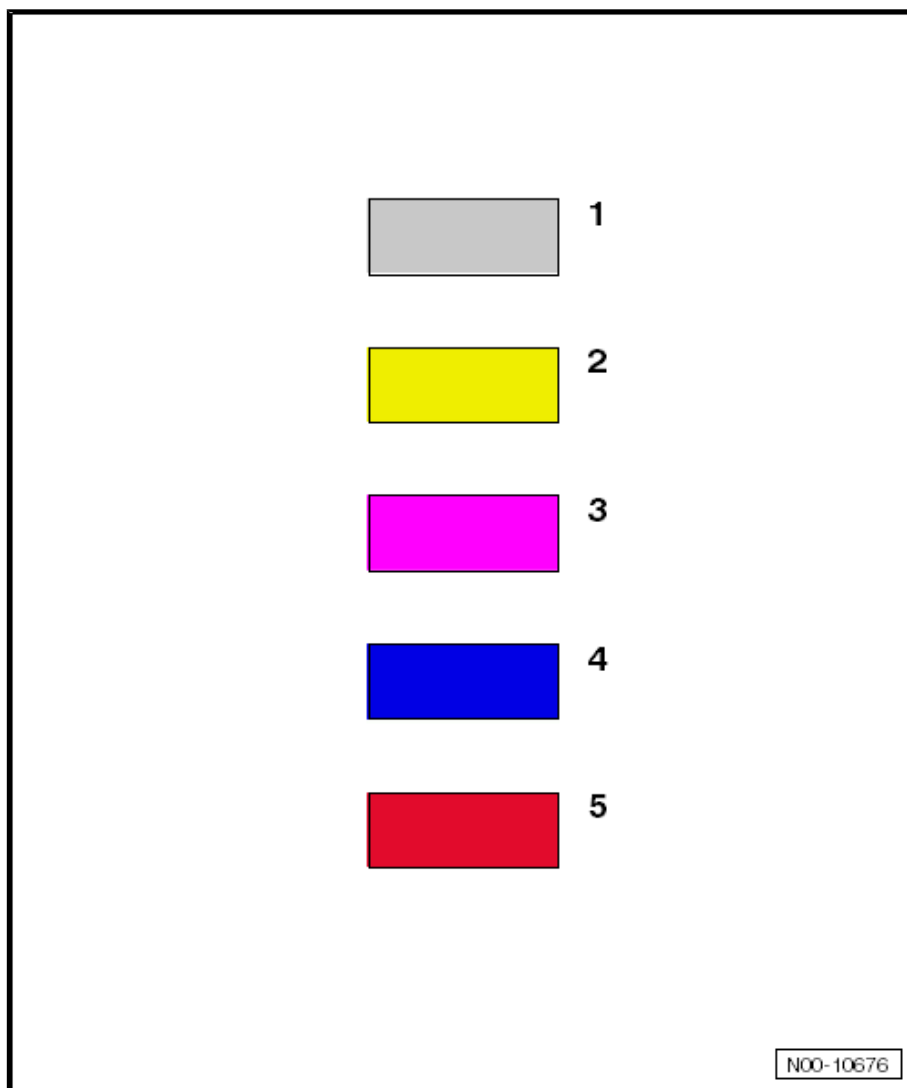


### NOTICE

**Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.**

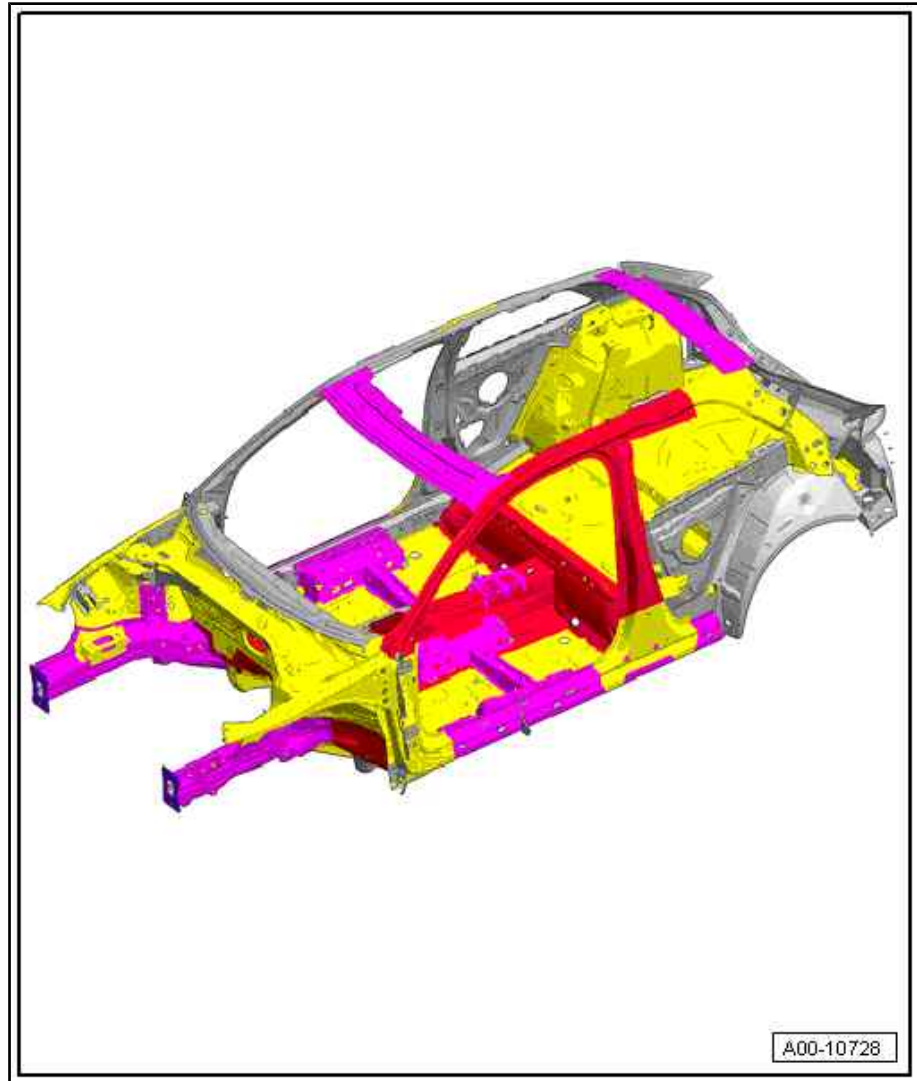
The body of the vehicle is predominantly manufactured from galvanised steel panels.

The following illustrations show the various types of steel in different colours, ranging from soft steel to hot-formed steel (see table below).

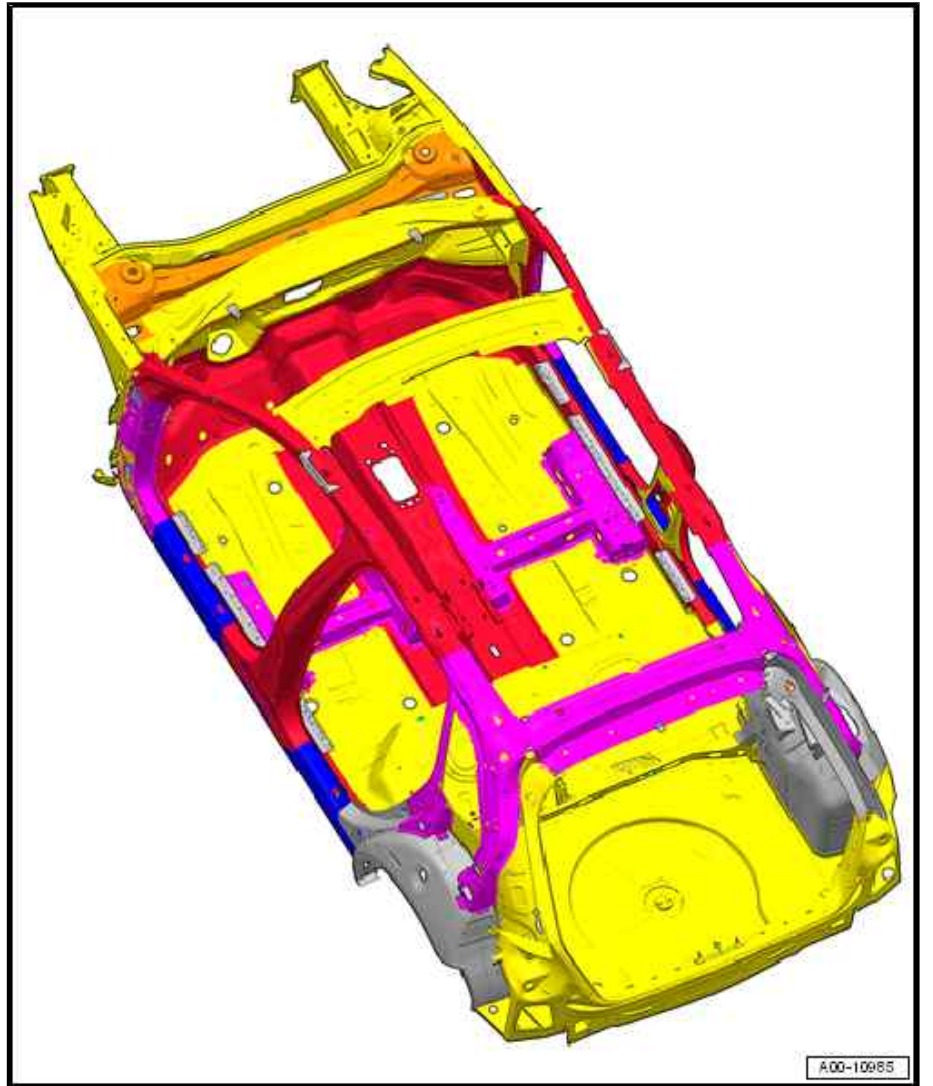


	Colour	Type of steel	Tensile strength / minimum yield strength in MPa
1	Grey	Soft	< 350
2	Yellow	High-strength steel	300 - 590
3	Magenta	Modern high-strength steel	500 - 980
4	Blue	Ultra-high-strength steel	980 - 1150
5	Red	Ultra-high-strength steel (hot-formed)	> 1400

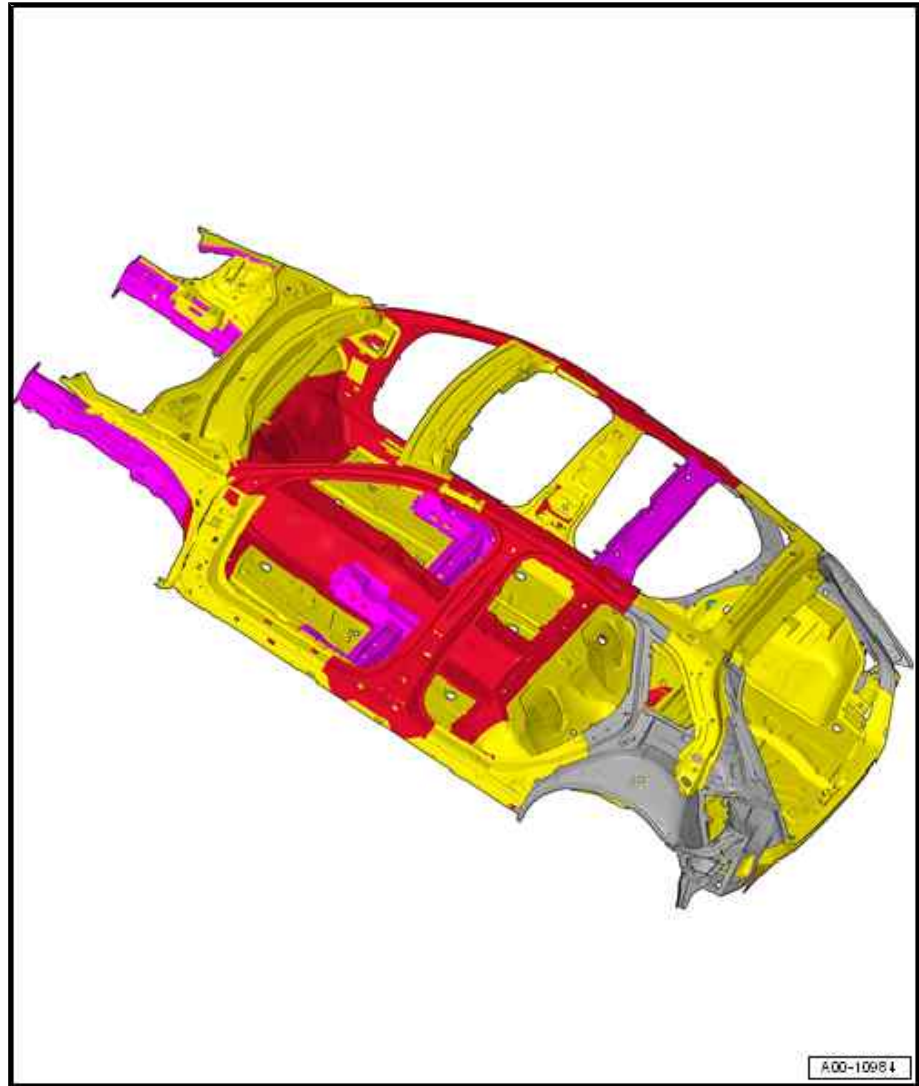
The outer side panel and roof are removed to give a clearer illustration. These panels consist of »normal« sheet metal.



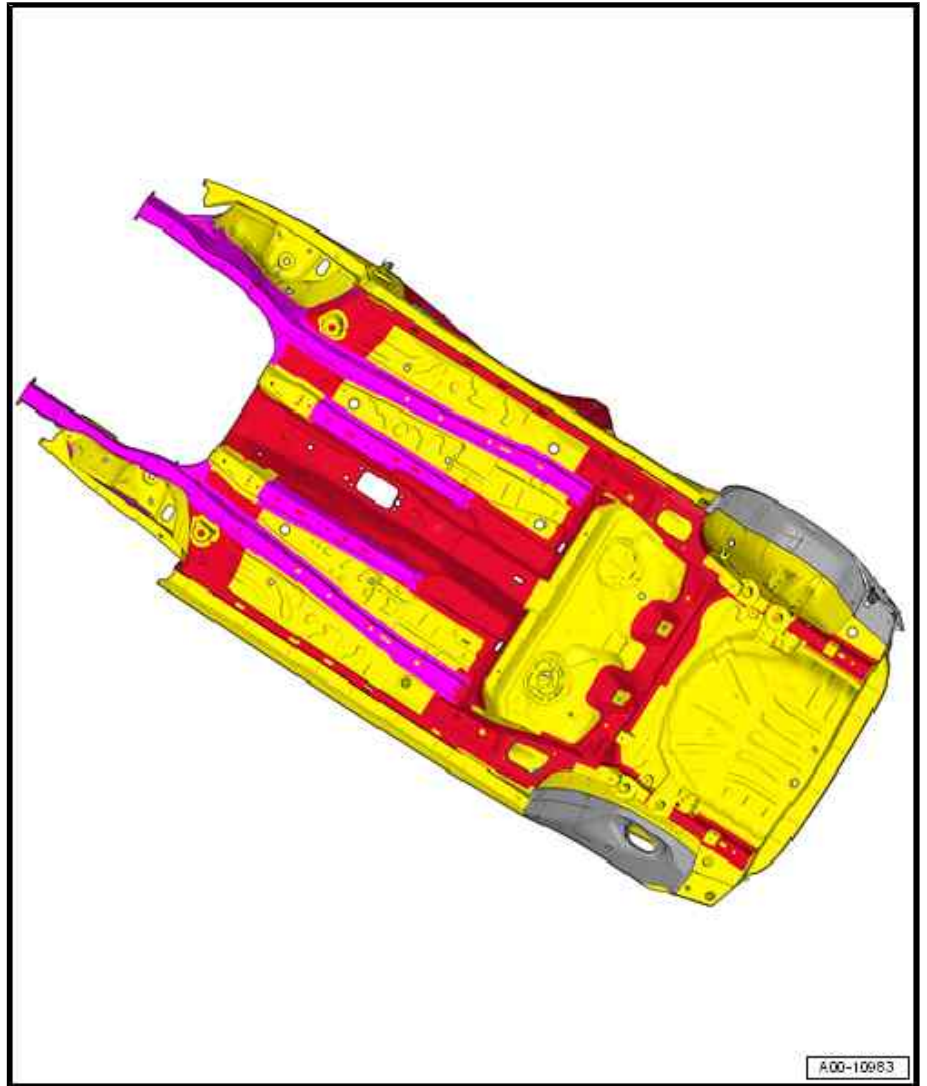
The outer side panel and roof are removed to give a clearer illustration. These panels consist of »normal« sheet metal.



The outer side panel and roof are removed to give a clearer illustration. These panels consist of »normal« sheet metal.

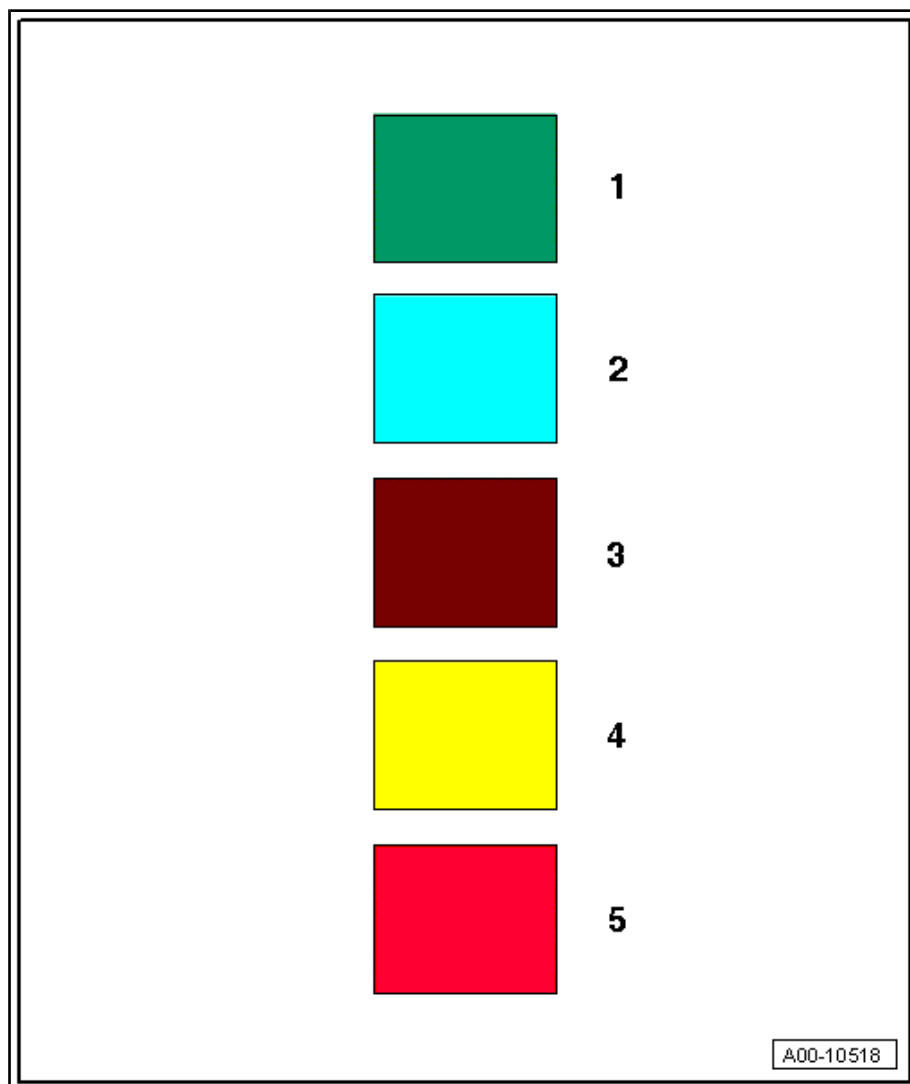


The outer side panel and roof are removed to give a clearer illustration. These panels consist of »normal« sheet metal.



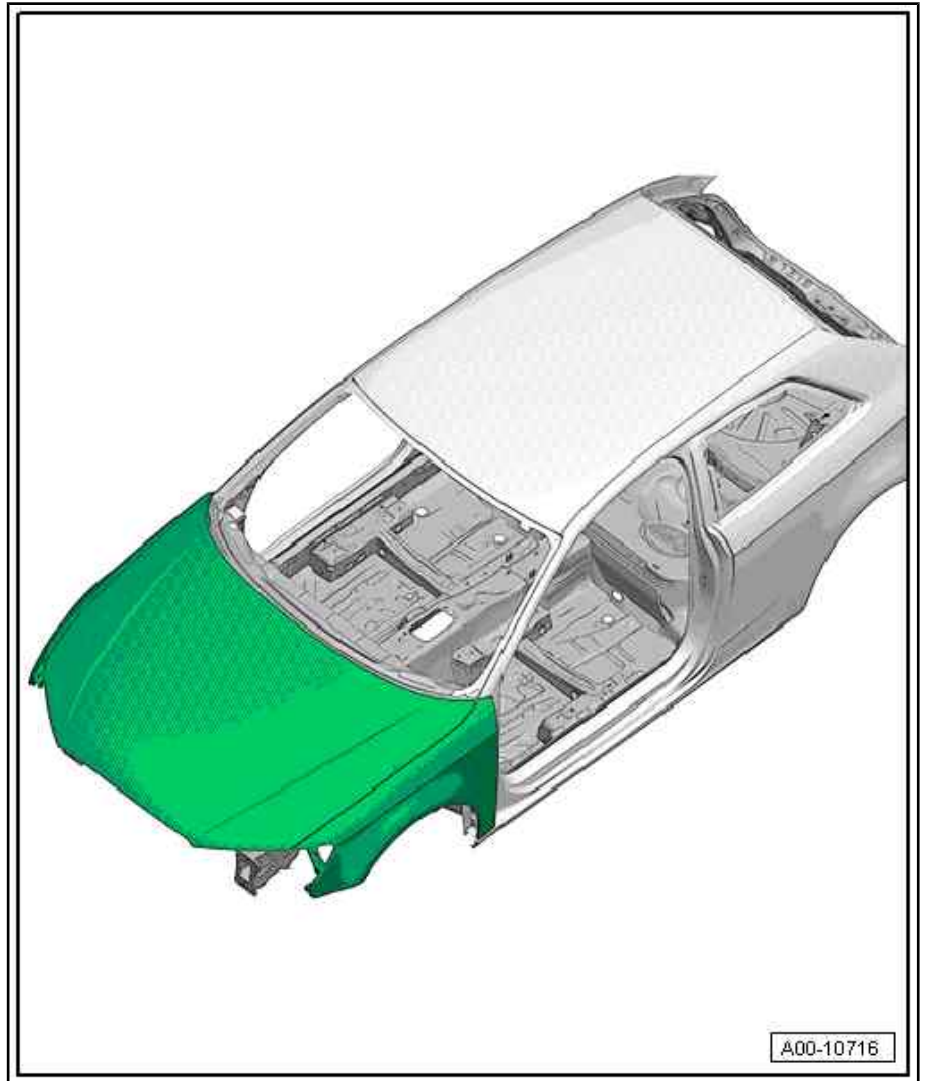
## 6.1 Aluminium panels

The hang-on parts of this vehicle are made of aluminium.

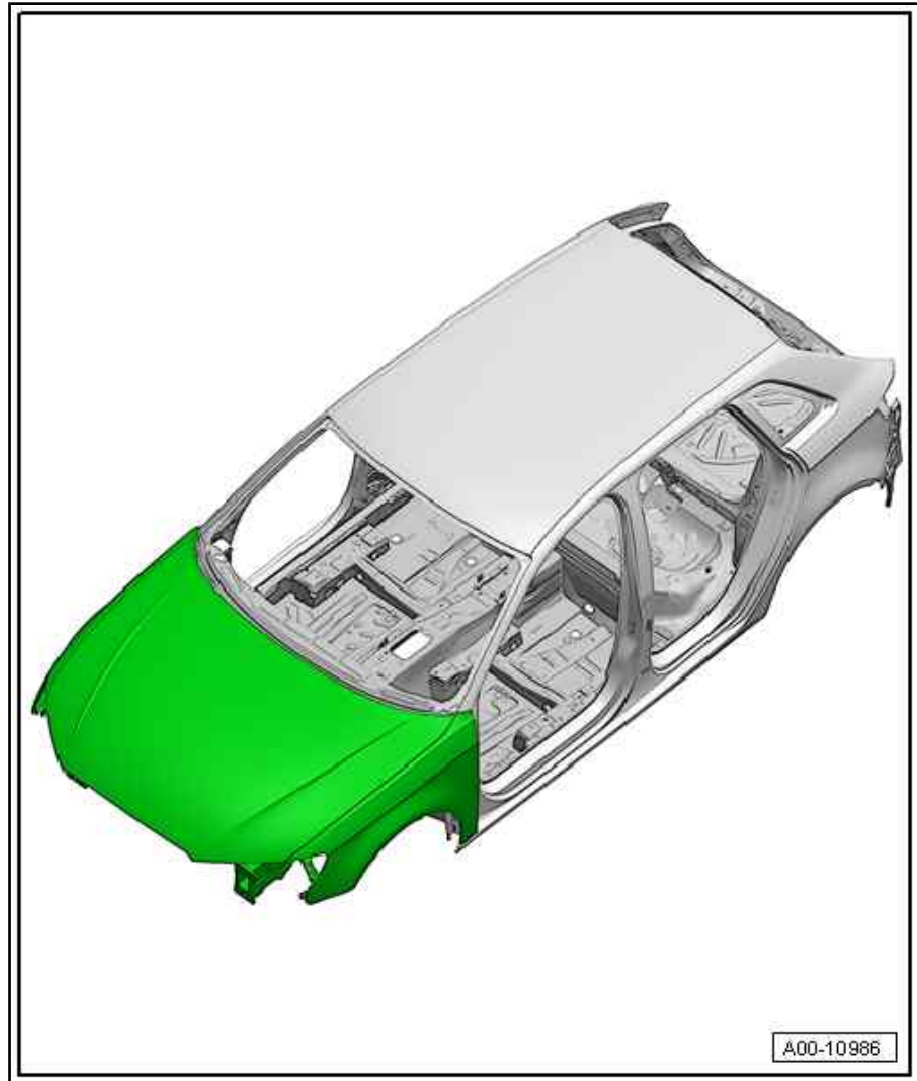


	Colour	Aluminium
1	Green	Aluminium sheet panels
2	Blue	Aluminium extrusions
3	Brown	Cast aluminium profiles

## Audi A3



Audi A3 Sportback



Audi A3 Saloon





## 7 Moulded foam inserts

### CAUTION

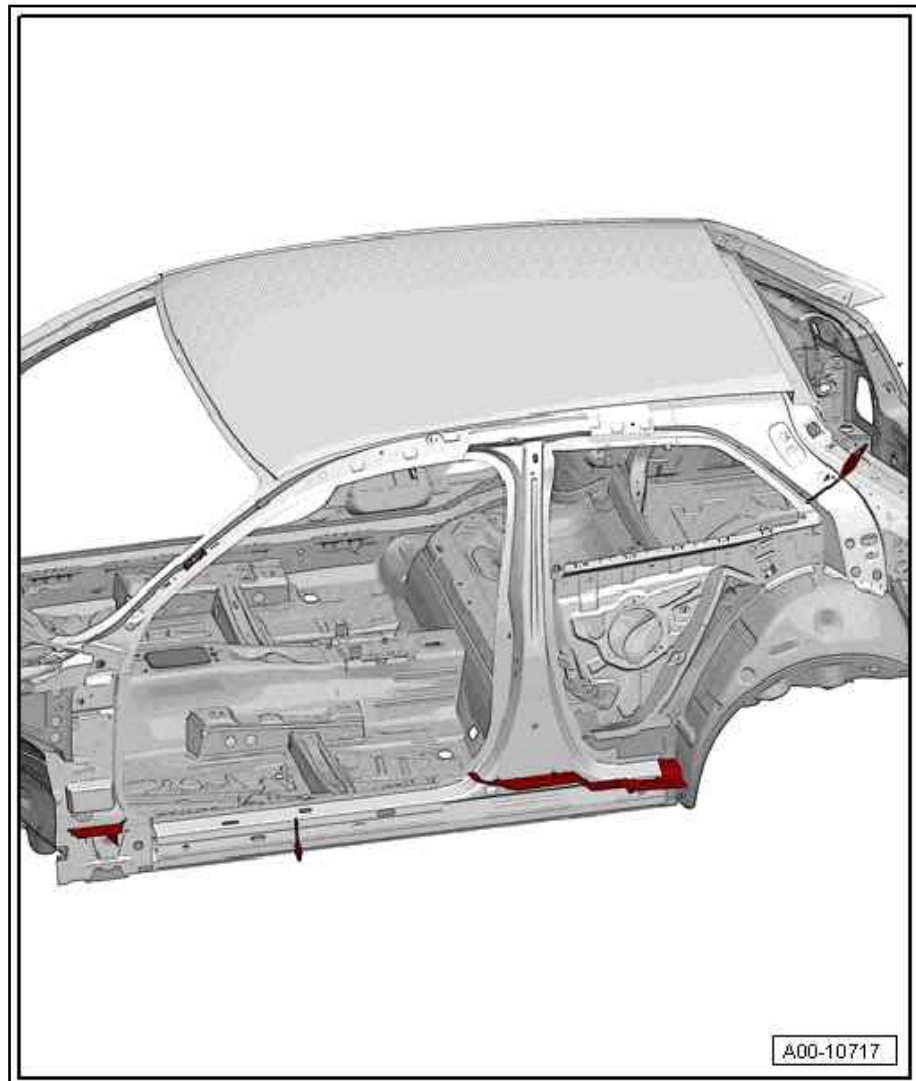
Always observe safety precautions.

Gases which damage the environment and are hazardous to health are given off if spark-generating tools for welding or cutting are used in the vicinity of foam material; do NOT use these methods in foam-filled areas.

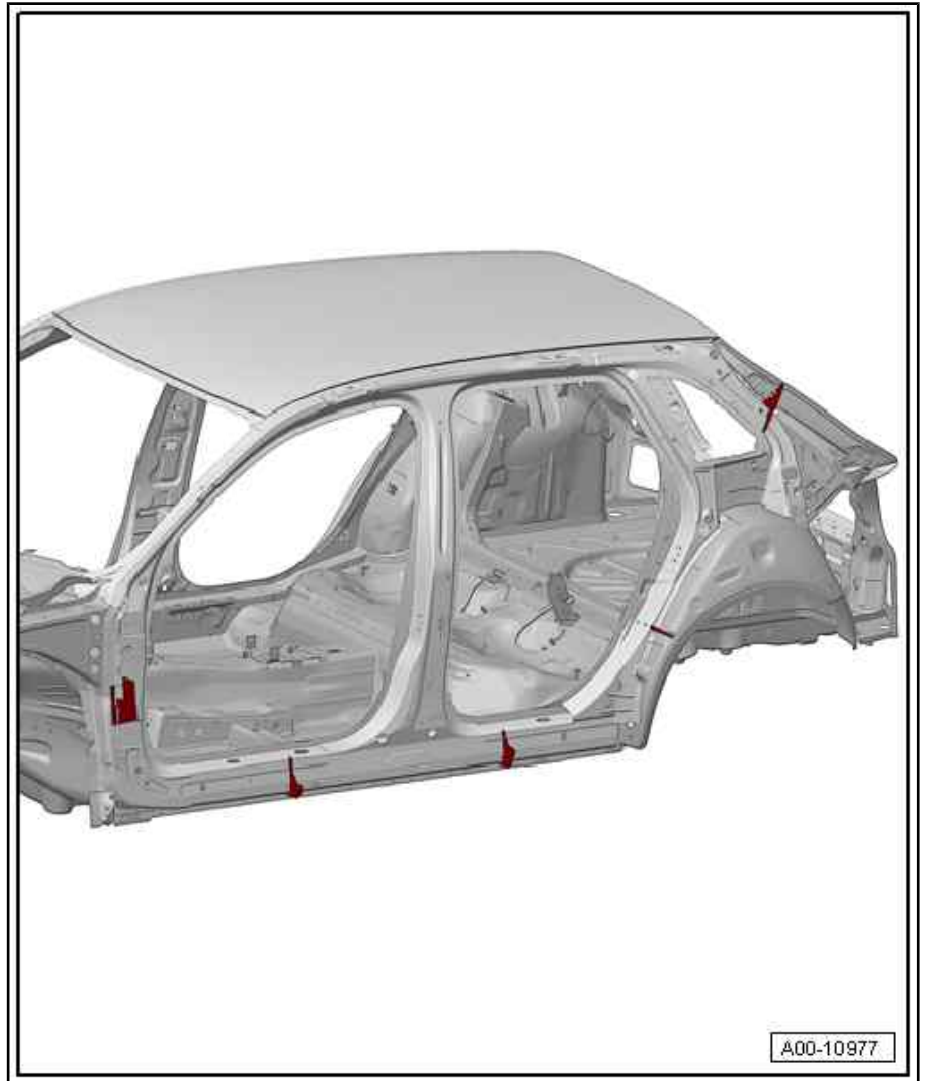
On this vehicle, various body cavities are fitted with moulded foam inserts.

The foam inserts reduce the noise transmitted to the interior when driving.

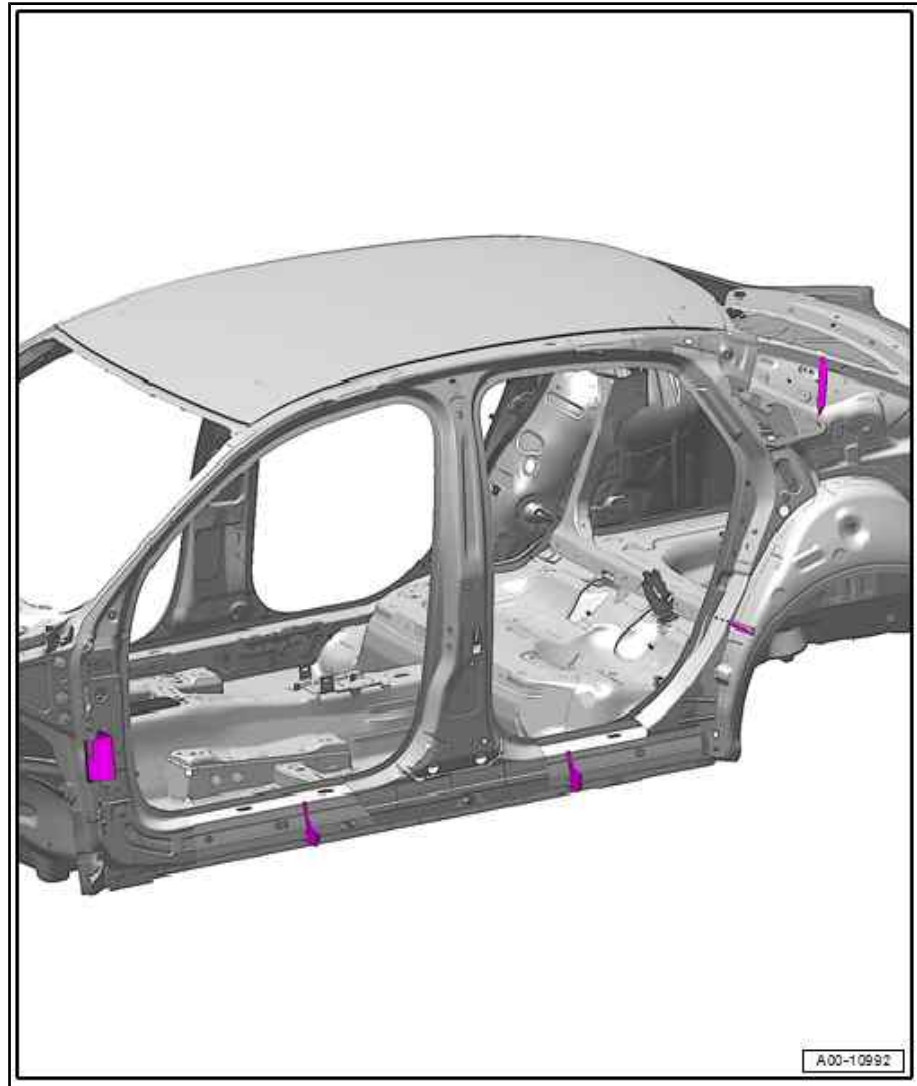
These pre-moulded parts are fitted during body manufacture and subsequently increase their volume in the paint shop drying oven at approx. 180 °C after priming.



Moulded foam inserts (Sportback)



Moulded foam inserts (Saloon)



**CAUTION**

The moulded foam inserts expand only after reaching approx. 180 °C. For this reason, a 2-component filler foam is used when performing repairs.

The material required for workshop repairs is 2-component filler foam - D 506 KD1 A3 - .

Since the temperature necessary for the foam inserts to expand cannot be achieved under normal workshop conditions, proceed as follows:

Remove residue of foam material on vehicle.

Restore paint coating; apply two coats (wet on wet) of glass/paint primer - D 009 200 02- if necessary, flash-off time approx. 10 minutes.

**Requirement**

Before continuing with this procedure, ensure that the replacement panel is ready for installation, i.e. cut to shape, matched up to the vehicle, corrosion protection applied.

**Renewing moulded foam insert**

Fix moulded foam insert to vehicle.



Apply 2-component filler foam -D 506 KD1 A3- to replacement part.

Secure the new part in position, gently pressing in the new part in the area of the moulded foam insert, and weld in.

The foam hardens within 25 minutes.

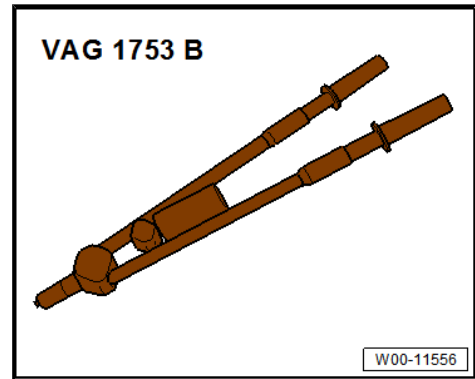
Do not weld (SG) within 15 mm of the foam insert (on either side).

After painting the vehicle the repaired area must be cavity-sealed.

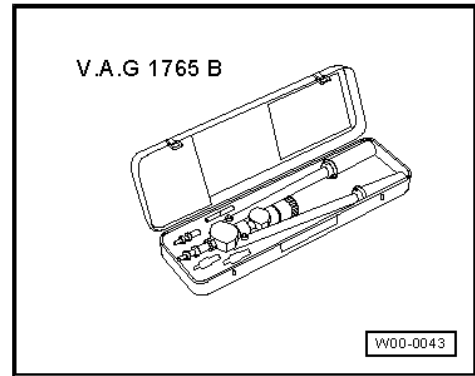


## 8 Overview of rivets and tools

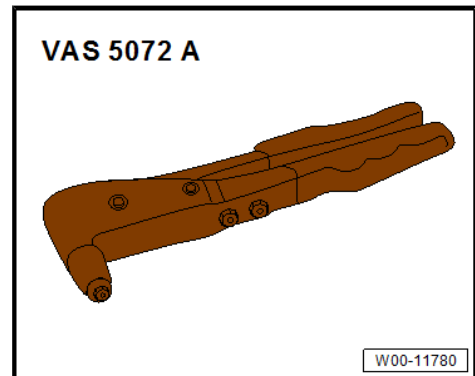
Pop rivet pliers - VAG 1753 B-



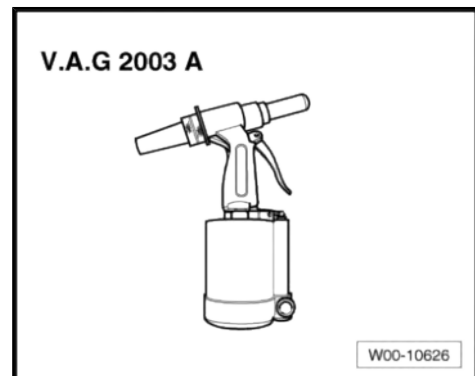
Pop rivet nut pliers - V.A.G 1765-



Pop rivet pliers - VAS 5072 A-

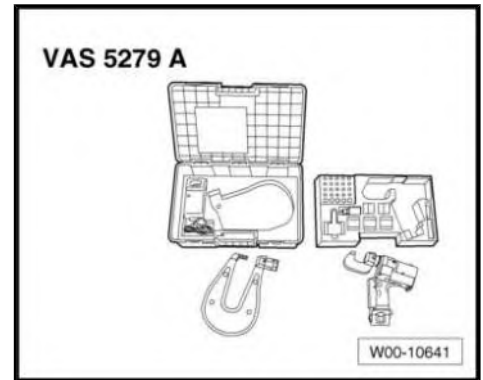


Pneumatic pop riveter - V.A.G 2003 A-





- Rechargeable riveter - VAS 5279 A-
- Rechargeable riveter - VAS 843 001-
- Pneumatic/hydraulic pop rivet pliers - VAS 6759-
- Compact booster - VAS 6790-
- Compact riveter - VAS 6792-
- Compact riveter - VAS 6792/2-
- Socket for flow-drill screws - VAS 852 007-
- Dent remover - VAS 852 001-





Rivet	Order number Size	V. A. G 17 65	V A S 52 79	V A S 50 72	VA G 17 53 B	VA G 20 03 A	V A S 67 90	V A S 6 7 9 2/ 2	VA S 84 3 00 1	V A S 6 7 5 9	V A S 8 5 2 0 07	V A S 8 5 2 0 0 1
Punch rivet	4D0.803.217 N 3.35 x 5 mm		x				x		x			
Punch rivet	4D0.803.217 Q 3.35 x 4 mm		x				x		x			
Punch rivet	N. 912.295.02 4.3 x 5 mm		x				x		x			
Punch rivet	4D0.803.217.L 5.3 x 5 mm		x				x		x			
Punch rivet	4D0.803.217.M 5.3 x 6.5 mm		x				x		x			
Punch rivet	N. 909.261.02 5.3 x 6 mm		x				x		x			
Punch rivet	N. 911.365.01 5.3 x 7.5 mm		x				x		x			
Punch rivet	N. 911.348.01 5 x 4.2mm		x				x		x			
Solid aluminium rivet	N. 103.239.01 4 x 8 mm		x				x		x			
Solid aluminium rivet	N 103.240.01 4 x 12 mm		x				x		x			
Solid aluminium rivet	N. 107.440.01 6 x 10 mm		x				x		x			
Solid aluminium rivet	N. 107.441 01 6 x 12 mm		x									



Rivet	Order number Size	V. A. G 17 65	V A S 52 79	V A S 50 72	VA G 17 53 B	VA G 20 03 A	V A S 67 90	V A S 67 92/ 2	VA S 84 3 00 1	V A S 67 59	V A S 85 20 07	V A S 85 20 01
Alumi- nium pop rivet with coun- ter- sunk head	4E0.809. 864.A						x	x	x	x		
Alumi- nium pop rivet with round head	8Z0.809. 864						x	x	x	x		
Flow- drill screw s	WHT 003 873 M5 x 25										x	
Flow- drill screw s	WHT 006 547 M5 x 20										x	
Flow- drill screw s	WHT 007 052 M5 x 18										x	
Threa- ded rivet	N. 907.163. 01 14 mm				x	x	x	x	x	x		
Threa- ded rivet	N. 907.162. 01 10 mm				x	x	x	x	x	x		
Threa- ded rivet	N. 907.161. 01 22 mm				x	x	x	x	x	x		
Threa- ded rivet	N 907.160. 01 6 mm				x	x	x	x	x	x		
Pop rivet	WHT. 005.413. A 6.5 mm Panel thick- ness that can be riveted: 3.35 – 5. 35 mm				x	x	x	x	x	x		



Rivet	Order number Size	V. A. G 17 65	V A S 52 79	V A S 50 72	VA G 17 53 B	VA G 20 03 A	V A S 67 90	V A S 6 7 9 2/ 2	VA S 84 3 00 1	V A S 6 7 5 9	V A S 8 5 2 0 07	V A S 8 5 2 0 0 1
Pop rivet	WHT. 005.697 6.5 mm Panel thick- ness that can be riveted: 2.8 – 4.8 mm				x	x	x	x	x	x		
Pop rivet:	N. 904.692. 02 6.5 mm Panel thick- ness that can be riveted: 6.8 – 8.8 mm				x	x	x	x	x	x		
Pop rivet	N. 911.527. 01 6.5 mm Panel thick- ness that can be riveted: 4.5 – 7.0 mm				x	x	x	x	x	x		
Pop rivet	N. 909.236. 01 4.8 mm Panel thick- ness that can be riveted: 2.4 – 4.8 mm				x	x	x	x	x	x		
Pop rivet	N. 905.344. 03 4.8 mm Panel thick- ness that can be riveted: 1.5 – 3.5 mm				x	x	x	x	x	x		



Rivet	Order number Size	V. A. G 17 65	V A S 52 79	V A S 50 72	VA G 17 53 B	VA G 20 03 A	V A S 67 90	V A S 67 92/ 2	VA S 84 3 00 1	V A S 67 59	V A S 85 20 07	V A S 85 20 01
Pop rivet	N. 906.924. 02 4.8 mm Panel thick- ness that can be riveted: 2.4 – 5.0 mm				x	x	x	x	x	x		
Pop rivet	4S0.843. 658				x	x	x	x	x	x		
Pop rivet bolt	WHT. 005.180	V. A. G 17 65 C/ 2										
Pop rivet bolt	N 910 011 01	V. A. G 17 65 C/ 4										
Pop rivet nut	N 910 377 01 M10	V. A. G 17 65										
Pop rivet nut	N 908 568 02 M8	V. A. G 17 65										
Weld stud	VAS 852.001/ 1 5 mm							x				x
Weld stud	VAS 852.001/ 2 4 mm							x				x



## 9 Overview of rivets used for repair measures

In production	For repair measures	To be used
Punch rivet, Ø 3.3	Aluminium/ aluminium	Solid aluminium rivet: Ø 4 mm N.103.239.01 N.103.240.01
Punch rivet, Ø 5.3	Aluminium/ aluminium	Solid aluminium rivet: Ø 6 mm N.107.440.01 N.107.441.01
Punch rivet, Ø 3.3 and friction elements	Aluminium/ steel	Pop rivet: Ø 4.8 mm N.905.344.03 Panel thickness that can be riveted: 1.5 - 3.5 mm N.906.924.02 Panel thickness that can be riveted: 2.4 - 5.0 mm
Punch rivet, Ø 5.3 and flow-drill screws (where applicable)	Aluminium/ steel	Pop rivet: Ø 6.5 mm WHT.005.413.A Panel thickness that can be riveted: 3.35 - 5.35 mm WHT.005.697 Panel thickness that can be riveted: 2.8 - 4.8 mm N.911.527.01 Panel thickness that can be riveted: 4.5 - 7.0 mm N.904.692.02 Panel thickness that can be riveted: 2.4 - 5.0 mm

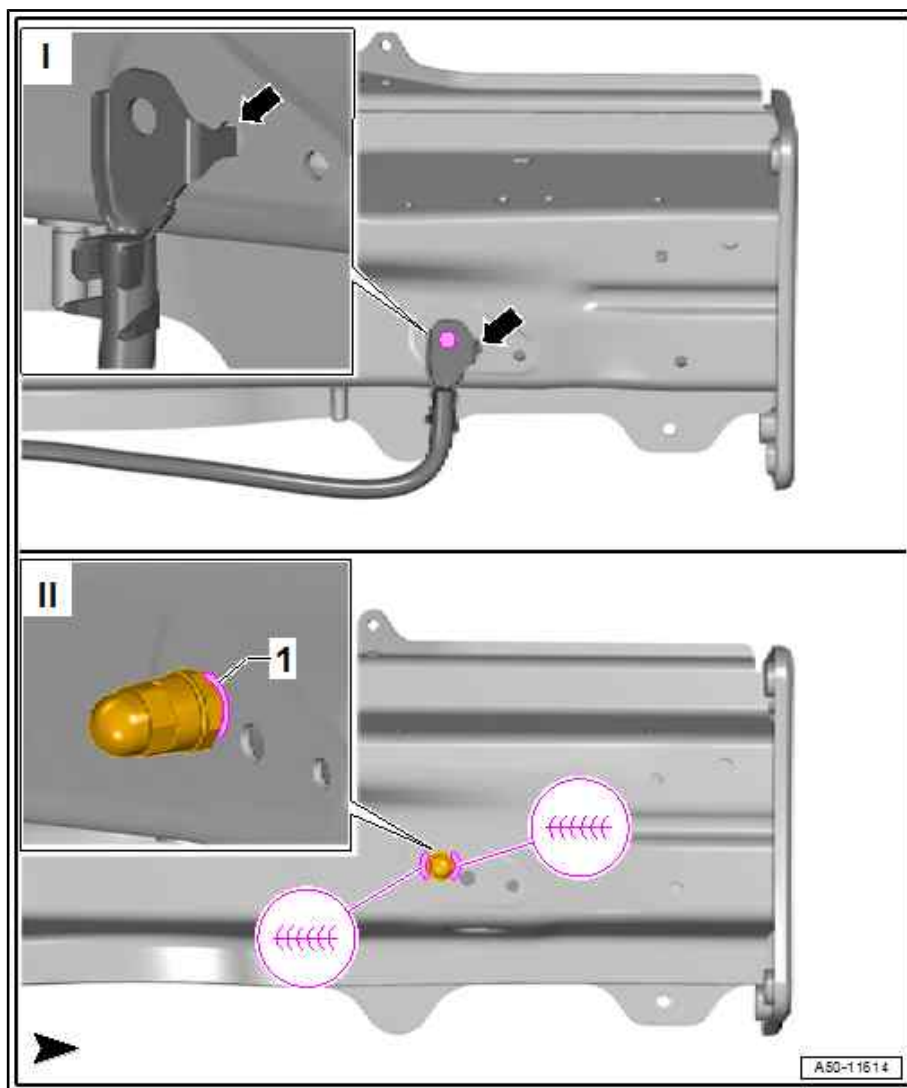


RO: 50 80 55 00

## 10 Renewing studs

The procedure for renewing weld screws, studs and weld studs with cap nut is described as an example.

This procedure should be used appropriately for all types of studs, screws etc.



- Take installation position of stud from old part or mark it using appropriate aids (e.g. earth cable tab -arrow-).
- Weld stud with 2 weld seams on either side -1- using shielded arc welding equipment : SG continuous seam.
- To ensure adequate electrical conductivity, the length of the weld seams must be at least 12 mm on each side of the stud.
- Clean contact surface of stud after welding work is complete.



## 11 Laser welding

The laser welding technique employs a high-energy light beam directed onto the weld by means of optical lenses or fibre optics.

During the welding process the upper panel is fused onto the partially molten lower panel, creating a weld joint with no additional material.

When performing repairs, the laser weld seams are replaced by SG plug weld seams or RP spot weld seams.

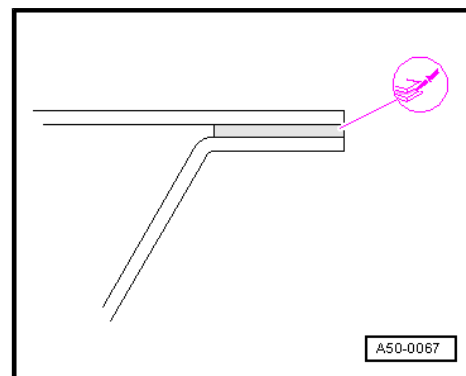


## 12 Bonded joints

The body of the Audi A3 features bonded joints and spot-welded bonded joints for increased rigidity and strength.

### 12.1 Bonded joints

In the case of adhesive-bonded joints, the joint between the sheet metal parts is formed only by the adhesive.



### 12.2 Inspecting and repairing bonded joints

Particular attention should be given to these joints when diagnosing accident damage and performing body repairs.

Note the following points: Do not use a chisel to test the strength of a joint or relieve stresses by hammering as this will cause irreparable damage to the bonded joint.

These joints should be inspected particularly closely when diagnosing accident damage and after performing straightening work on the body.

If the joint is not accessible with pop rivets, it must be repaired with an arc-welded seam (SG). In this case the complete area must be repaired as the heat generated by welding destroys the adhesive joint. The SG seams should be welded working from the thin to the thick panel. Always use a fume extractor.



## 13 Repair methods for replacing body parts

When making repairs, welded joints can be used in place of all spot-welded bonded joints and certain bonded joints if no suitable body adhesive is available.

Do not make the repair with only the same spot welds or seams as originally used in production. These alone are not adequate for a proper joint.

The repair methods are shown in detail on the following pages.



### Note

- ◆ *If the instructions call for additional spot welds, these should be applied in a single operation.*
- ◆ *Do not place new spot welds in-between the original spot welds.*
- ◆ *SG plug welding should only be performed after spot welding.*
- ◆ *This avoids any increased shunt current when spot welding.*

Ensure good root penetration at all joints.

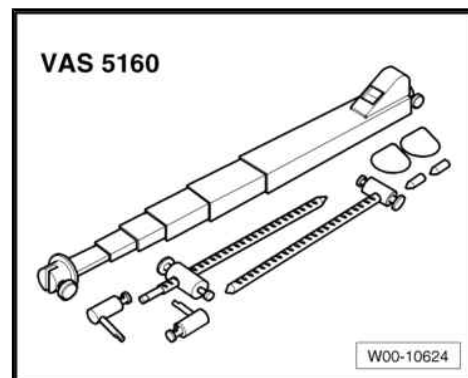
Seal off repaired joint flanges and apply cavity sealing.



## 14 Body dimensions

### Note

- ◆ Dimensions are only given for checking purposes. Correct dimensions are defined by the alignment bracket set.
- ◆ Bolts, screws, plugs, trim panels and attached components must be removed before starting the measuring process.
- ◆ The body dimensions should be measured using the telescopic gauge - VAS 5159- or the telescopic gauge - VAS 5160-.
- ◆ To avoid inaccurate measurements, make sure the measuring rods are always of equal length.



### Body - front

#### NOTICE

These dimensions only serve as a check. Correct dimensions are defined by the alignment bracket set.

### 14.1 Body - front

#### A - 1345 mm ± 2.0 mm

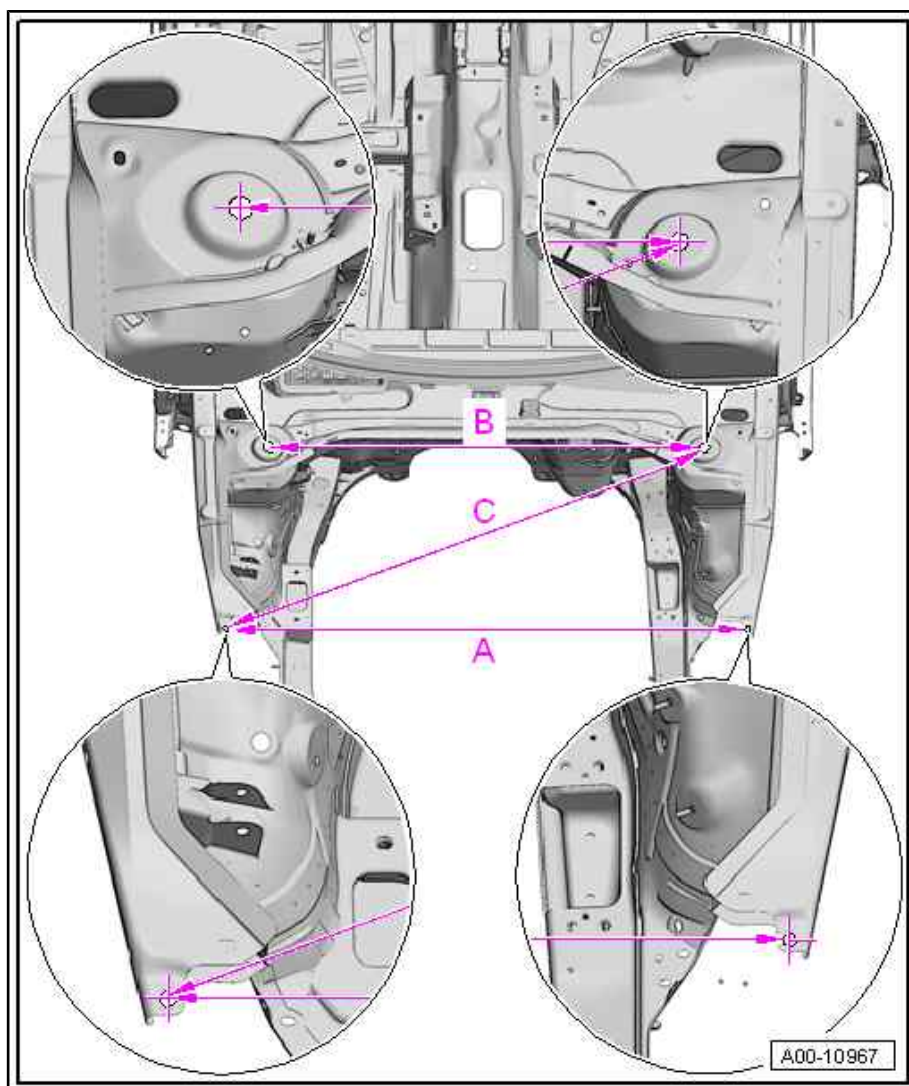
Distance between wing panel mountings

#### B - 1123 mm ± 2.0 mm

Distance between suspension strut mountings

#### C - 1326 mm ± 2.0 mm

Diagonal distance between





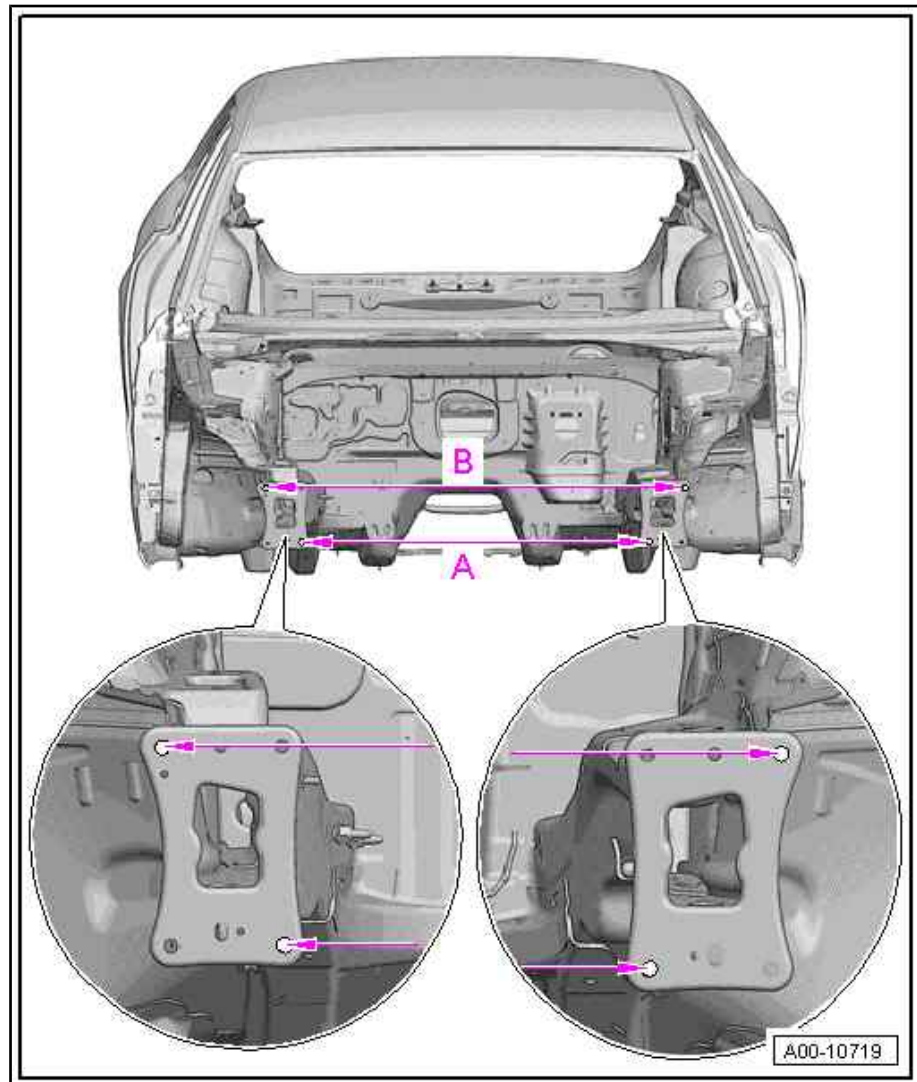
suspension strut mountings

**A - 878 mm ± 2.0 mm**

Distance between impact  
damper mountings

**B - 1072 mm ± 2.0 mm**

Distance between impact  
damper mountings

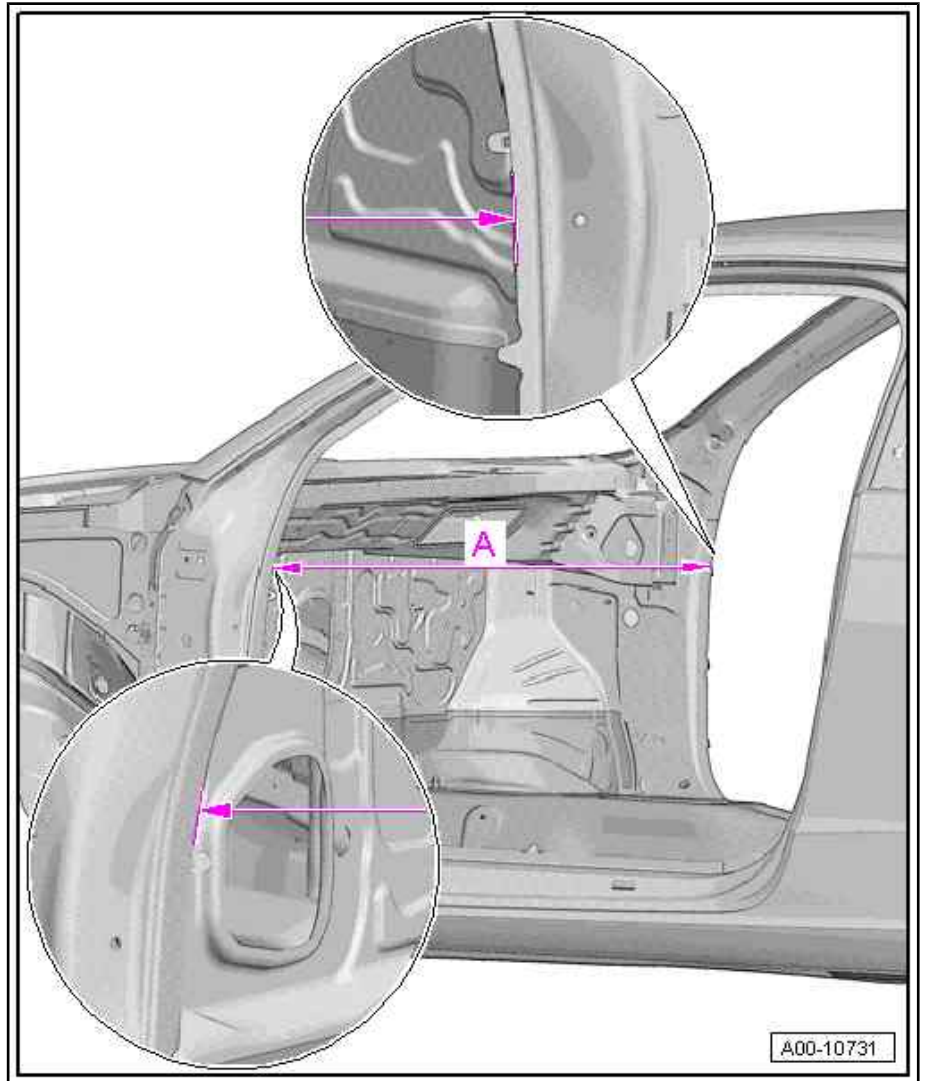


## 14.2 Body - centre

Distance between A-pillars



**A - 1407 mm ± 2.0 mm**  
Distance between A-pillars



**Front door opening**

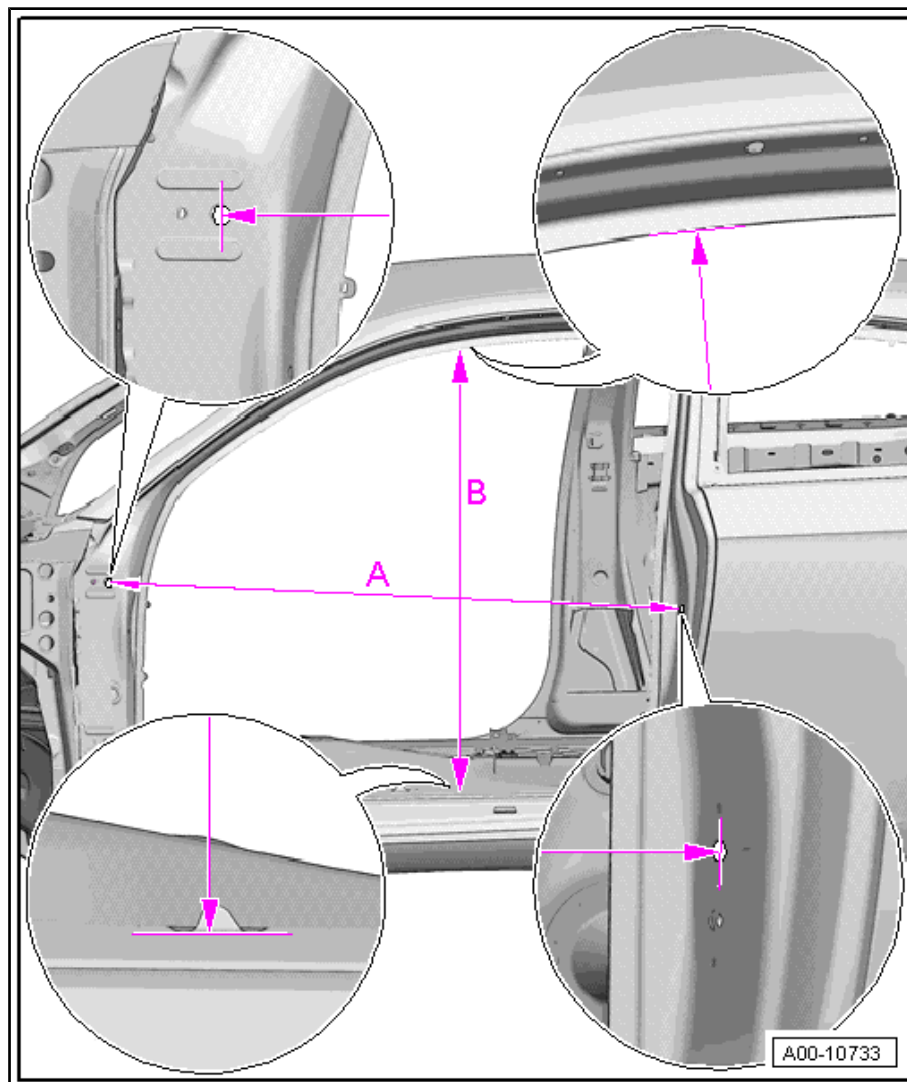


**A - 1211 mm ± 2.0 mm**

Distance between A-pillar and  
B-pillar

**B - 917 mm ± 2.0 mm**

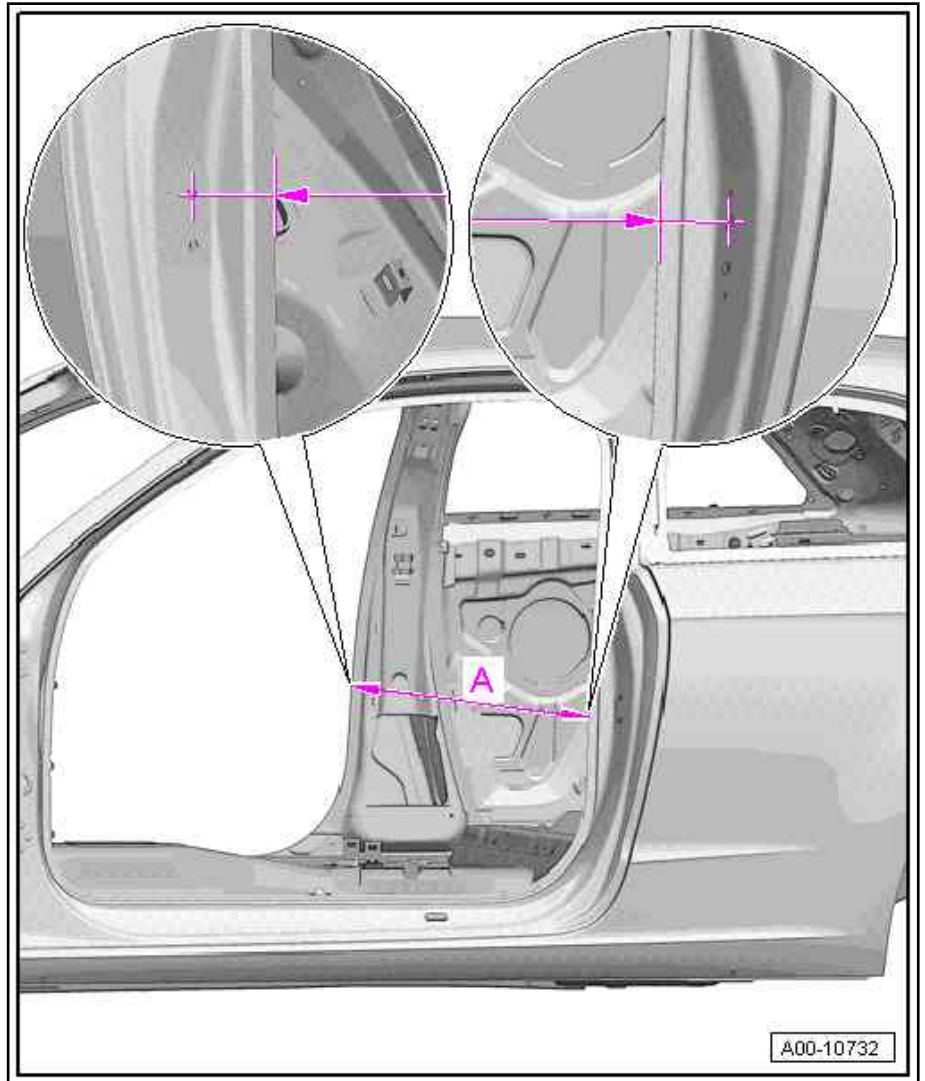
Height of door opening



**Distance between B-pillars**



**A - 1396 mm ± 2.0 mm**  
Distance between B-pillars



Front door opening (Sportback and Saloon identical)

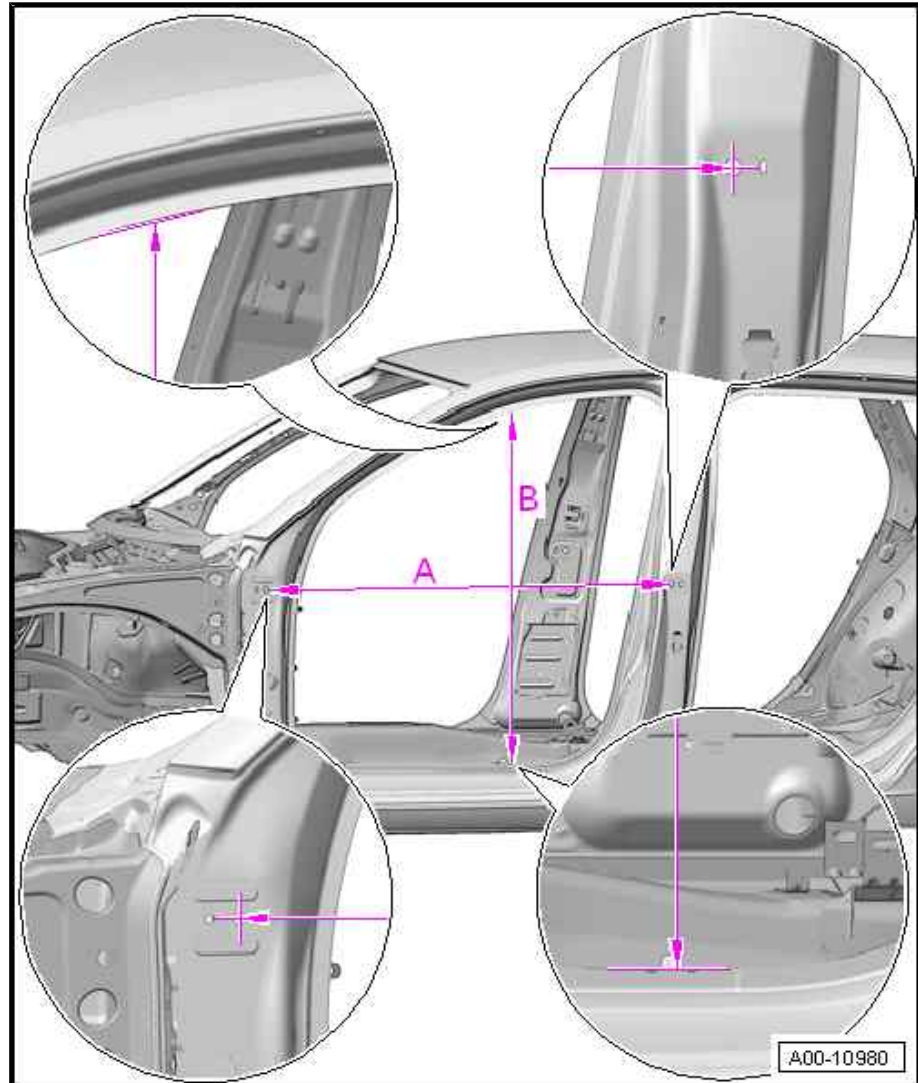


**A - 1,040 mm ± 2.0 mm**

Distance between A-pillar and  
B-pillar

**B - 895 mm ± 2.0 mm**

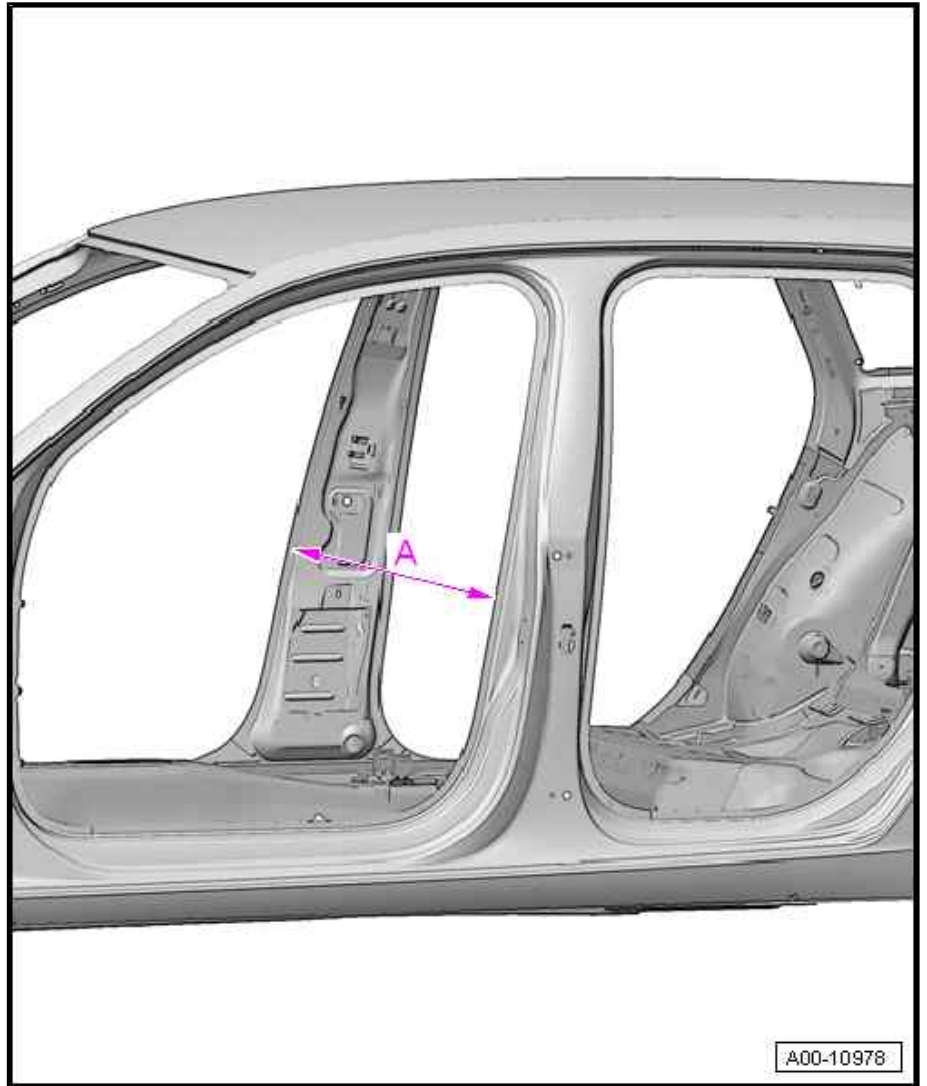
Height of door opening



**Distance between B-pillars (Sportback and Saloon identical)**



**A - 1458 mm ± 2.0 mm**  
Distance between B-pillars

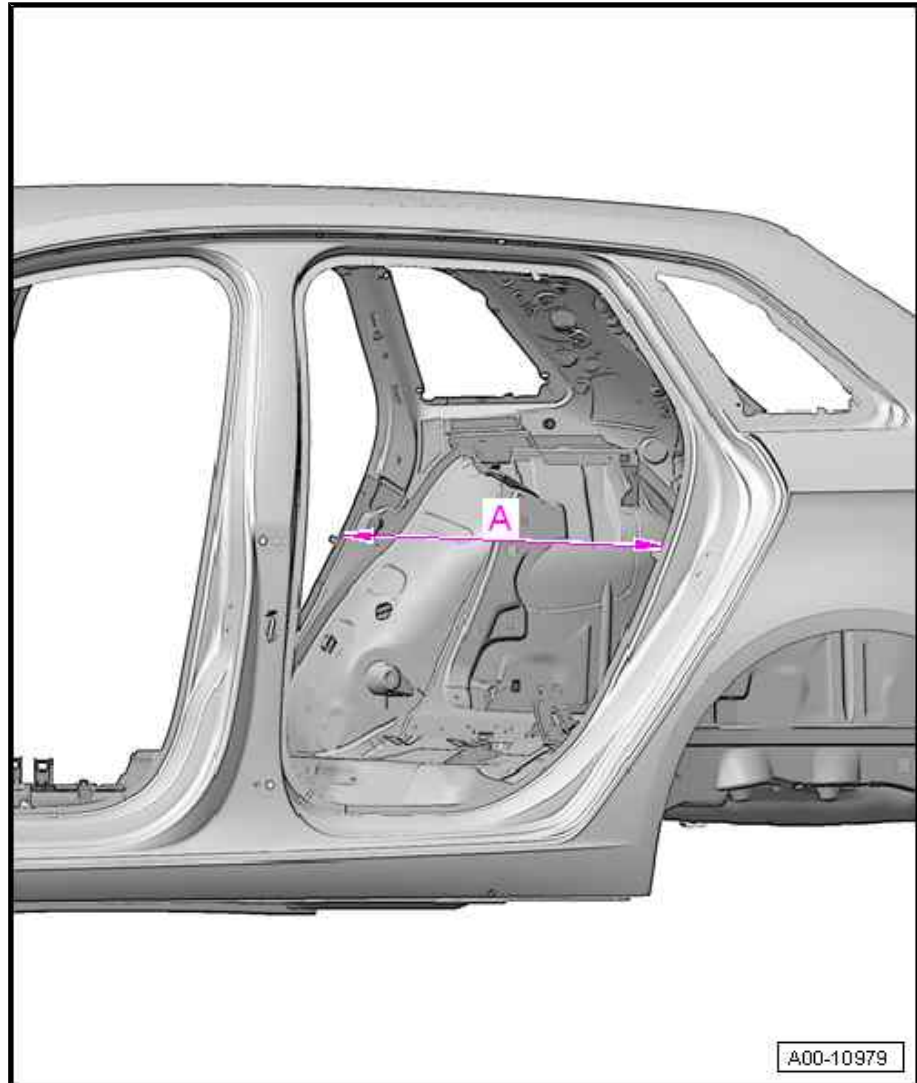


**Distance between C-pillars (Sportback and Saloon identical)**



A - 1394 mm ± 2.0 mm

Distance between C-pillars



A00-10979



### 14.3 Floor group

**A - 874 mm ± 2.0 mm**

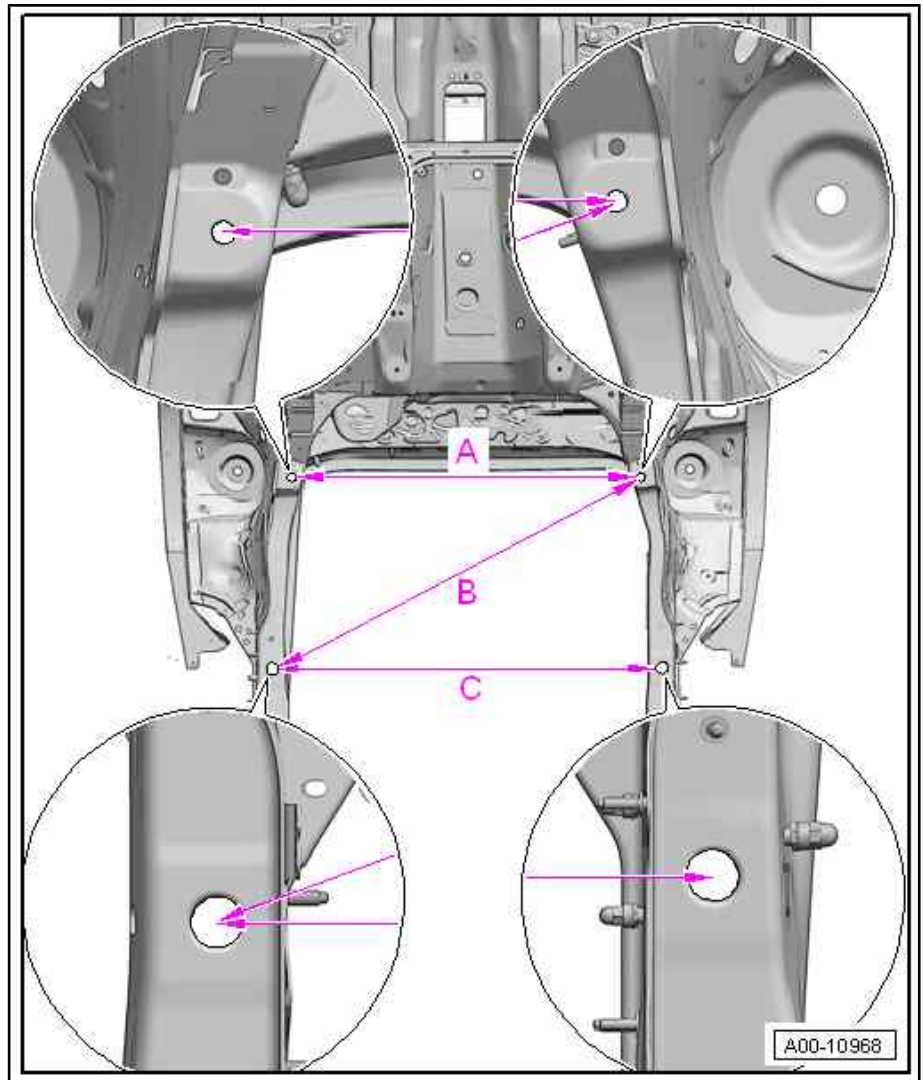
Distance between suspension  
strut mountings

**B - 1,040 mm ± 2.0 mm**

Diagonal distance between  
front longitudinal members

**C - 970 mm ± 2.0 mm**

Distance between front longi-  
tudinal members





**A - 403 mm ± 2.0 mm**

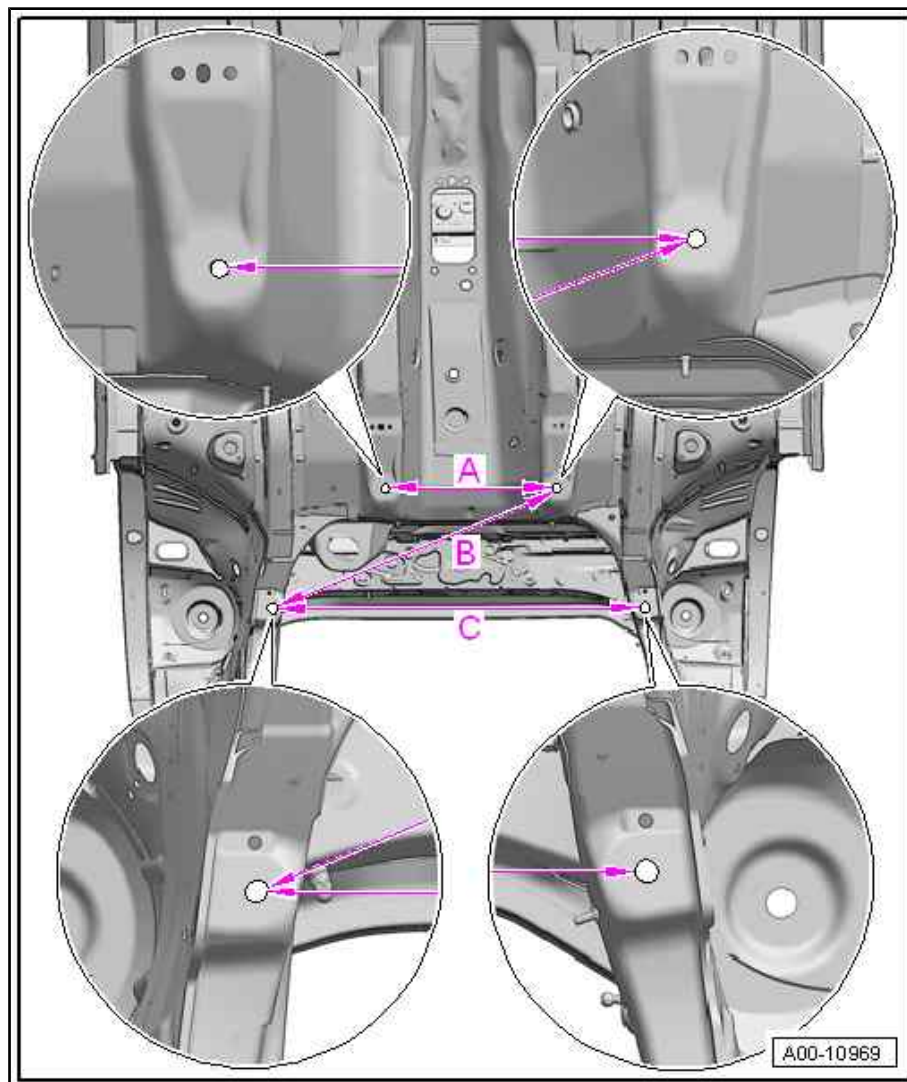
Distance between subframe attachment points

**B - 731 mm ± 2.0 mm**

Diagonal distance between subframe attachment points

**C - 874 mm ± 2.0 mm**

Distance between subframe attachment points





**A - 1000 mm ± 2.0 mm**

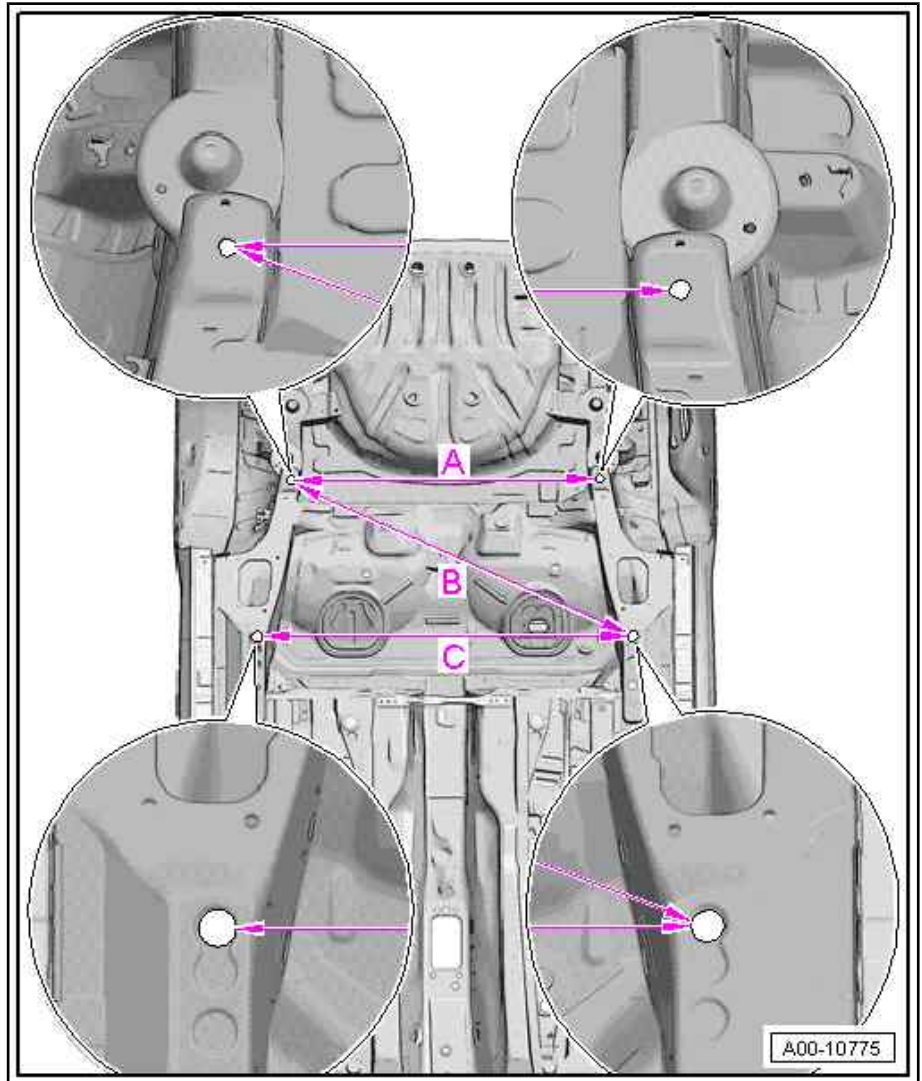
Distance between rear axle mountings

**B - 1246 mm ± 2.0 mm**

Diagonal distance between longitudinal members and axle mountings

**C - 1220 mm ± 2.0 mm**

Distance between rear axle mountings





**A - 987 mm ± 2.0 mm**

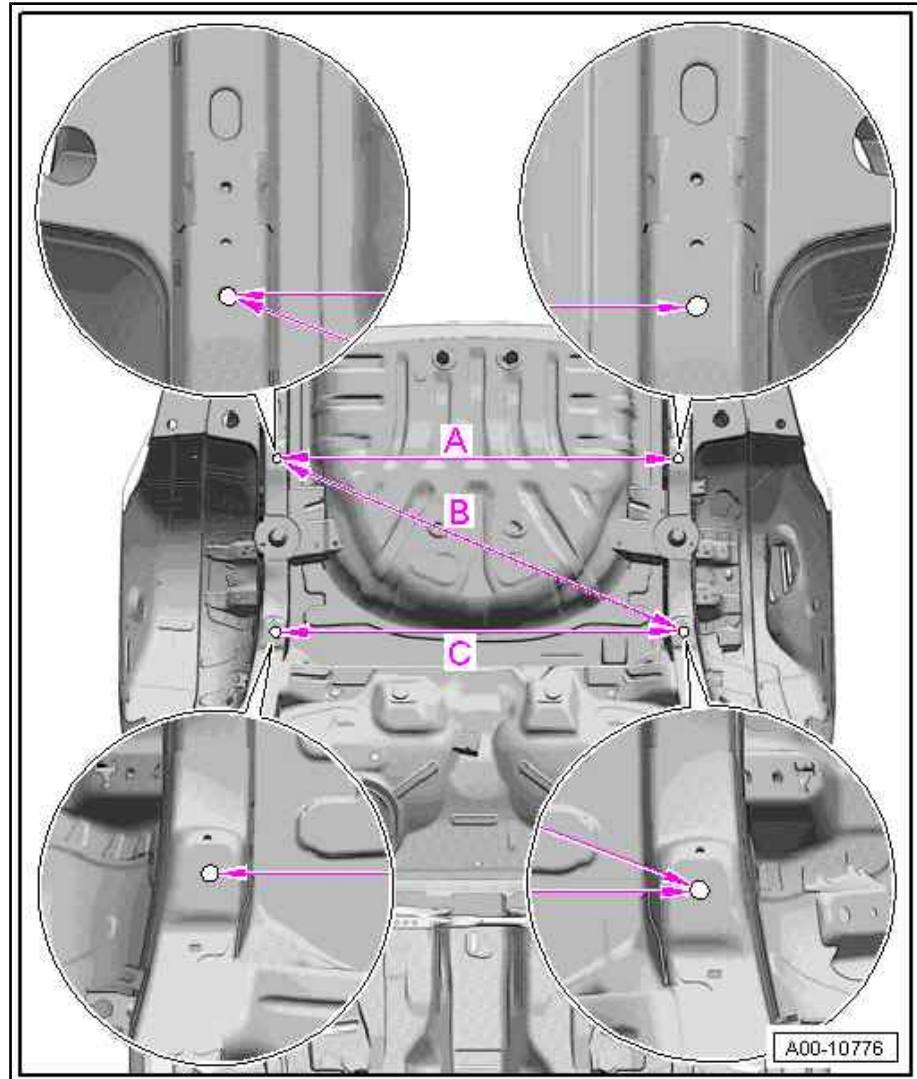
Distance between rear axle mountings

**B - 1085 mm ± 2.0 mm**

Diagonal distance between longitudinal members and axle mountings

**C - 1000 mm ± 2.0 mm**

Distance between rear axle mountings



## 14.4 Body - rear

### Dimensions - rear

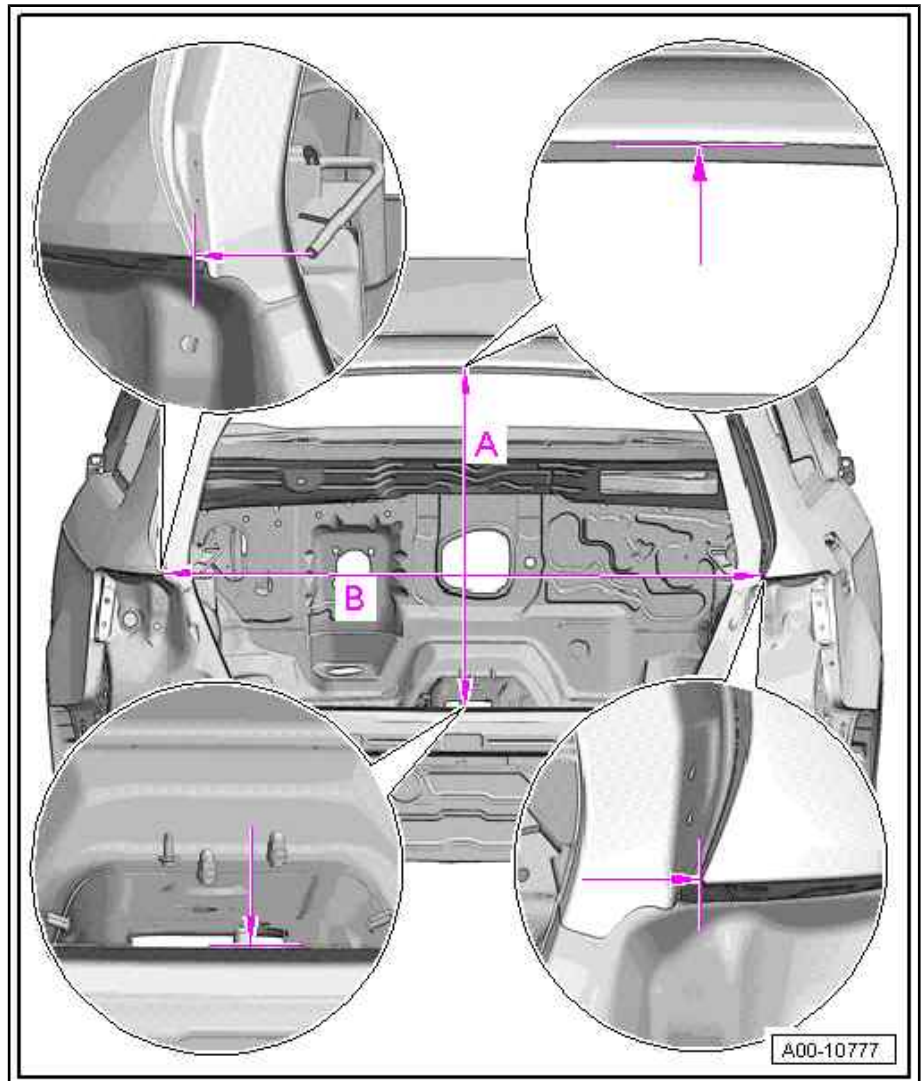


**A - 876 mm ± 2.0 mm**

Distance between roof frame  
and rear upper cross panel

**B - 1267 mm ± 2.0 mm**

Distance between side panels



Dimensions at rear (Sportback)

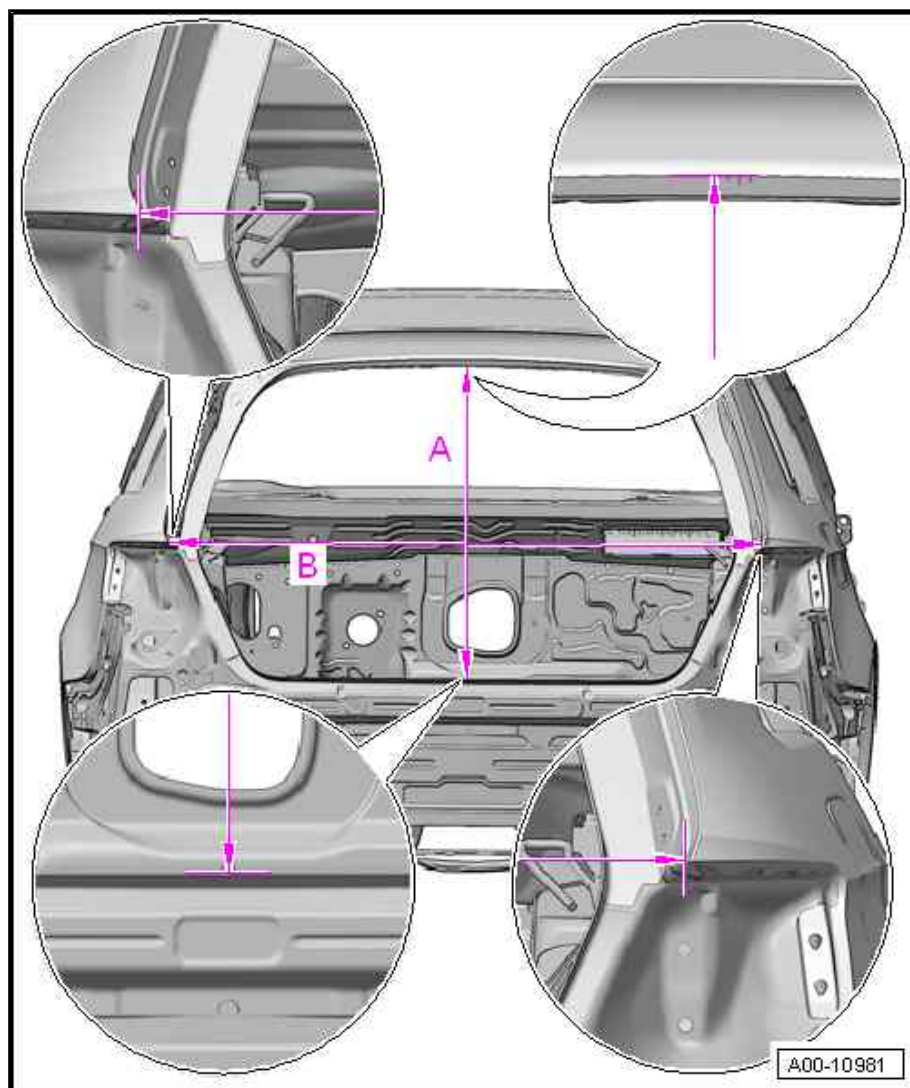


**A - 858 mm ± 2.0 mm**

Distance between roof frame  
and rear upper cross panel

**B - 1287 mm ± 2.0 mm**

Distance between side panels



Dimensions - rear (Saloon)

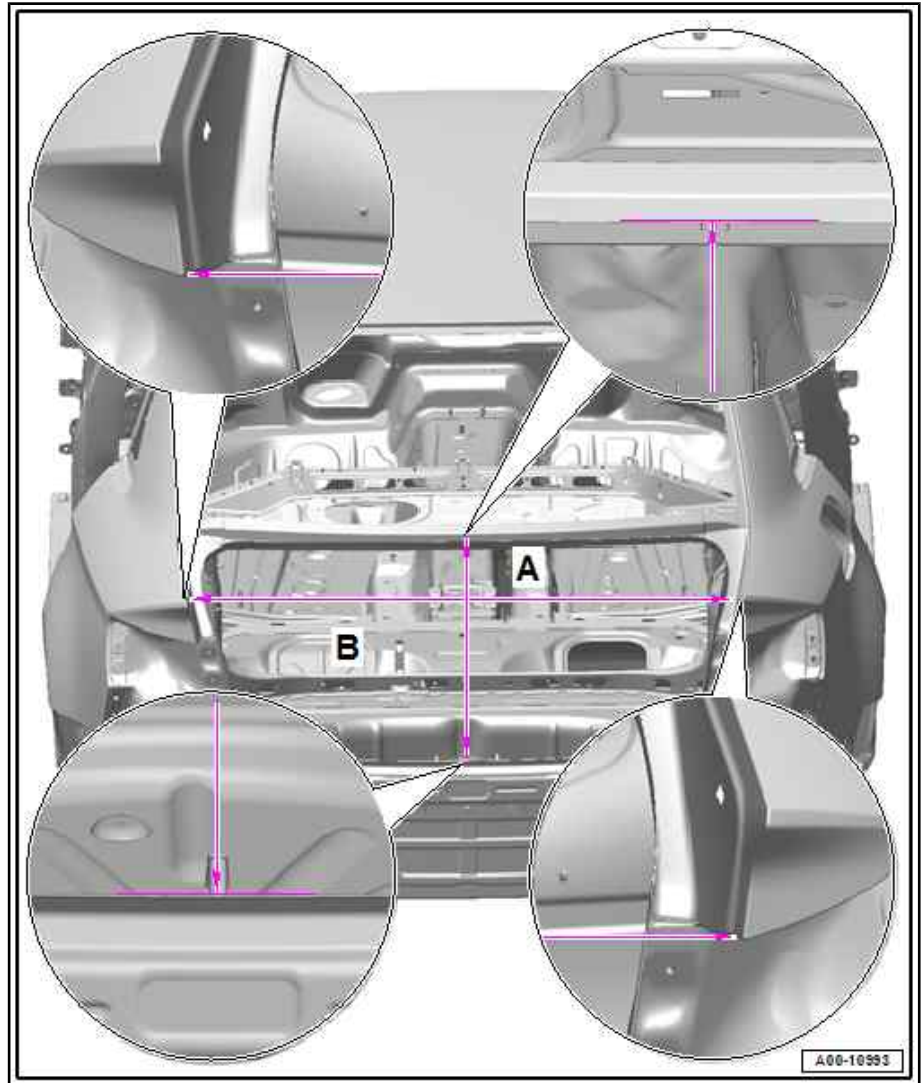


**A - 482 mm ± 2.0 mm**

Distance between window  
cross member and rear upper  
cross panel

**B - 1136 mm ± 2.0 mm**

Distance between side panels



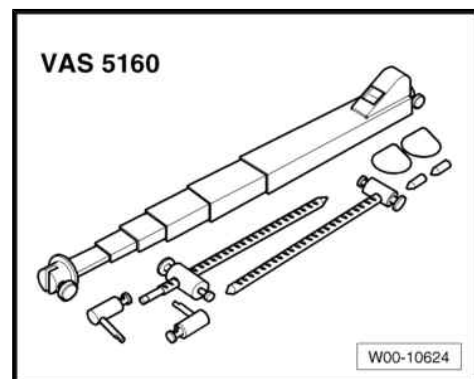
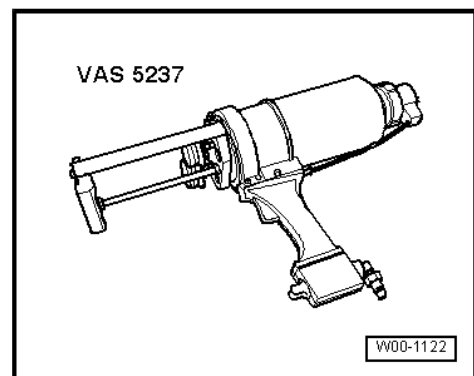


## 15 Tools

### Special tools and workshop equipment required

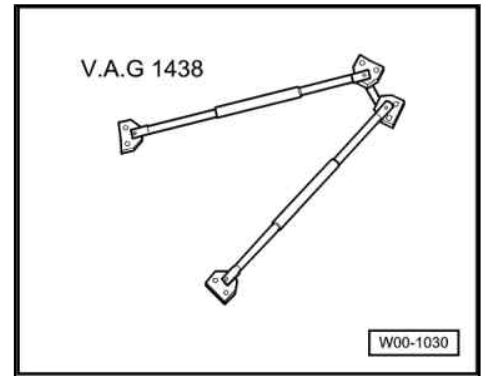
- ◆ Resistance spot welder - VAS 6239 A-
- ◆ Resistance spot welder - VAS 6525-
- ◆ Resistance spot welder - VAS 6530-
- ◆ Resistance spot welder - VAS 6535-
- ◆ Resistance spot welder - VAS 6545-
- ◆ Shielded arc welding equipment - VAS 6044- or -VAS 6045-
- ◆ Shielded arc welding equipment - VAS 6388-
- ◆ Socket for flow-drill screws - VAS 852 007-
- ◆ Hole finder - VAS 6631-
- ◆ Measuring and alignment system - VAS 6526- , basic
- ◆ Measuring and alignment system - VAS 6527- , professional
- ◆ Measuring and alignment system - VAS 6528- , professional plus
- ◆ Brush grinder - VAS 6446-
- ◆ Drill - VAS 6267 A-
- ◆ Scraper - VAS 5448-
- ◆ Compact booster - VAS 6790-
- ◆ Compact angle grinder - VAS 5167-
- ◆ Double cartridge gun - VAS 6453-
- ◆ Double cartridge gun - VAS 5237-

- ◆ Telescopic gauge - VAS 5159- or telescopic gauge - VAS 5160- .

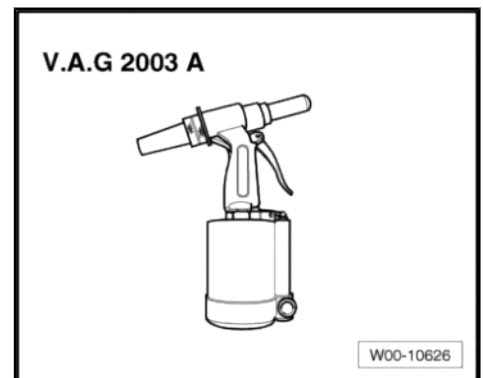




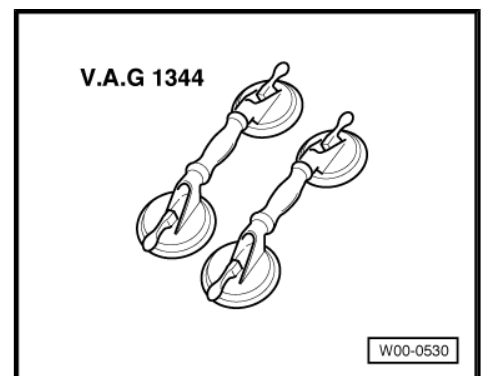
- ◆ Mechanical door tensioner - V.A.G 1438-



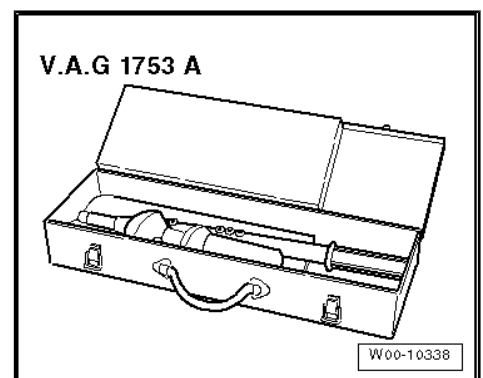
- ◆ Pneumatic pop riveter - V.A.G 2003 A-



- ◆ Suction lifter - V.A.G 1344- or magnet - VAS 6739-

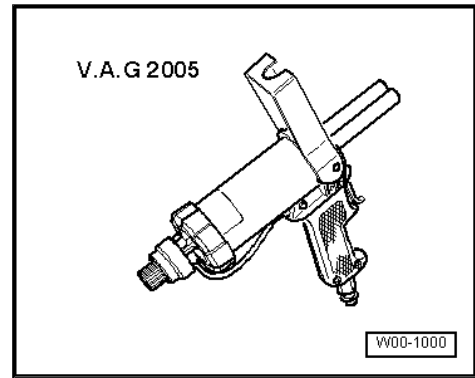


- ◆ Pop rivet pliers - 1753 A-

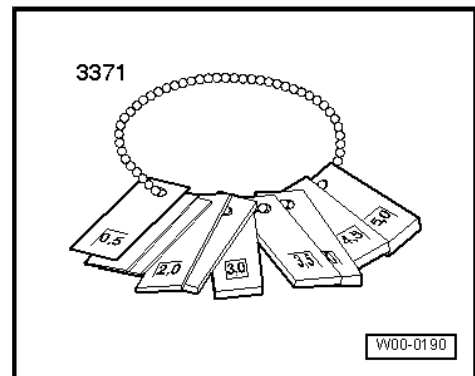




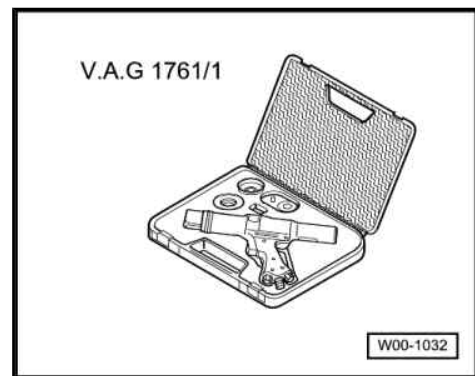
- ◆ Pneumatic glue gun - V.A.G 2005 B-



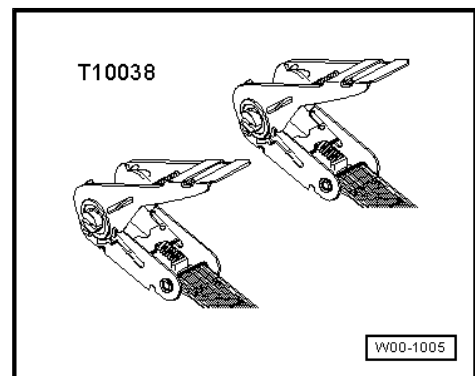
- ◆ Setting gauge - 3371-



- ◆ Compressed-air gun - V.A.G 1761/1-

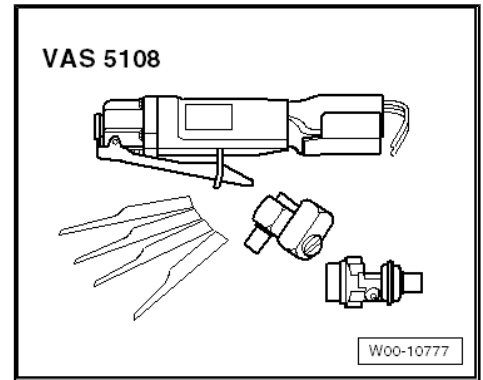


- ◆ Tensioning strap - T 10038-

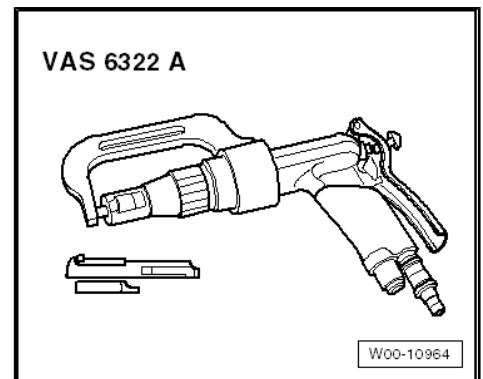




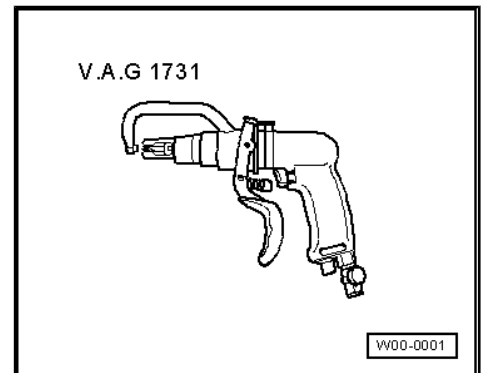
- ◆ Body saw - VAS 5108 - or - VAS 6598 - or -VAS 6780-



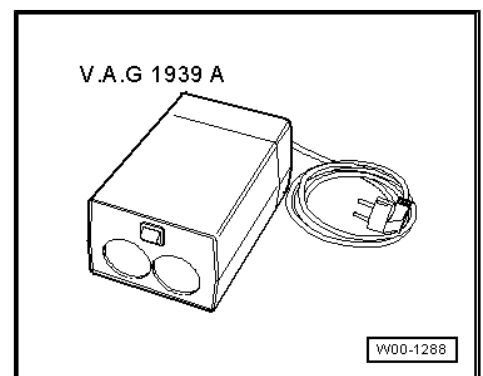
- ◆ Spot weld breaker - VAS 6322 A- or



- ◆ Spot weld breaker - V.A.G 1731 -



- ◆ Cartridge heater - V.A.G 1939 A-





## 16 Matching the surface contour

Repaired areas must be prepared so that all surfaces, swage lines and panel edges are accurately aligned with the surrounding body contour.

**The following requirements must be met:**

- ◆ After body repair work such as dent removal, welding and filling, etc., the repaired areas and parts must be dry-sanded with a grit size of at least P 80.
- ◆ The repaired surfaces must be prepared so that the required paint finish can be achieved in no more than two stages.

**For the required surface contour use the following body fillers:**

**For vehicles with steel body**

2-component steel filler set - DA 787 300 A2 -

**For vehicles with aluminium body**

2-component "diamond" filler aluminium powder - DA 004 200 A2  
- and hardener - DA 004 201 A1-

### CAUTION

The use of body solder containing lead is prohibited as of 1st January 2003.



### Note

*Lead-free body solder is not approved by AUDI AG.*



## 17 Straightening jig



### Note

- ◆ *The item numbers in the illustrations are identical with the end numbers on the alignment bracket mountings.*
- ◆ *The item numbers of the alignment bracket mountings marked with a circle are for checking the body with mechanical units installed.*
- ◆ *The required basic set size is given for the alignment bracket mountings.*

Is used in conjunction with MZ Plus straightening bracket system - VAS 6630- .

Alignment bracket set, Audi A3 - VAS 6789-

Portal gauge, A3 Saloon - VAS 5007/80-

Portal gauge, A3 - VAS 5007/68-

Portal gauge, A3 Sportback - VAS 5007/79-

- Detailed information on setting up the alignment bracket set can be found in the setup plan enclosed with the equipment.

### 17.1 Procedure for repairing structural body damage on Audi vehicles

- If there is reason to believe that a vehicle has suffered structural body damage, if the body dimensions do not conform to the specifications in the Workshop Manual and/or if there is visible damage to structural components, the vehicle must be mounted on an Audi-approved straightening jig system in order to check the body dimensions.

#### Definition of structural body damage:

Damage (denting, buckling, rupture, etc.) to and/or displacement of a structural component of the vehicle body.

All body components with the exception of outer skin panels or bolt-on parts must be regarded as structural components.

Notwithstanding the above, the bolt-on longitudinal members of an aluminium vehicle are also structural components.

If the body dimensions differ from the specifications, the vehicle must be repaired according to the instructions in the Workshop Manual.



### Note

*Detailed information on setting up the alignment bracket set can be found with the equipment.*



#### Note

- ◆ *The item numbers in the illustrations are identical with the end numbers on the alignment bracket mountings.*
- ◆ *The item numbers of the alignment bracket mountings marked with a circle are for checking the body with mechanical units installed.*
- ◆ *The required basic size is given for the alignment bracket mountings.*



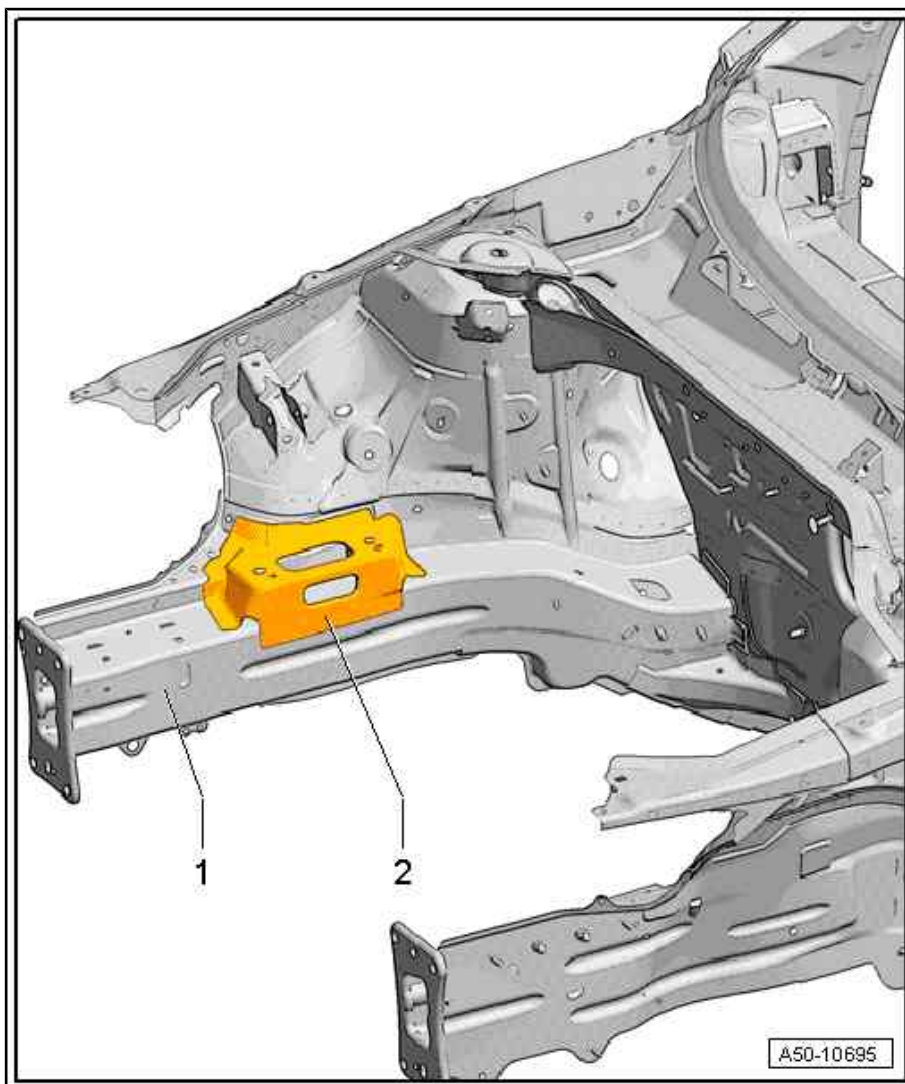
## 50 – Body - front

RO: 50 40 55 50

### 1 Engine console (right-side) - Renewal

A3, Sportback and Saloon identical

- 1 - Longitudinal member
- 2 - Engine console



### 1.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Drill
- ◆ Compact angle grinder
- ◆ Body saw



- ◆ Spot weld breaker



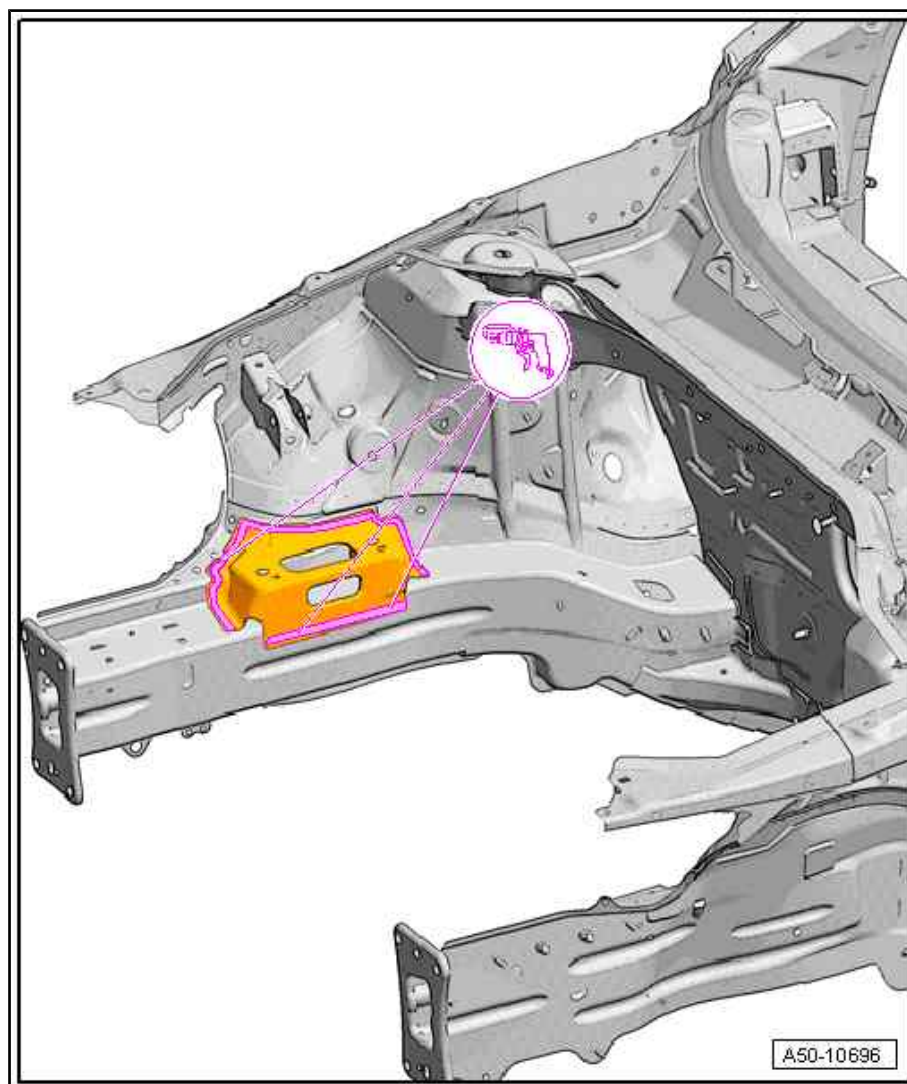
**NOTICE**

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work => [page 48](#) .

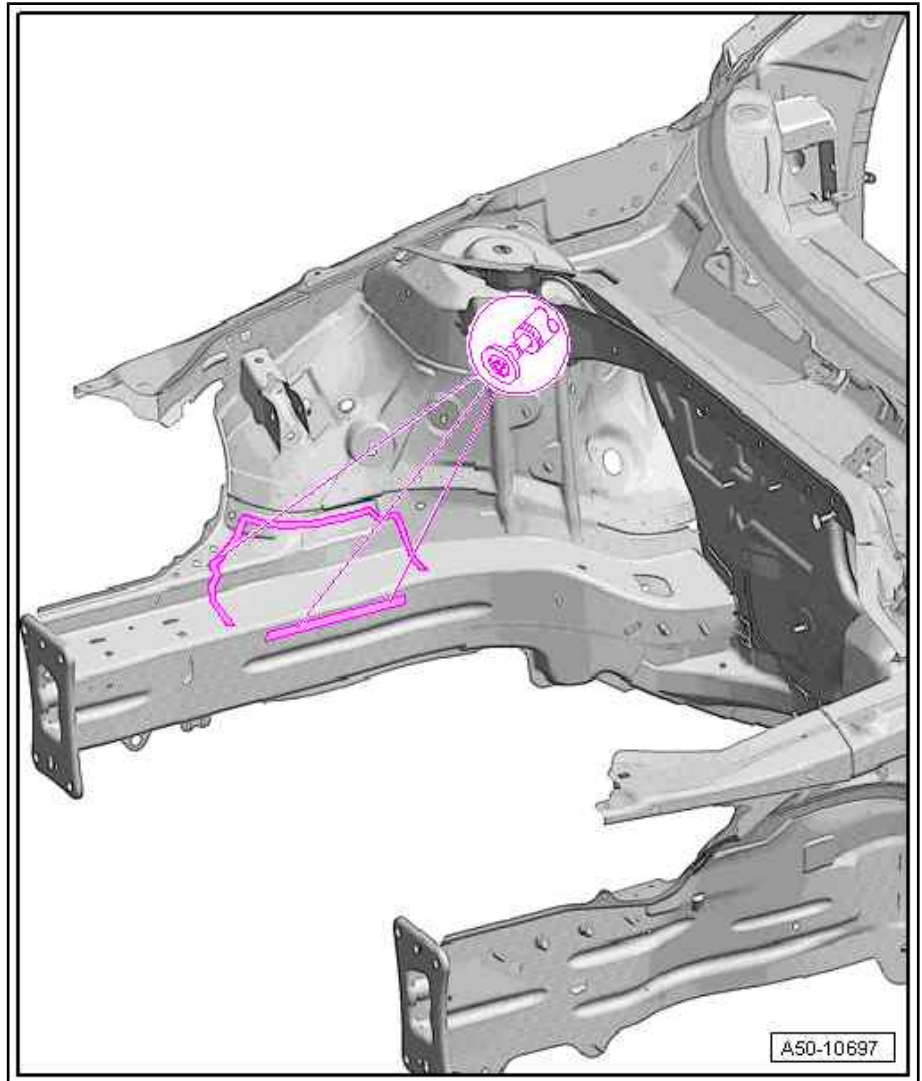
## 1.2 Procedure

### Cutting locations

- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .



#### Replacement part

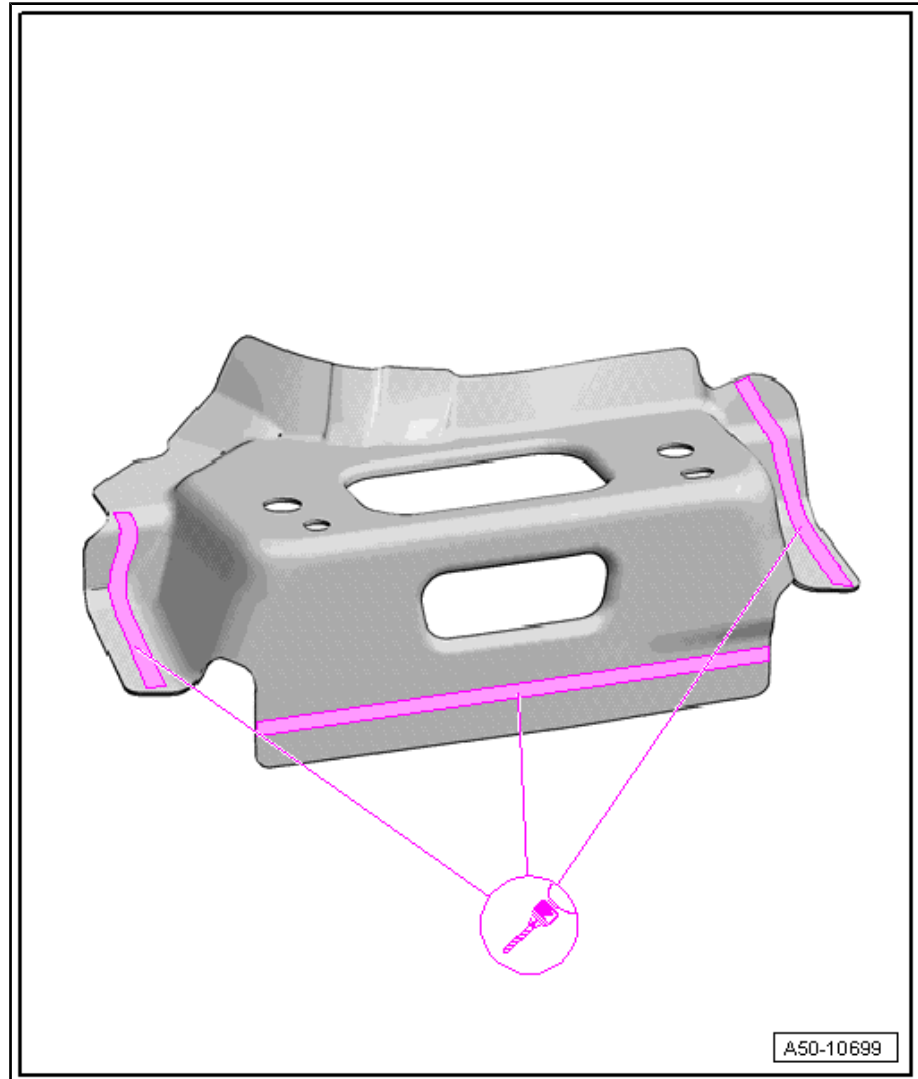
- ◆ Engine console (right side)
- Match up new part with vehicle positioned on alignment bracket set and fix in place.

#### Pre-treatment - applies to replacement part only

- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.

#### Preparing new parts

- Drill holes for SG plug weld seam, 8 mm Ø using drill .

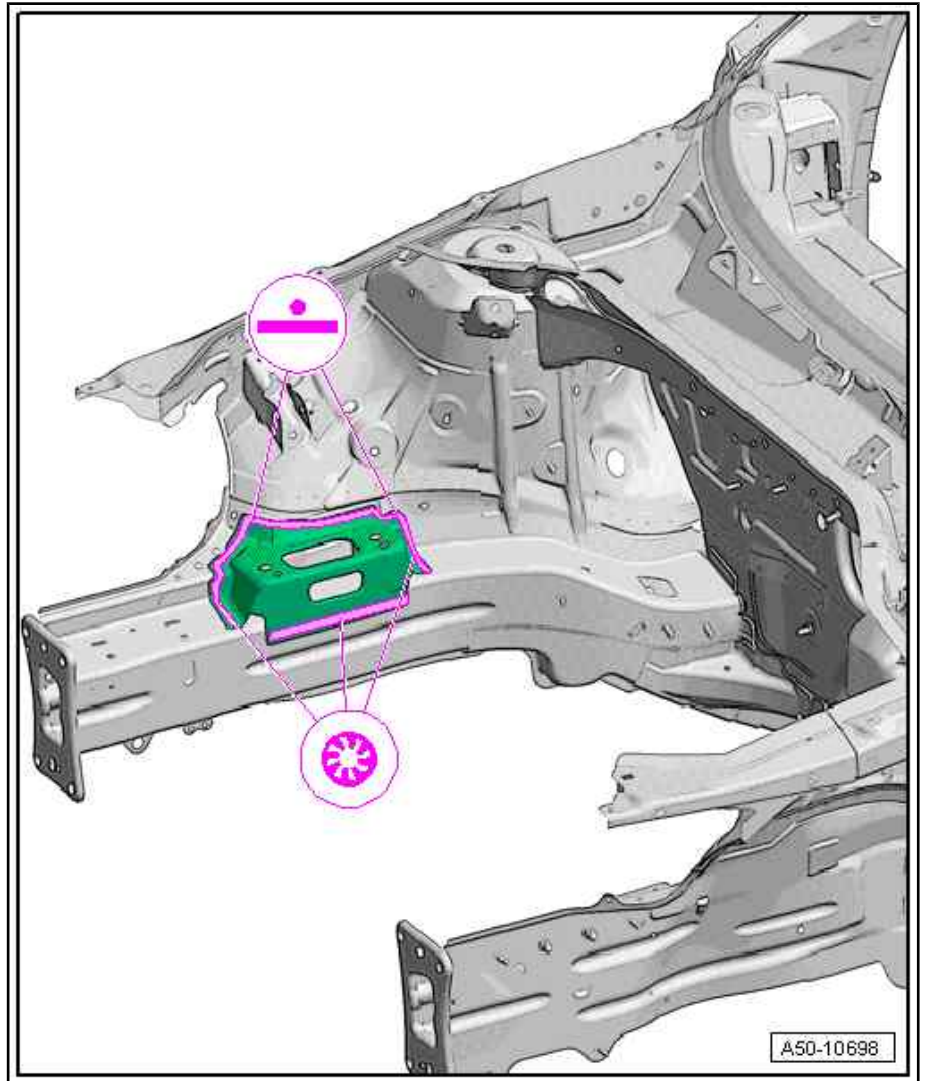


**!** NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Weld in support bracket using resistance spot welder : RP spot weld seam.
- Weld in support bracket using shielded arc welding equipment : SG plug weld seam.



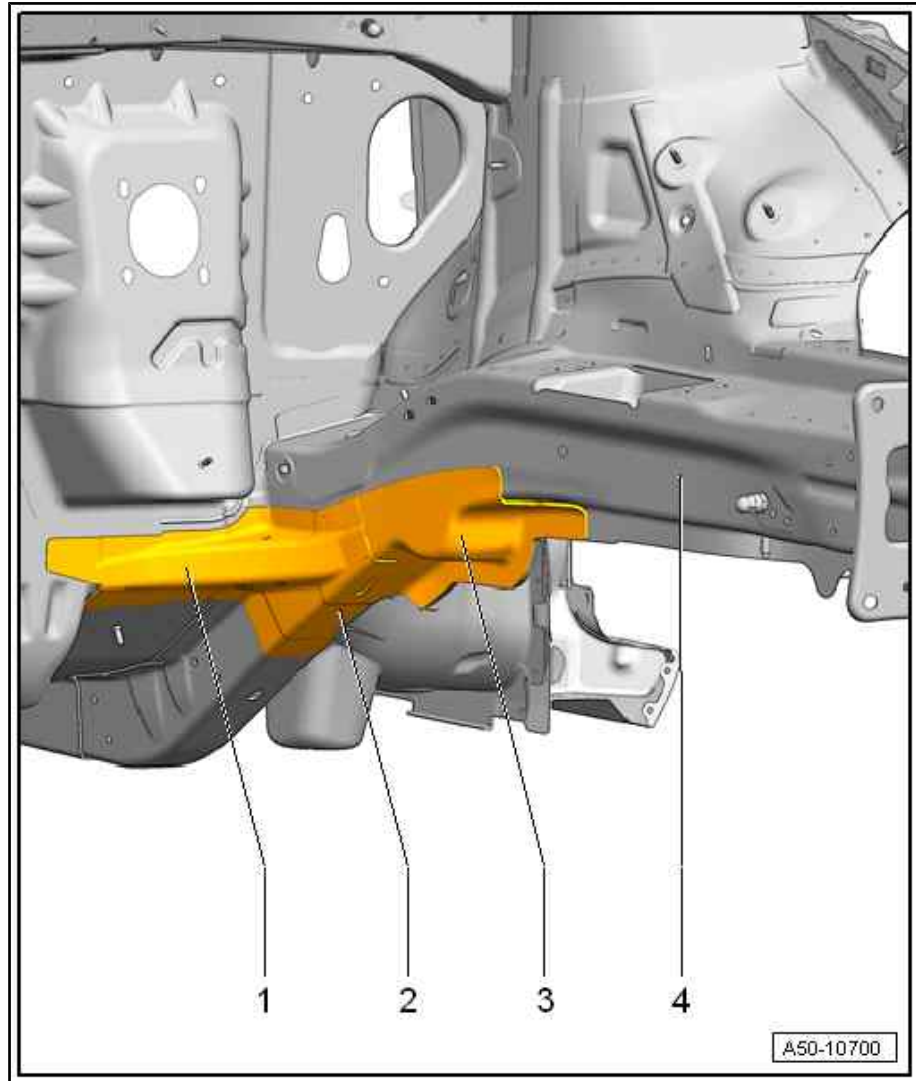


RO: 50 43 55 00

## 2 Mounting bracket (for subframe) - Renewal

A3, Sportback and Saloon identical

- 1 - Longitudinal member reinforcement
- 2 - Cover for longitudinal member
- 3 - Mounting bracket for subframe
- 4 - Longitudinal member



### 2.1 Tools

Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Drill
- ◆ Spot weld breaker



**!** NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

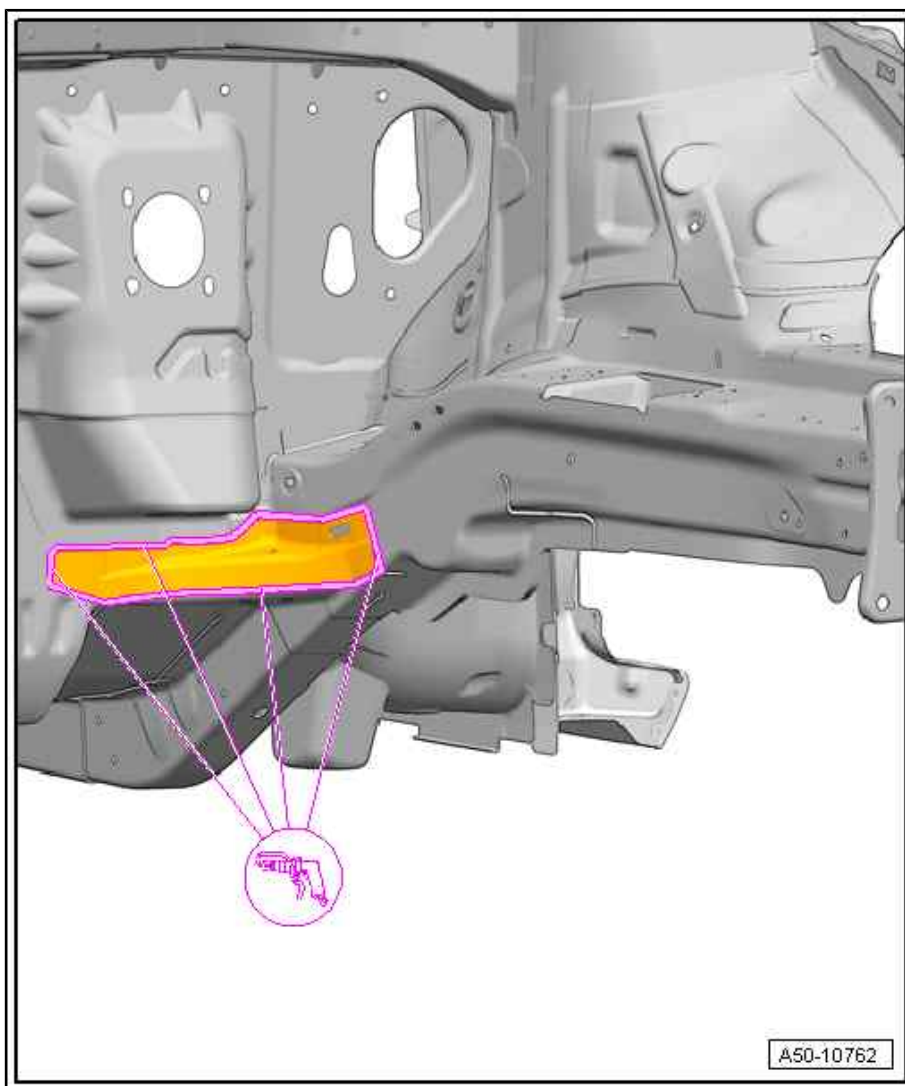
## 2.2 Procedure

**i** Note

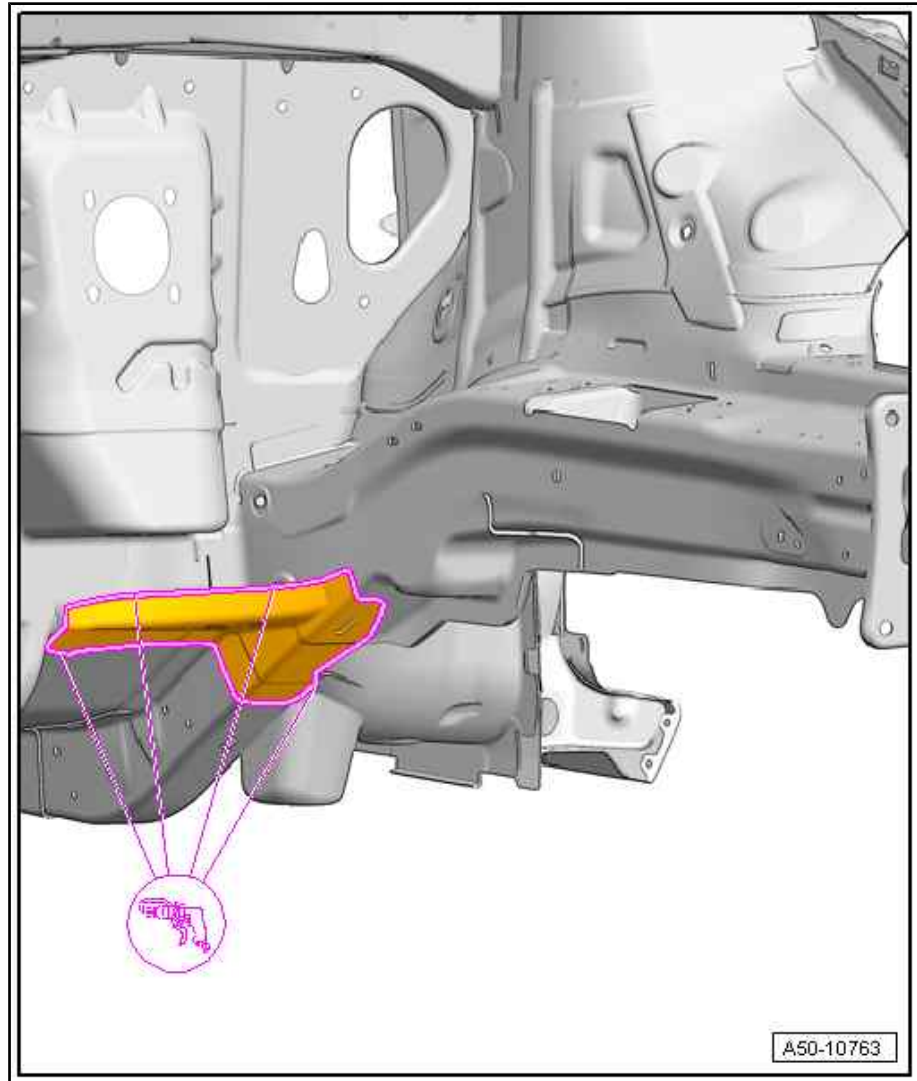
*The procedure for renewal of the subframe mounting bracket is described on this vehicle for the front left mounting bracket. The procedure for the other mounting brackets is similar (if required).*

### Cutting locations

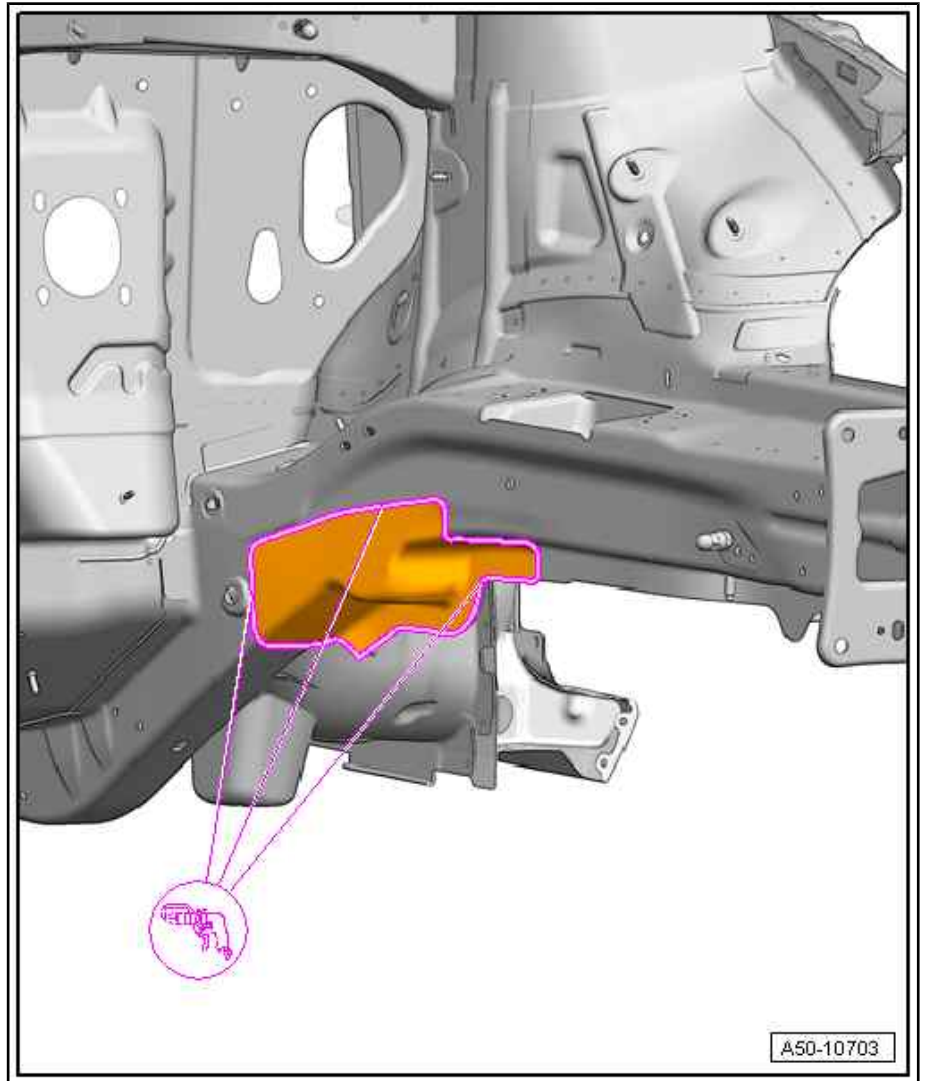
- Separate original joint at longitudinal member reinforcement using spot weld breaker .



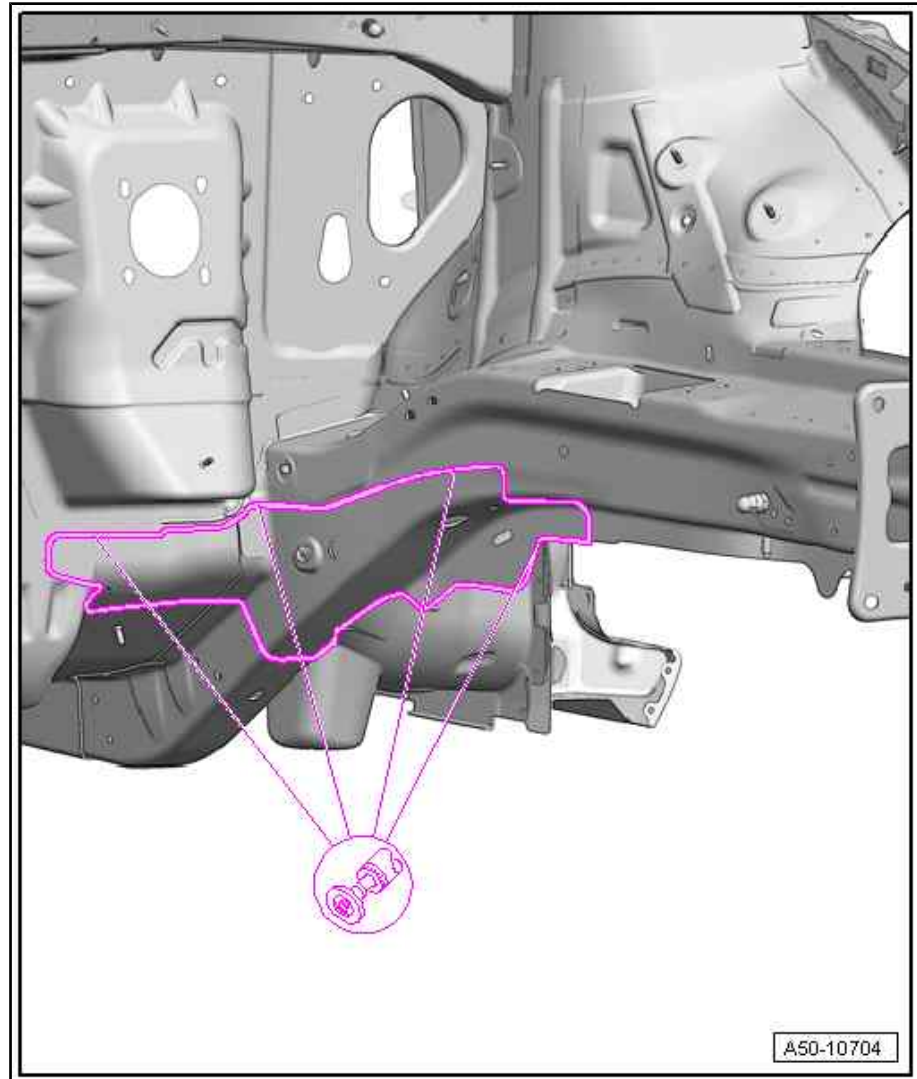
- Separate original joint at cover for longitudinal member using spot weld breaker .



- Separate original joint at subframe mounting bracket using spot weld breaker .



- Remove remaining material using compact angle grinder .



#### Replacement part

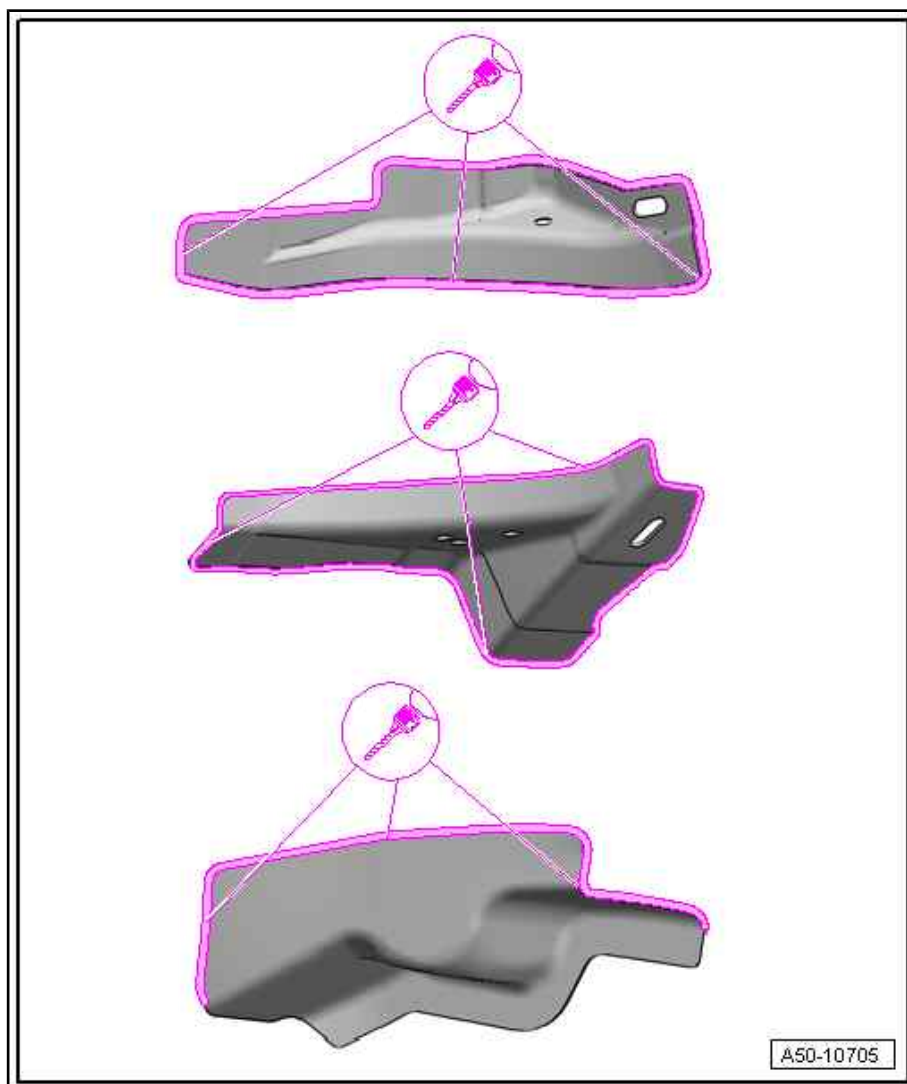
- ◆ Front mounting bracket for subframe
- ◆ Longitudinal member reinforcement
- ◆ Cover for longitudinal member

#### Pre-treatment - applies to replacement part only

- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.

#### Preparing new part

- Drill holes for SG plug weld seam, 8 mm  $\varnothing$  using drill .



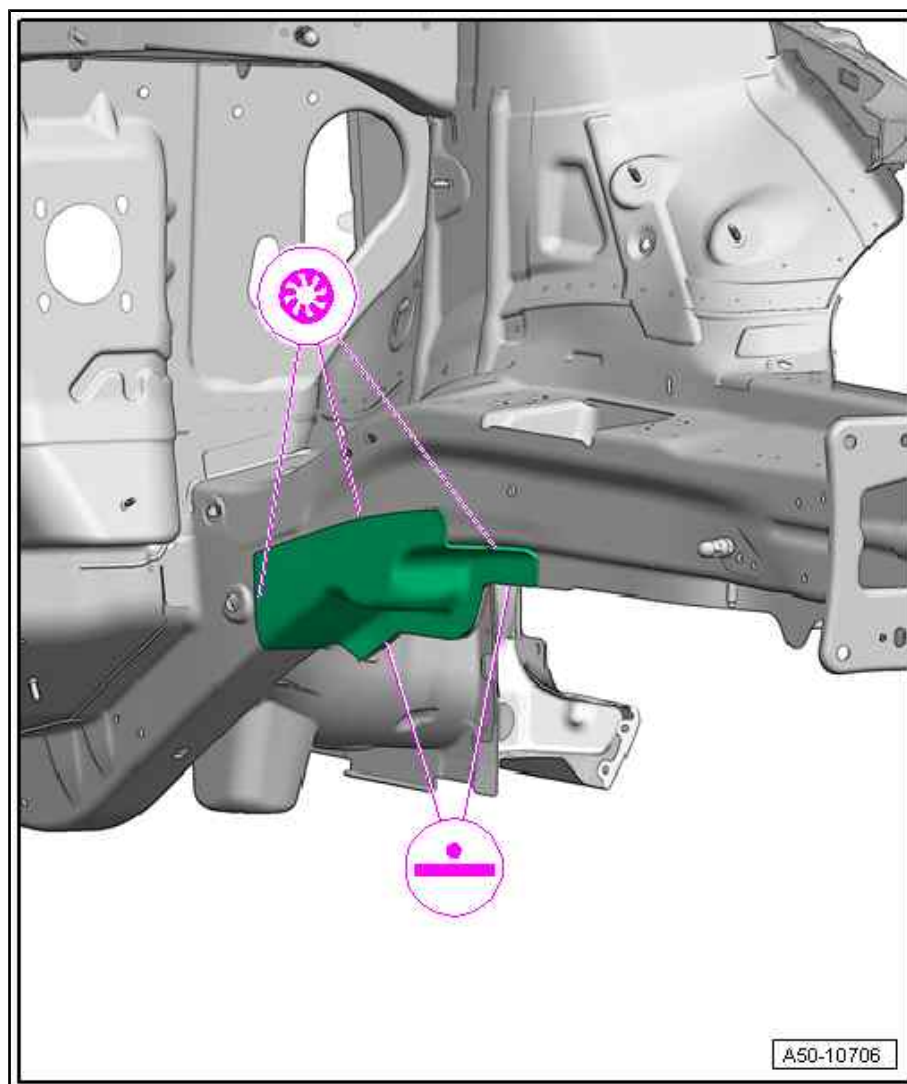
**!** NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

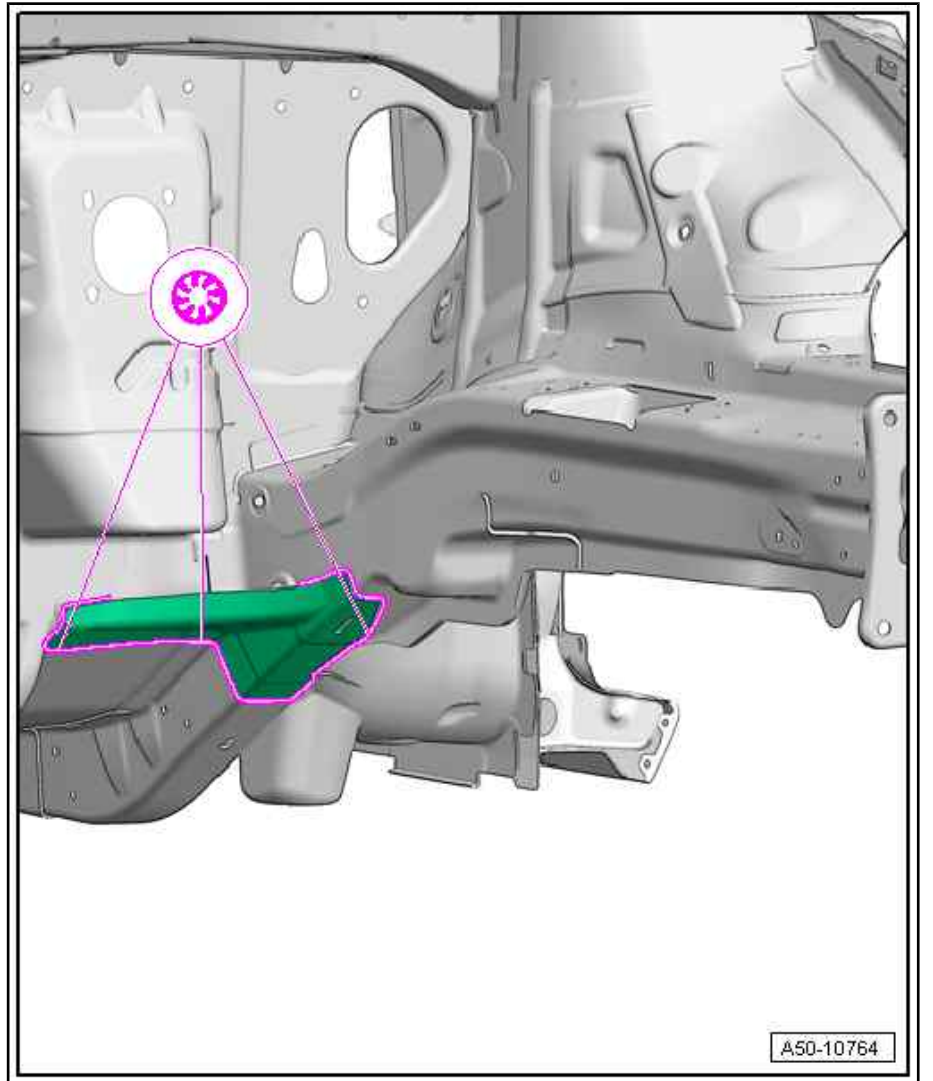
- Match up front mounting bracket for subframe with vehicle positioned on alignment bracket set and fix in place.

**Welding in**

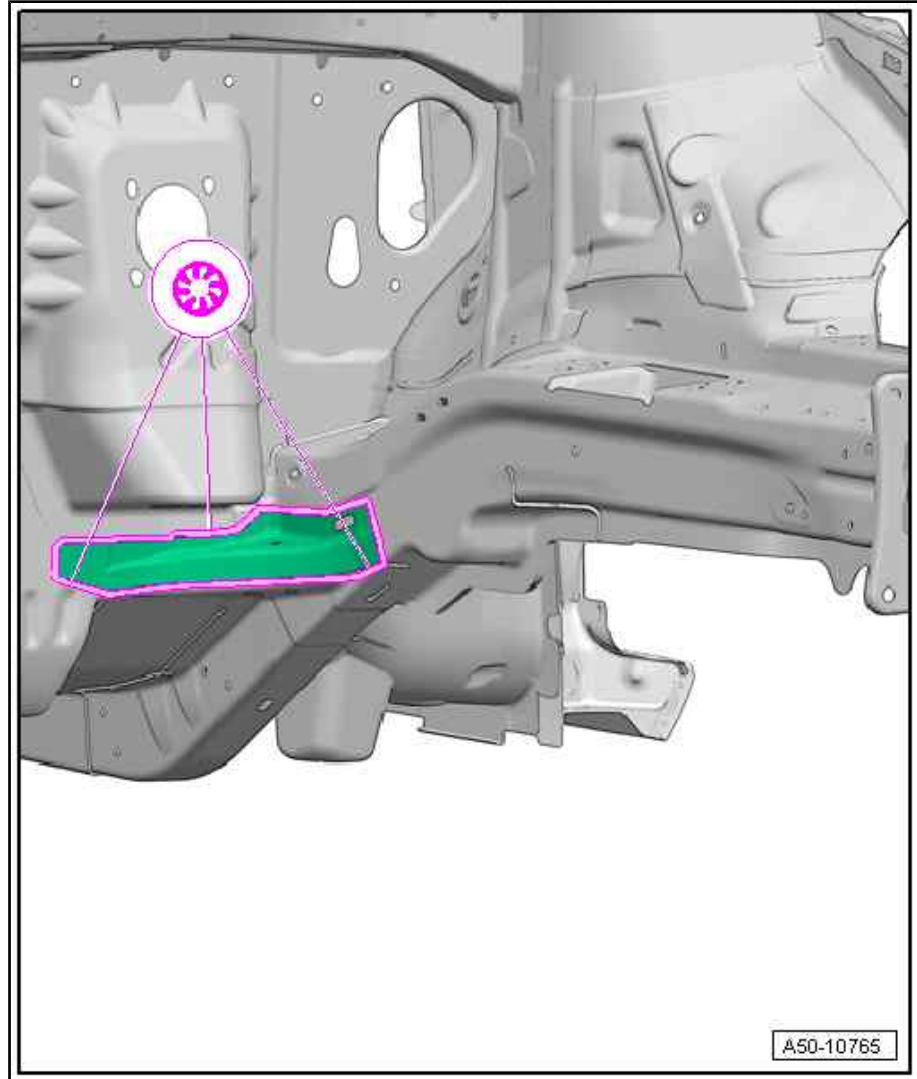
- Weld in mounting bracket for subframe using shielded arc welding equipment : SG plug weld seam.
- Weld in mounting bracket for subframe using resistance spot welder : RP spot weld seam.



- Weld in longitudinal member reinforcement using shielded arc welding equipment : SG plug weld seam.



- Weld in cover for longitudinal member using shielded arc welding equipment : SG plug weld seam.





RO: 50 72 55 00

### 3 Upper wheel housing longitudinal member - Renewal

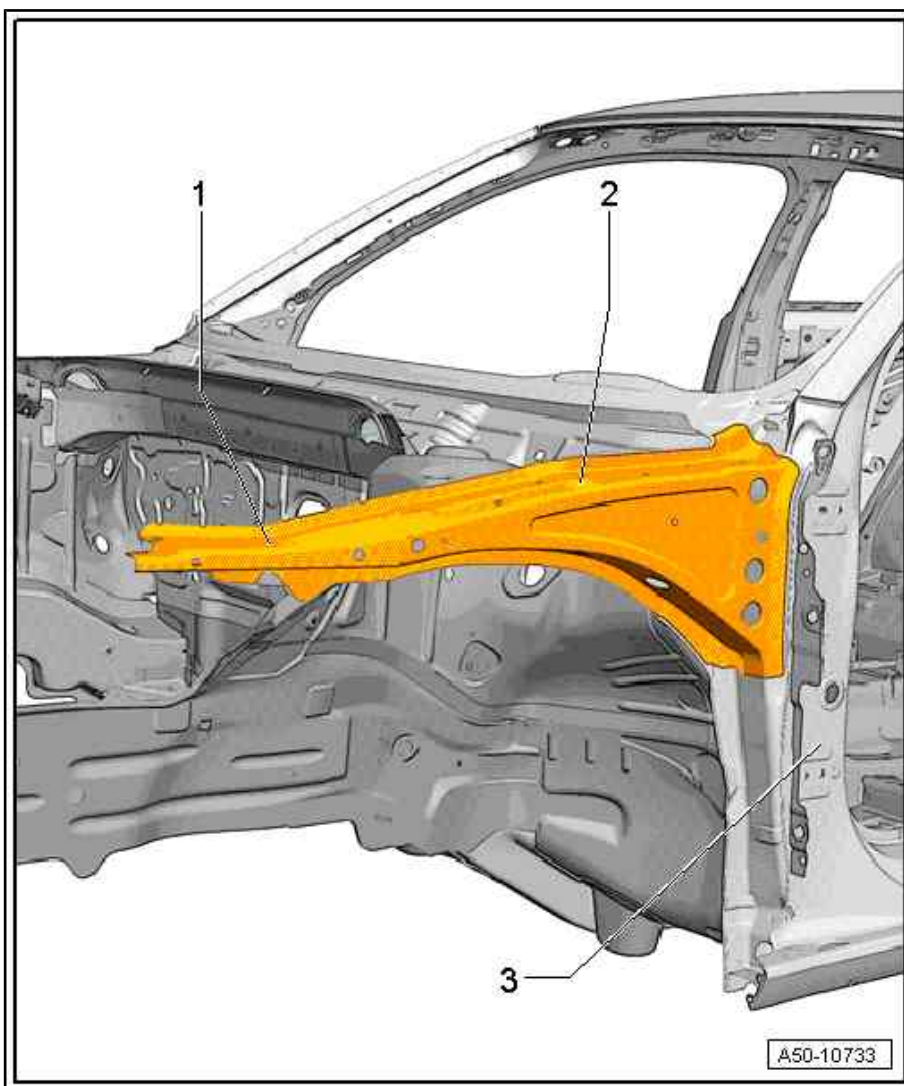
A3, Sportback and Saloon identical

Includes: upper outer longitudinal member and wheel housing longitudinal member

1 - Closure plate for upper longitudinal member

2 - Upper outer longitudinal member

3 - Outer A-pillar



#### 3.1 Tools

Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Drill
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker - VAS 6322 A- or



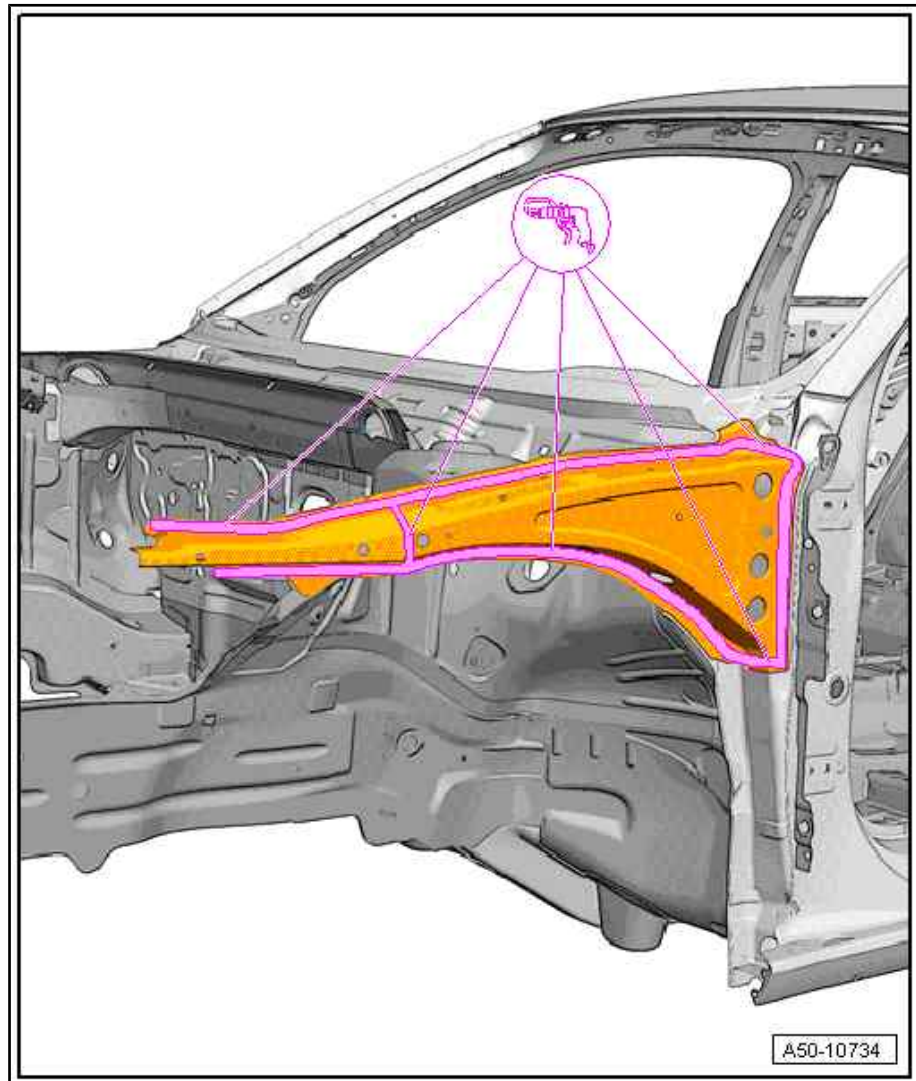
#### NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

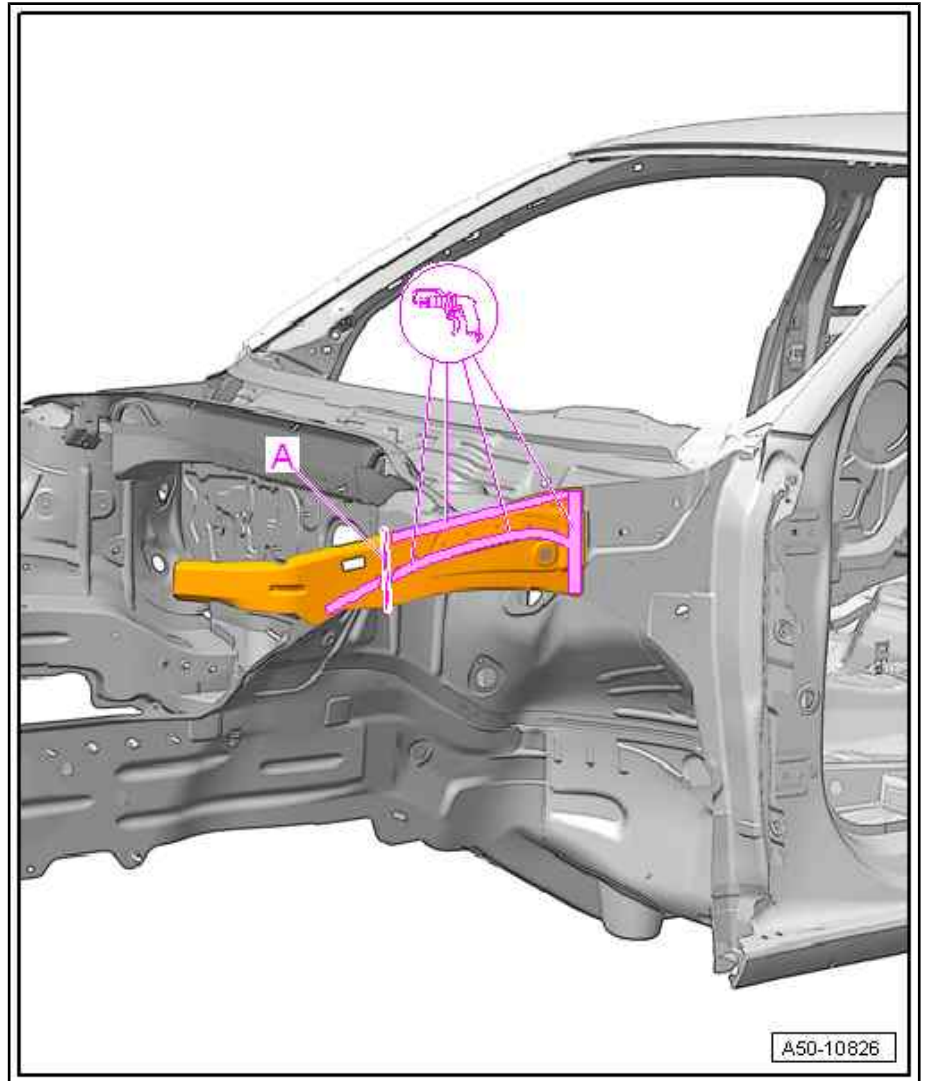
## 3.2 Procedure

### Cutting locations

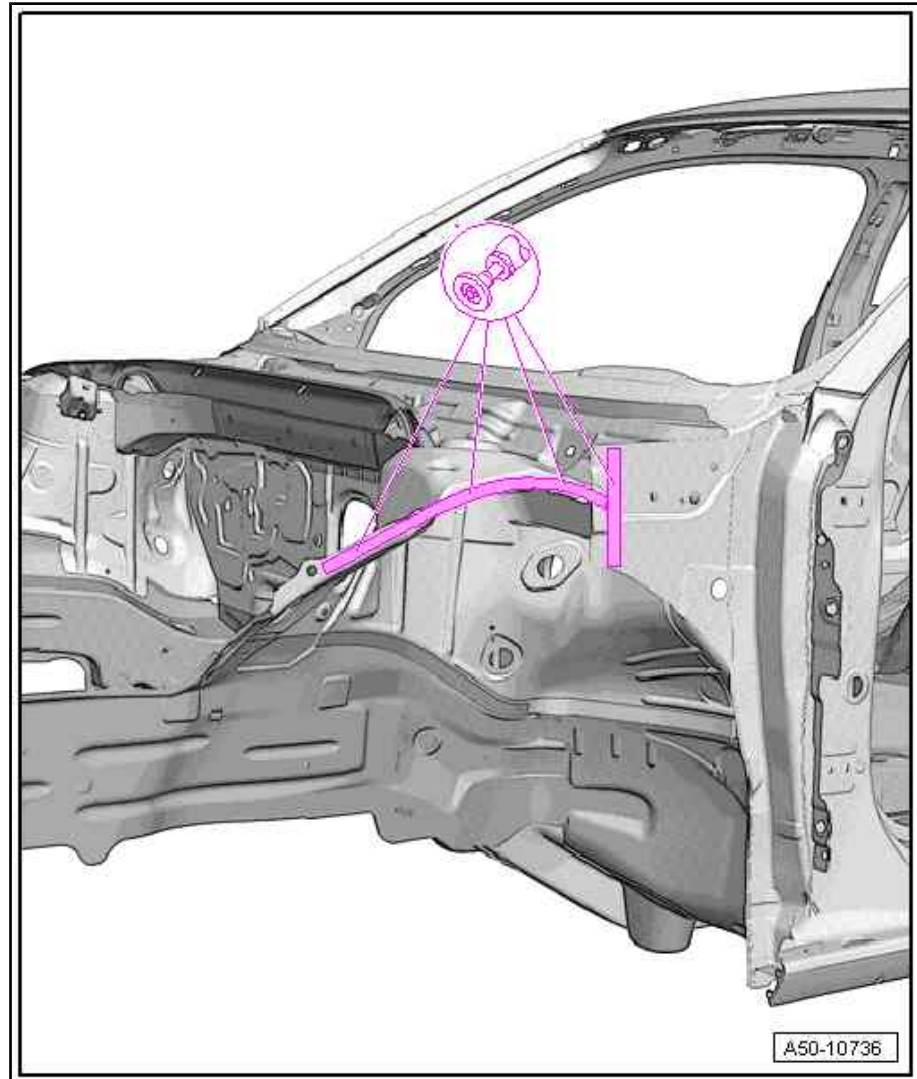
- Drill out original joint using spot weld breaker .



- Drill out original joint using spot weld breaker .
- Part section repair is possible using separating cut -a-.



- Remove remaining material using compact angle grinder .



#### Replacement part

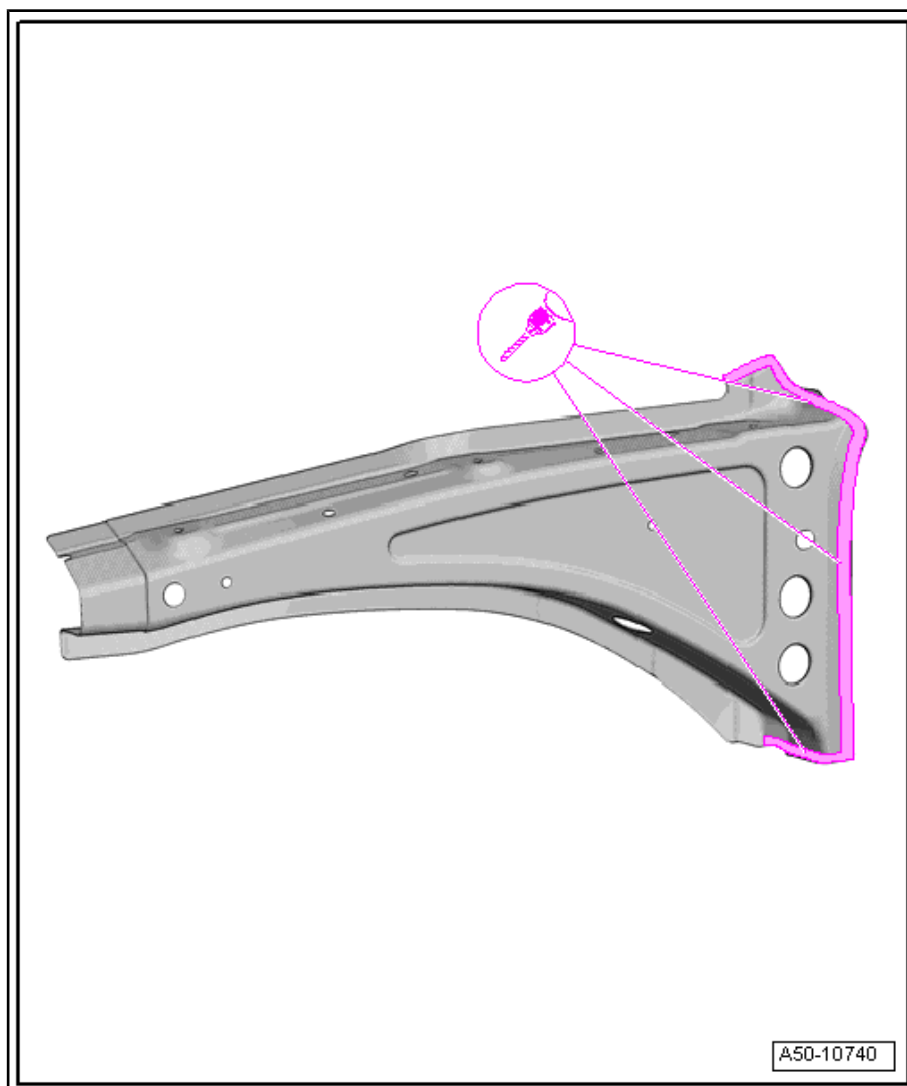
- ◆ Upper inner longitudinal member
- ◆ Upper longitudinal member

#### Pre-treatment - applies to replacement part only

- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.

#### Preparing new part

Drill holes for SG plug weld seam, 8 mm Ø using drill .

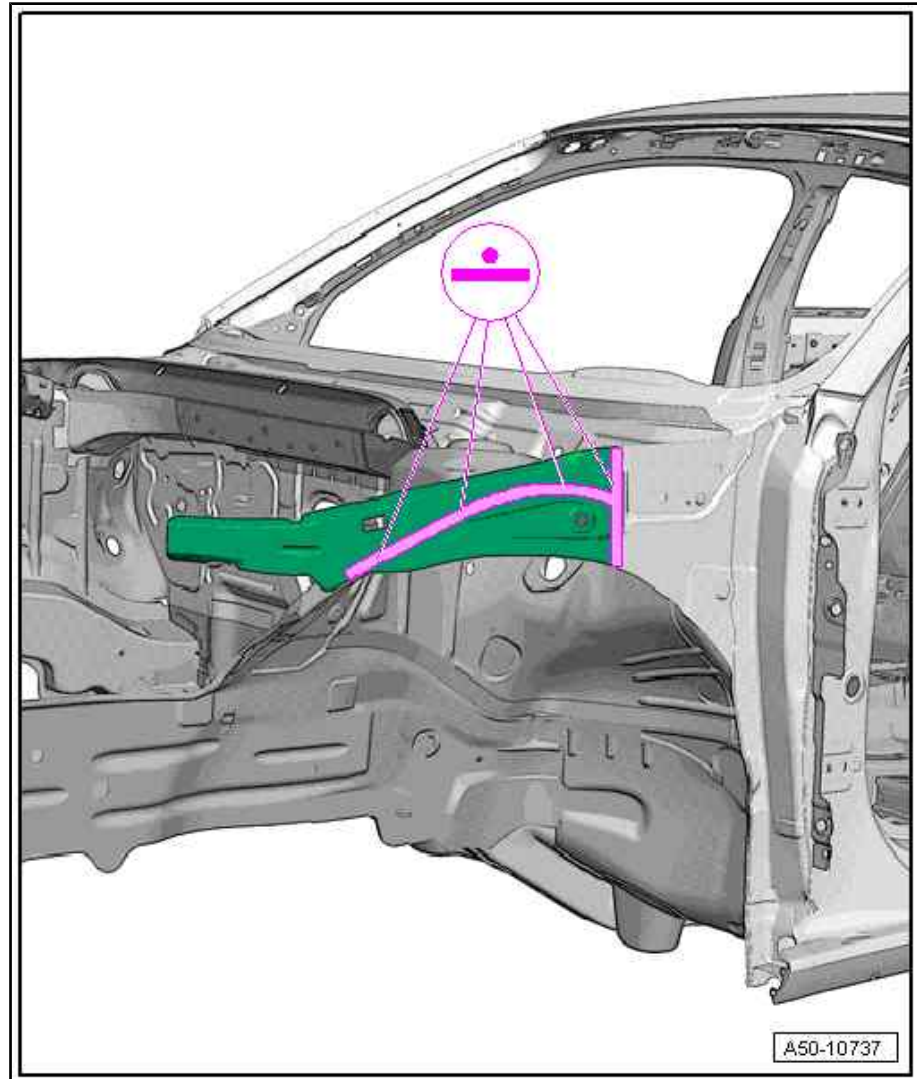


**!** NOTICE

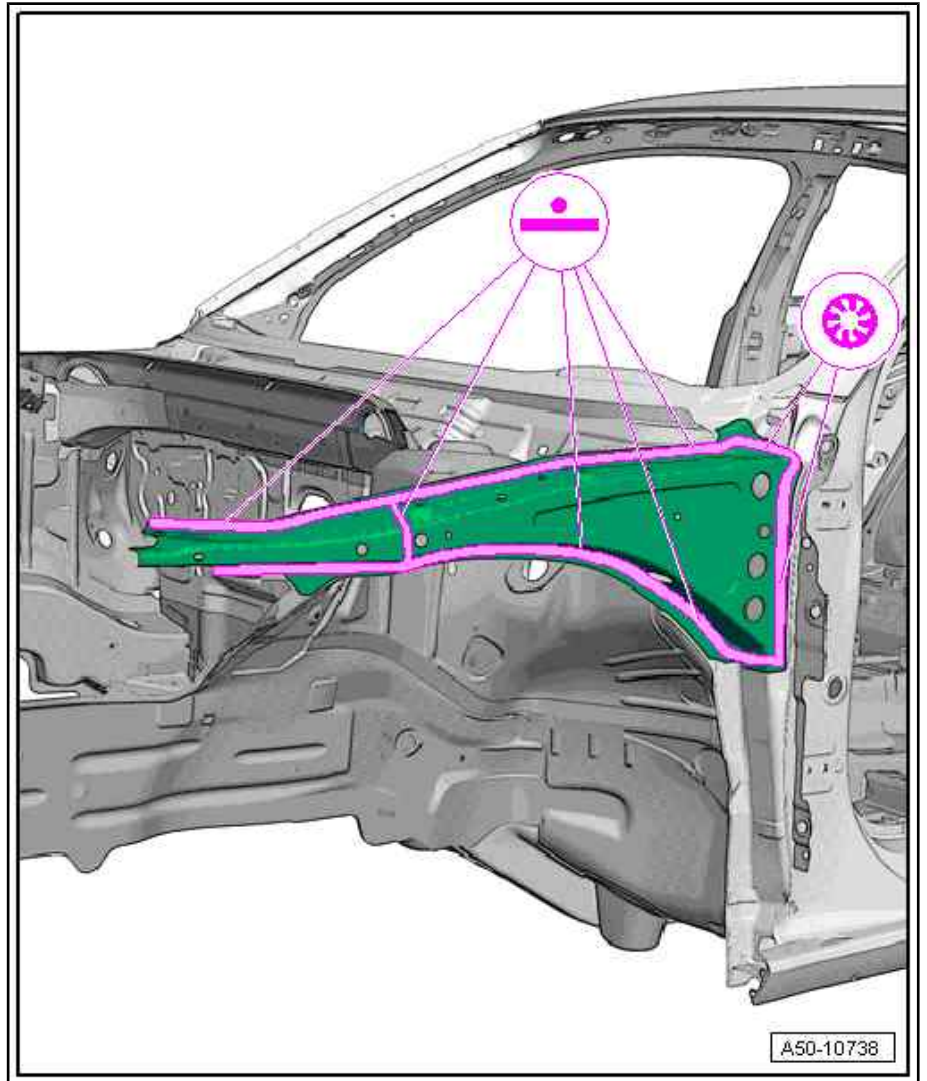
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Weld in upper inner longitudinal member at suspension turret using resistance spot welder : RP spot weld seam.
- Weld in at separating cut using shielded arc welding equipment : SG continuous seam.



- Weld in upper inner longitudinal member using shielded arc welding equipment : SG plug weld seam.
- Weld in upper longitudinal member for wheel housing using resistance spot welder : RP spot weld seam.



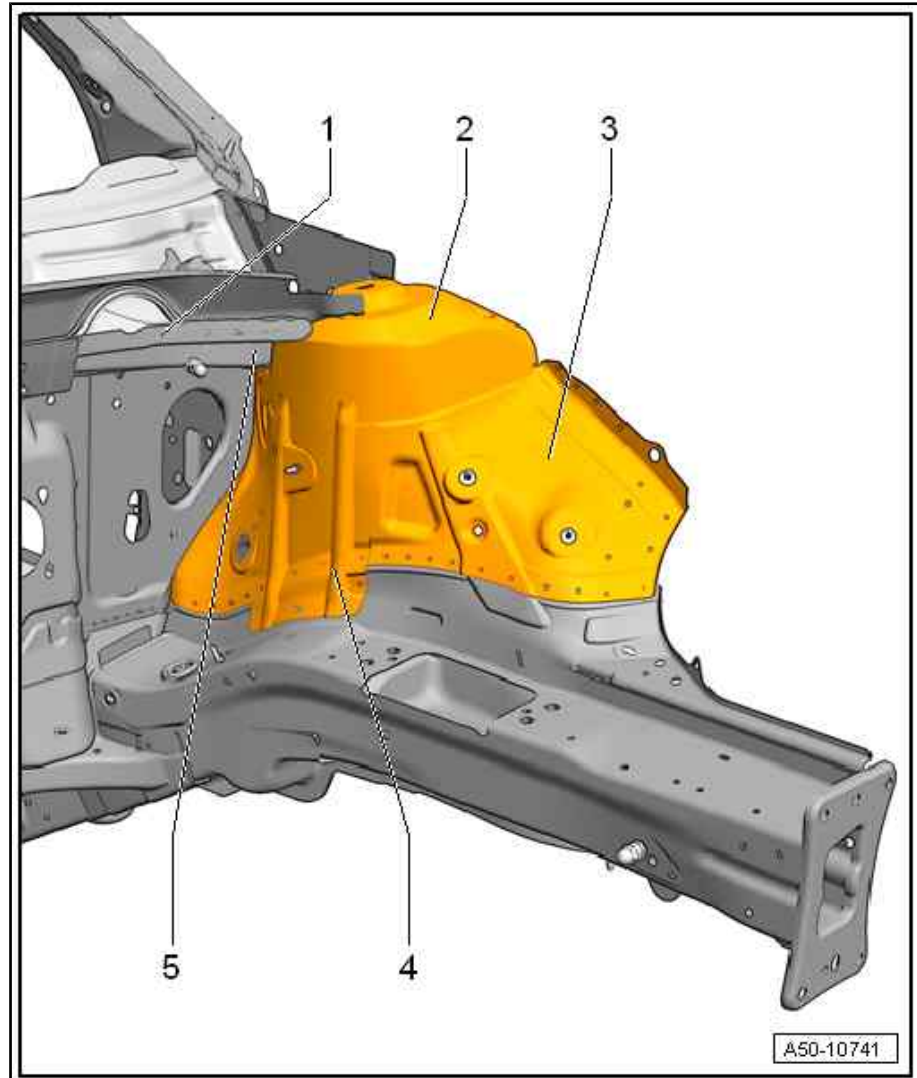


RO: 50 74 55 00

## 4 Front wheel housing - Renewal

A3, Sportback and Saloon identical

- 1 - Plenum chamber
- 2 - Suspension strut mounting
- 3 - Front wheel housing
- 4 - Wheel housing reinforcement
- 5 - Flange plate



### 4.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Drill
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker



**!** NOTICE

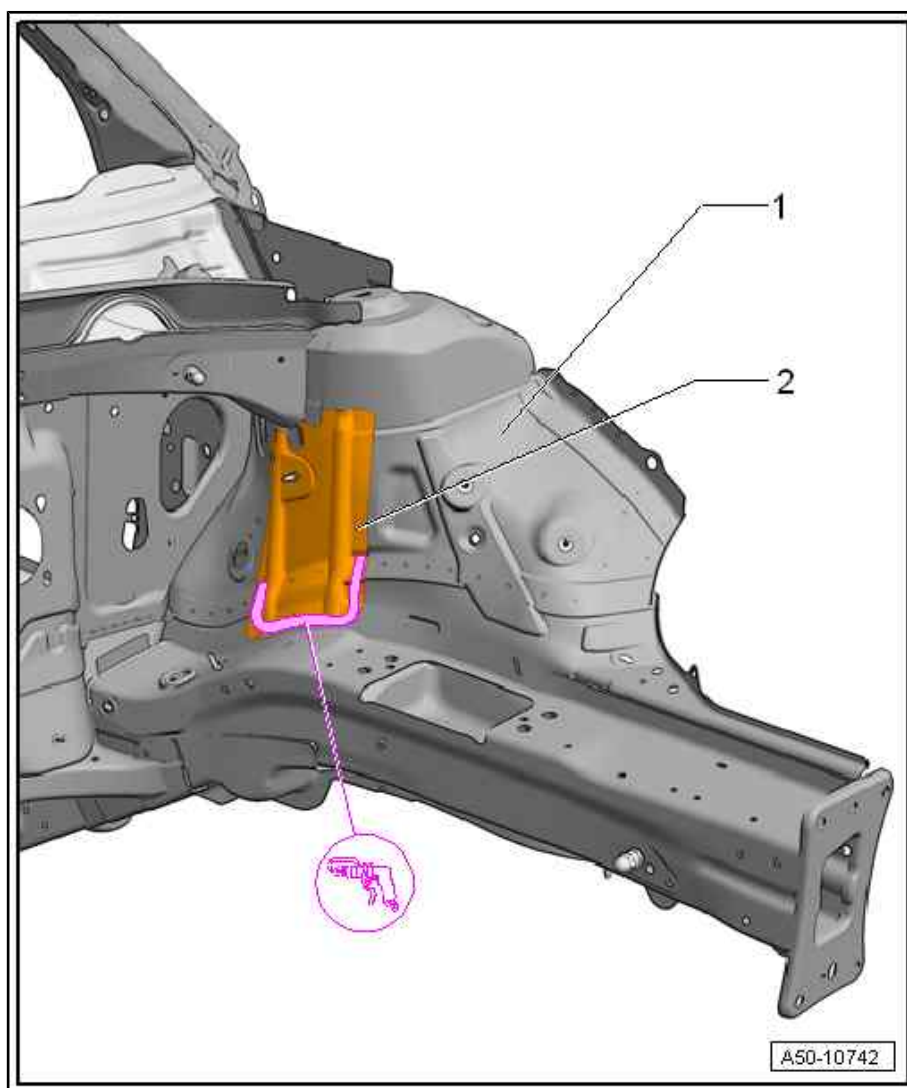
One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

## 4.2 Procedure

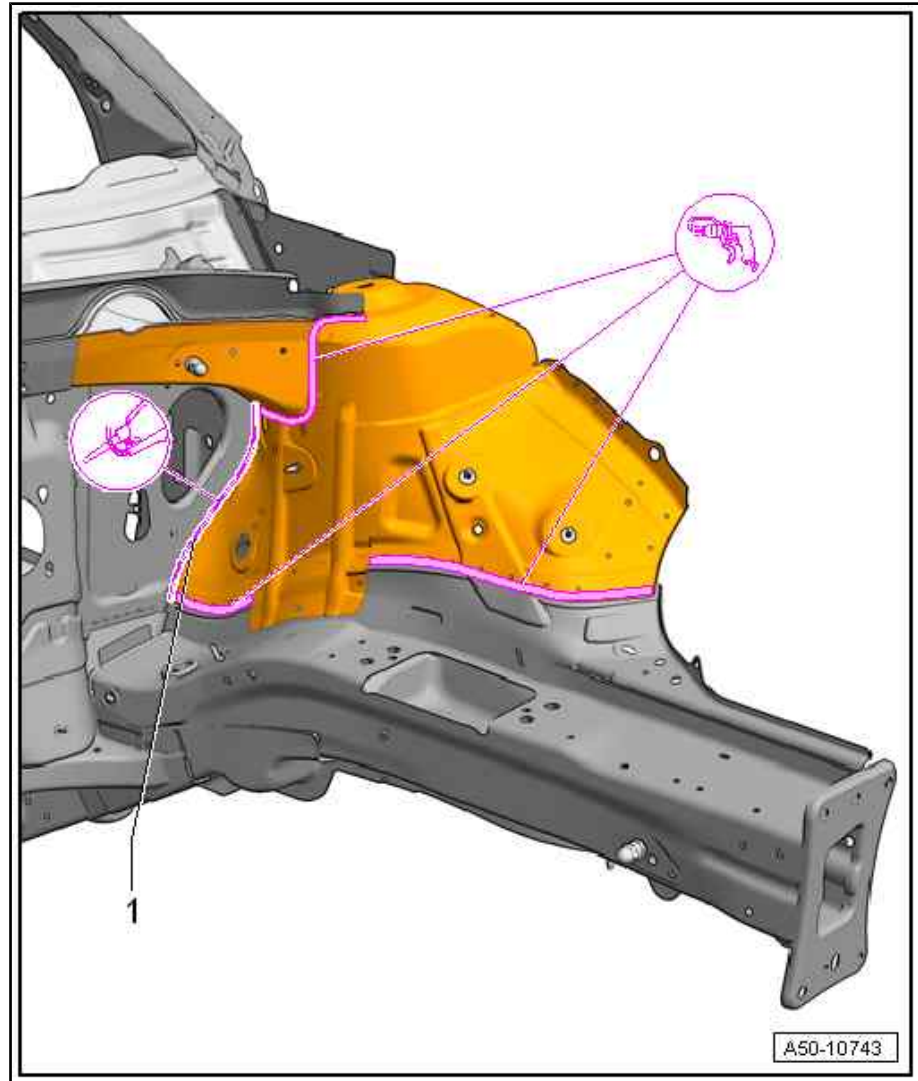
- Remove upper longitudinal member ⇒ [page 69](#) .

### Cutting locations

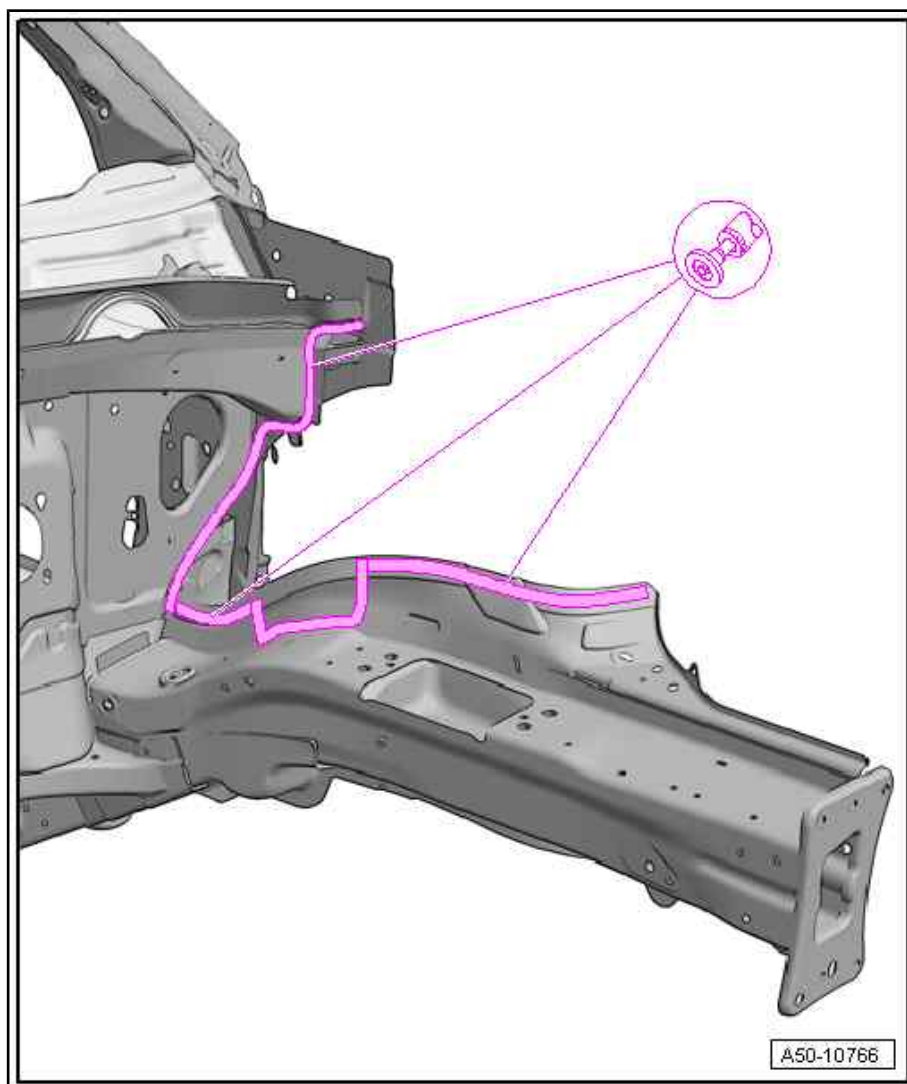
- Separate original joint between wheel housing reinforcement -2- and wheel housing -1- using spot weld breaker .



- Separate original joint between wheel housing, cover plate for longitudinal member and bulkhead using body saw .
  - Separate original joint using spot weld breaker .
- Part section repair is possible using separating cut -1-.



- Remove remaining material using compact angle grinder .



### Replacement parts

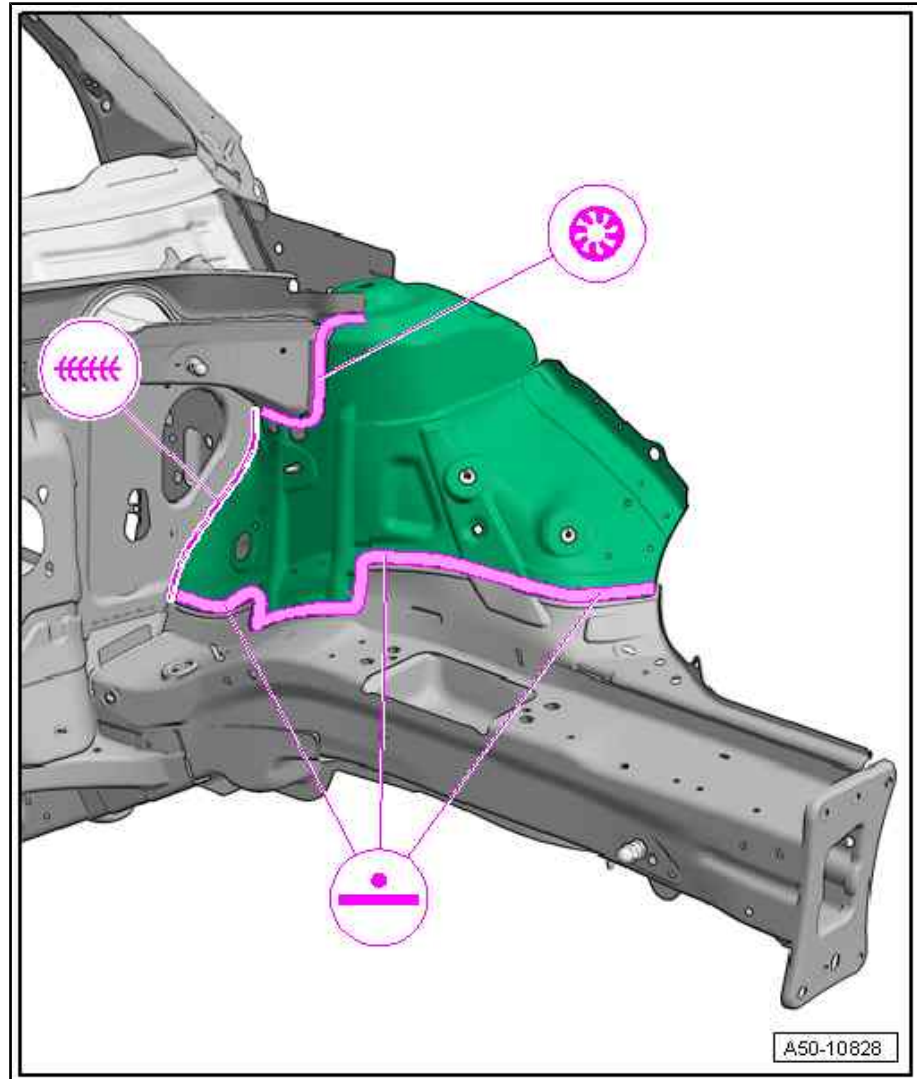
- ◆ Wheel housing
- ◆ Flange plate

### ! NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

### Welding in

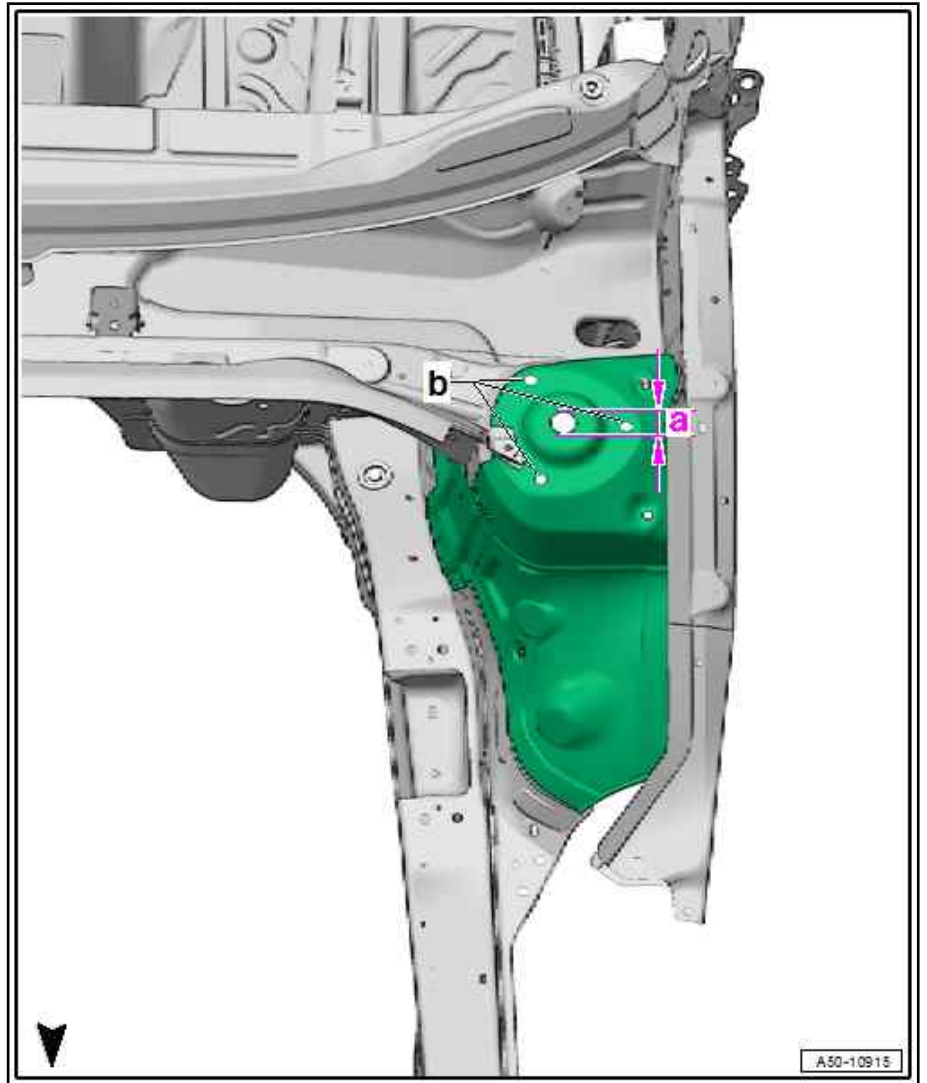
- Match up new parts with alignment bracket mountings and adjacent parts and fix in position.
- Weld in wheel housing using resistance spot welder : RP spot weld seam.
- Weld in wheel housing using shielded arc welding equipment : SG plug weld seam.
- Weld at separating cut using shielded arc welding equipment : SG continuous seam.



- Drill out suspension turret to dimension -a- using a step drill (commercially available).
- Drill out suspension turret to dimension -b- using alignment bracket set for Audi A3 - VAS 6789 - .

**Dimension -a- = 34 mm**

**Dimension -b- = 10 mm**



- Welding in upper longitudinal member ⇒ [page 69](#)

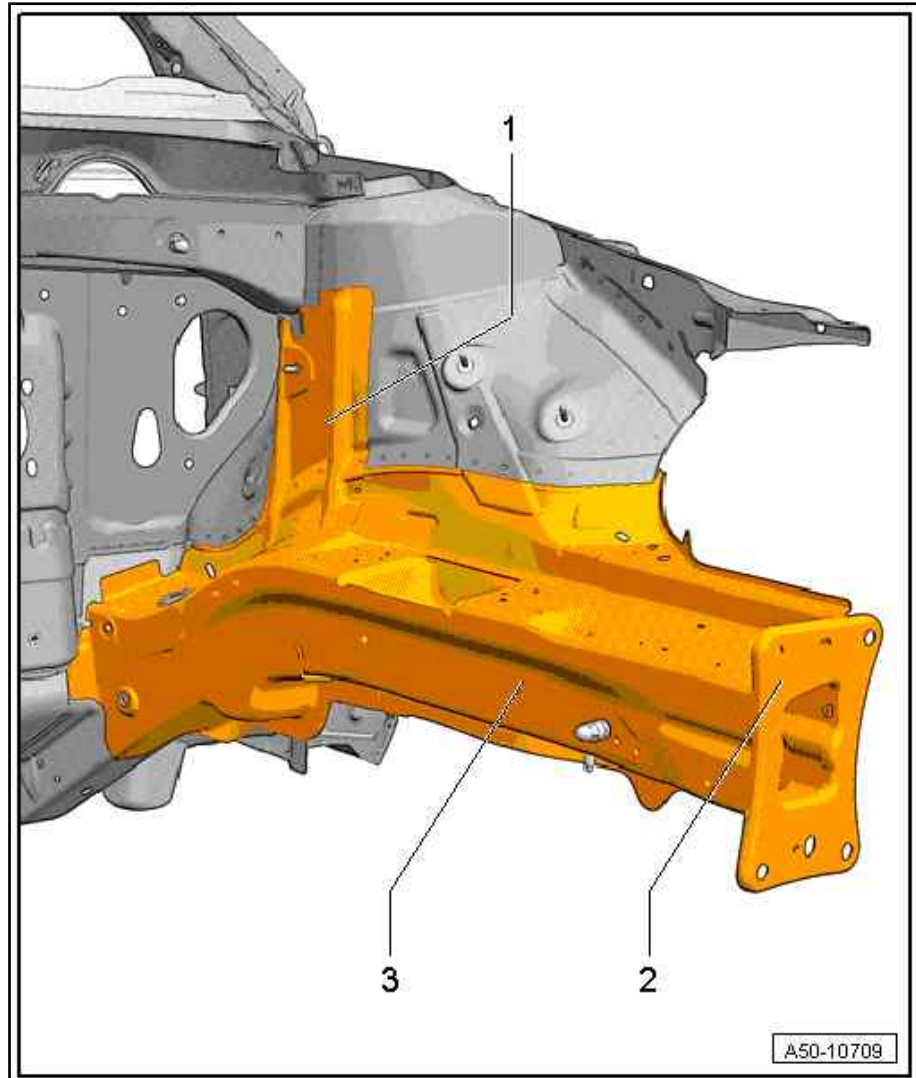


RO: 50 79 55 00

## 5 Front longitudinal member - Renewal

A3, Sportback and Saloon identical

- 1 - Front wheel housing reinforcement
- 2 - Bumper bracket
- 3 - Front longitudinal member



### 5.1 Tools

Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Drill
- ◆ Spot weld breaker



**NOTICE**

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

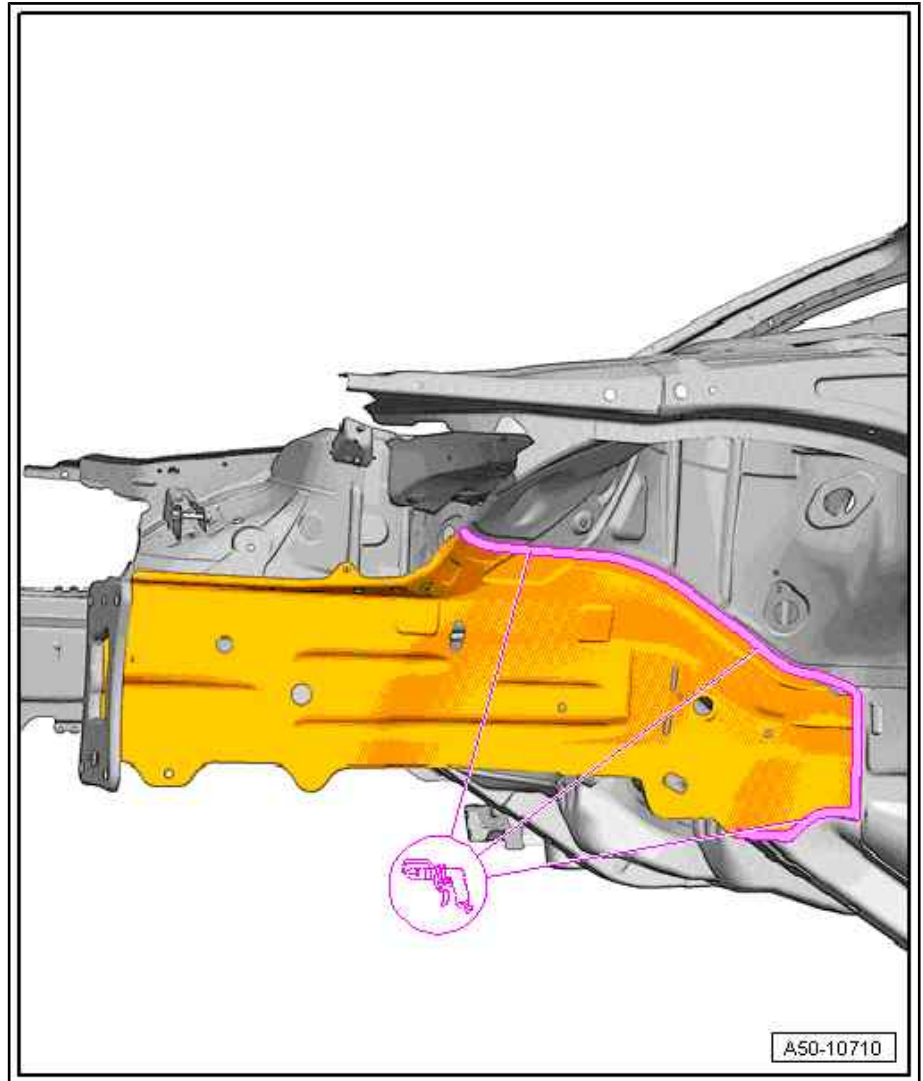


## 5.2 Procedure

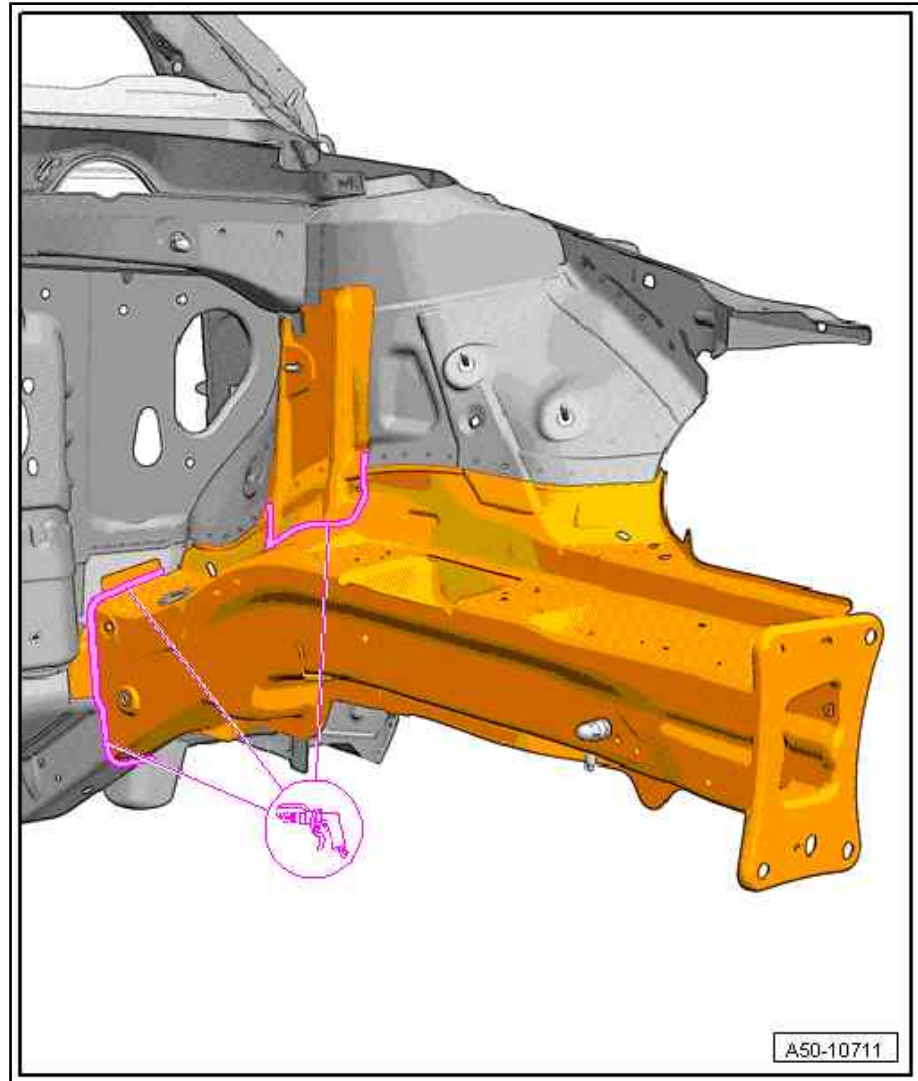
- Remove mounting bracket for subframe ⇒ [page 60](#) .

### Cutting locations

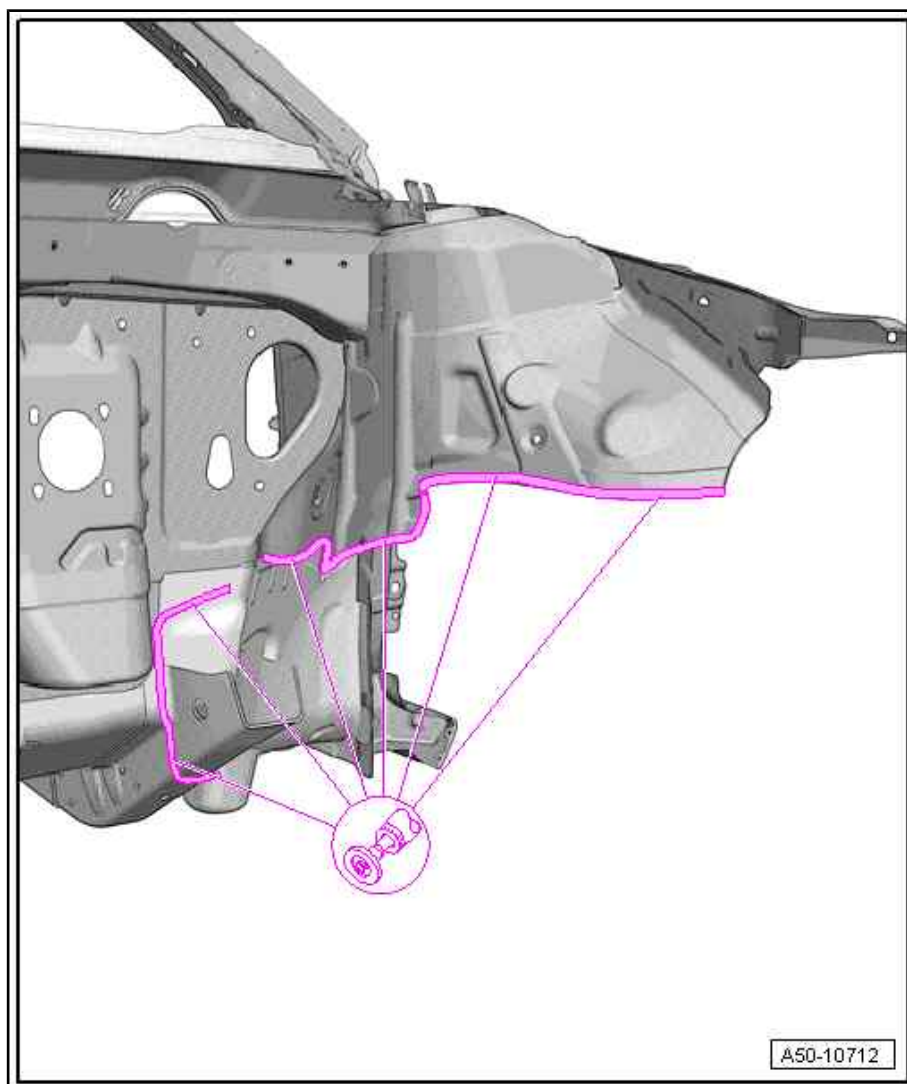
- Separate original joint using spot weld breaker .



- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .



### Replacement parts

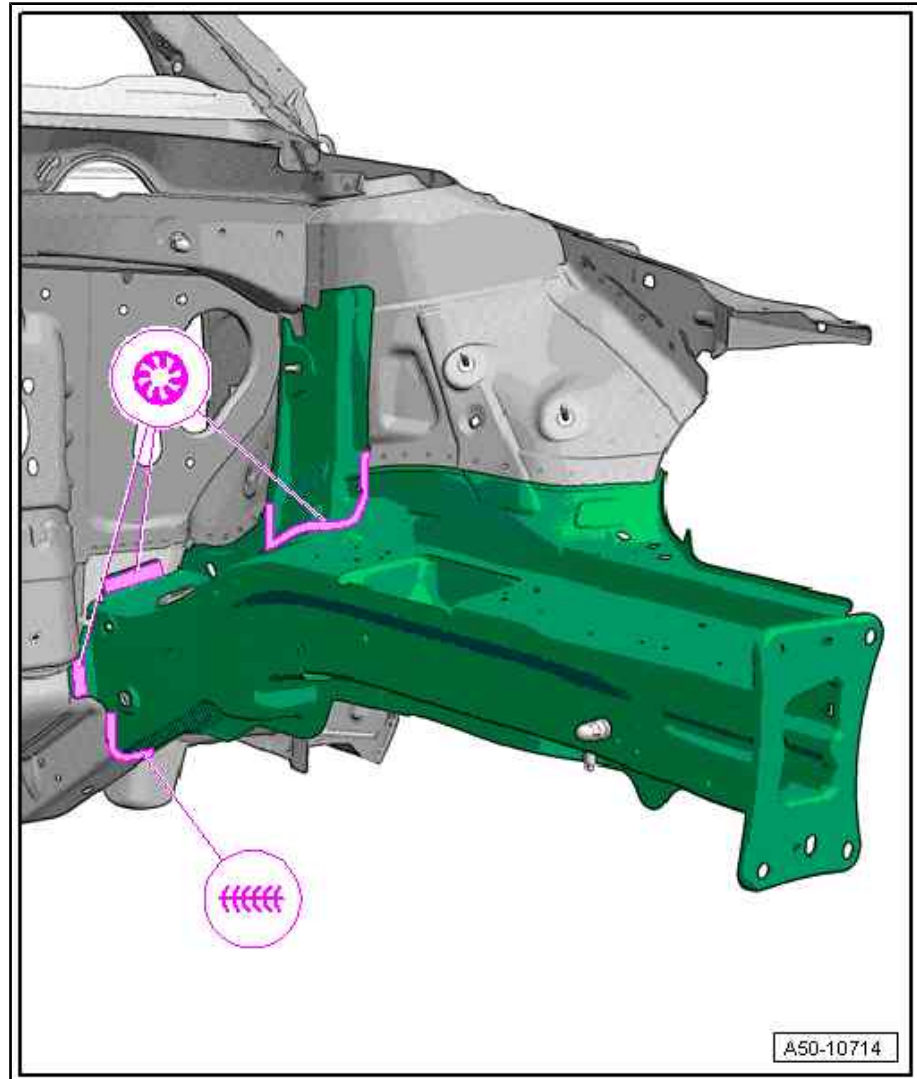
- ◆ Sub-part - front longitudinal member

#### NOTICE

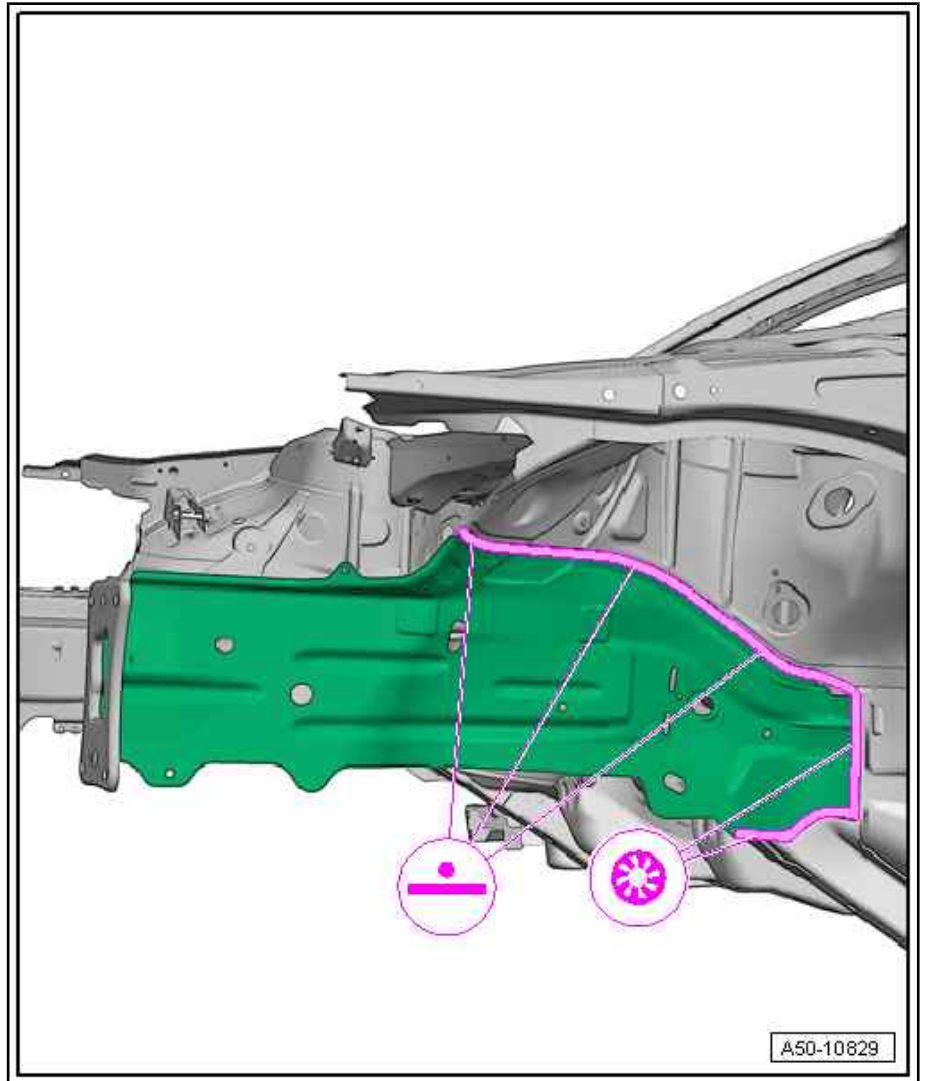
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

### Welding in

- With vehicle standing on alignment bracket set, match up new part and fix in position.
- Check fit with adjacent parts.
- Weld in longitudinal member using shielded arc welding equipment : SG continuous seam.
- Weld in longitudinal member using shielded arc welding equipment : SG plug weld seam.



- Weld in wheel housing using resistance spot welder : RP spot weld seam.
- Remake original joint at wheel housing using shielded arc welding equipment : SG plug weld seam.



- Welding in mounting bracket for subframe ⇒ [page 60](#)

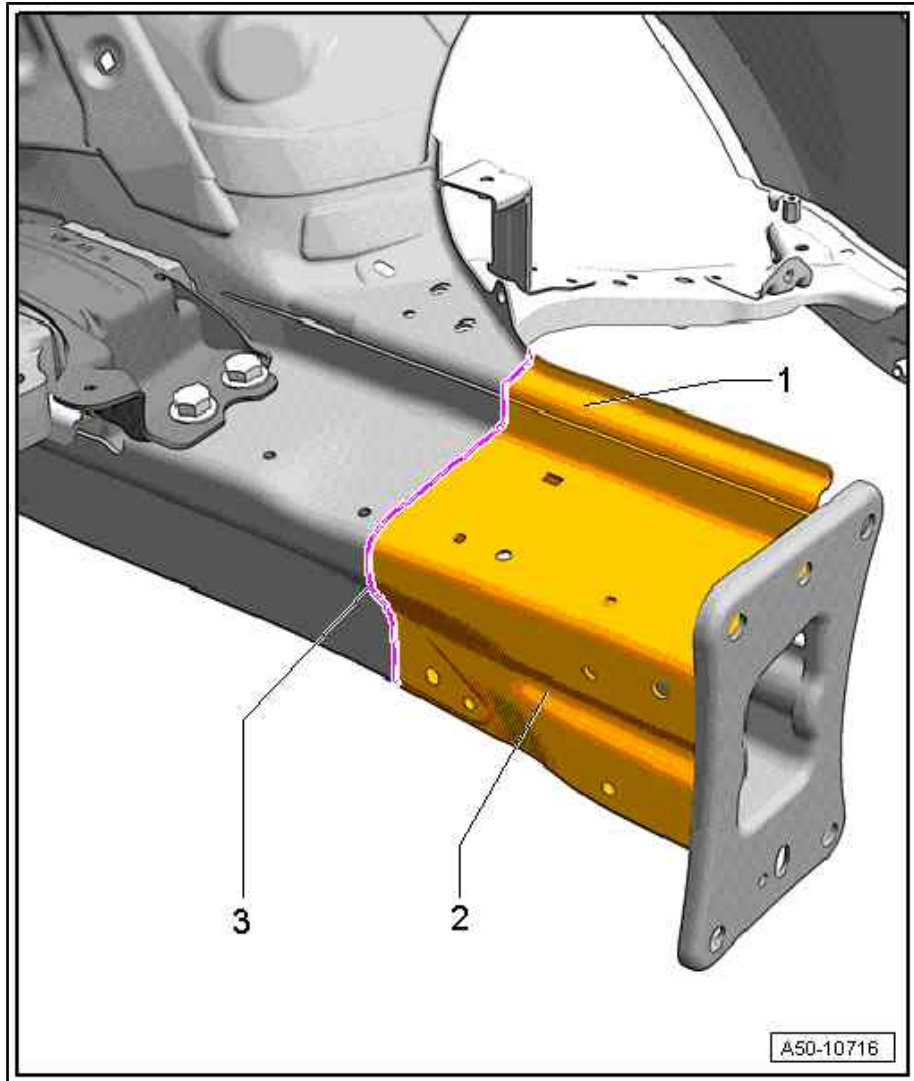


RO: 50 79 55 02

## 6 Front longitudinal member (left-side) - Partial renewal

A3, Sportback and Saloon identical

- 1 - Cover plate for longitudinal member
- 2 - Front longitudinal member
- 3 - Separating cut



### 6.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Drill
- ◆ Spot weld breaker



**!** NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work => [page 48](#) .

## 6.2 Procedure

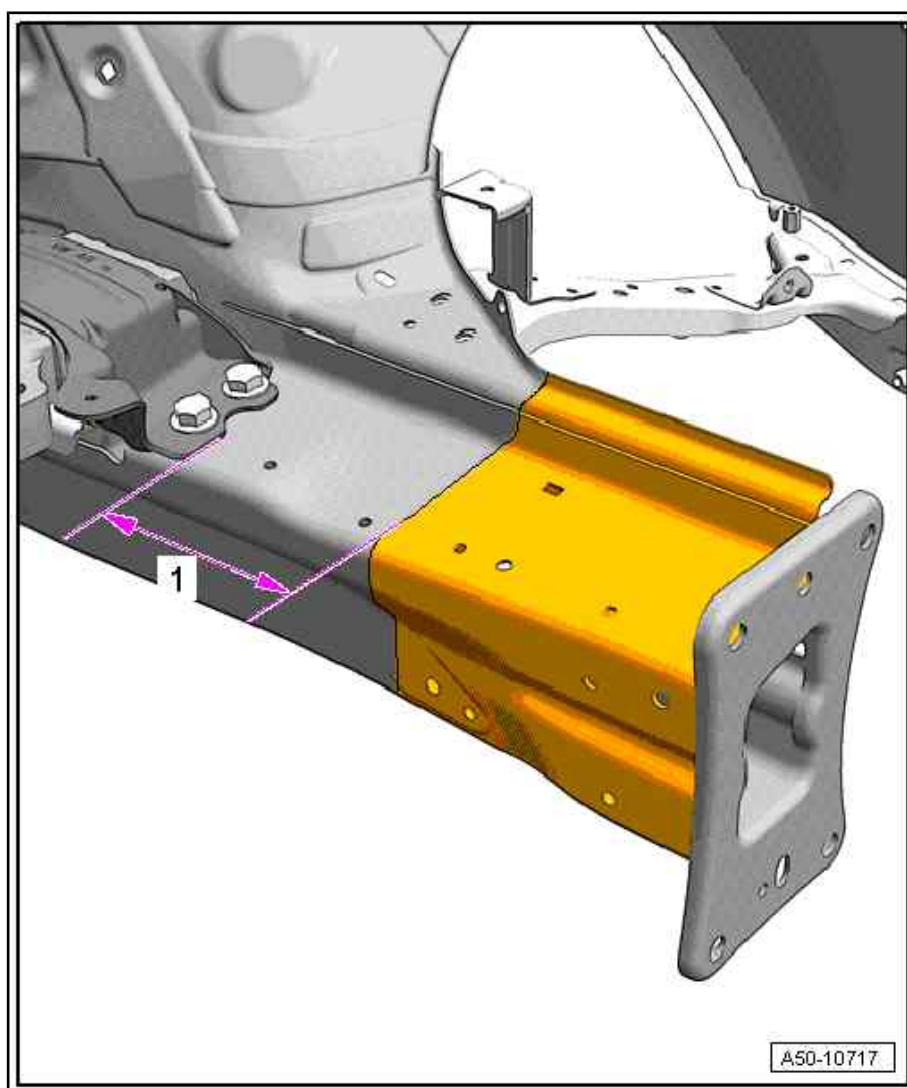
### Cutting locations

**!** CAUTION

This separating cut on the longitudinal member may only be made in the area shown. If damage to the longitudinal member extends further it must be renewed completely.

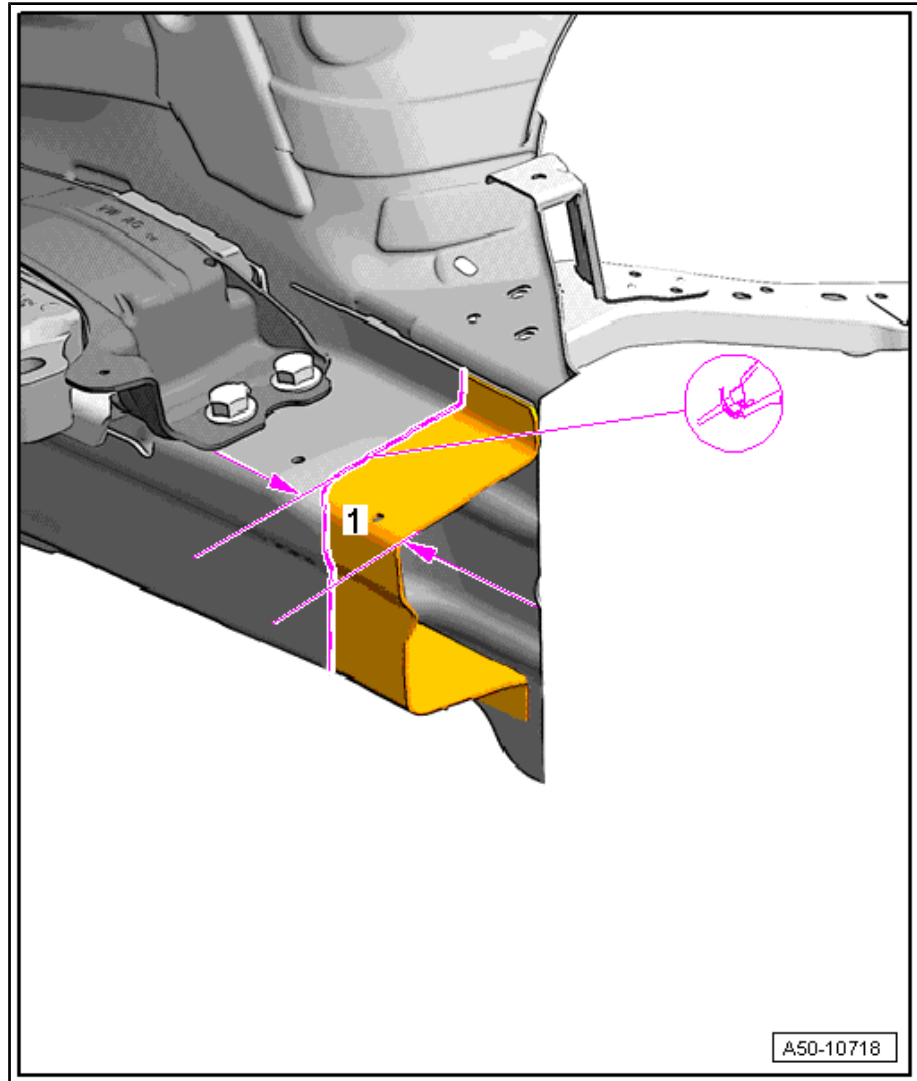
- Cut through longitudinal member completely using body saw (important: keep to dimension -1- for separating cut).

Dimension -1- = 110 mm

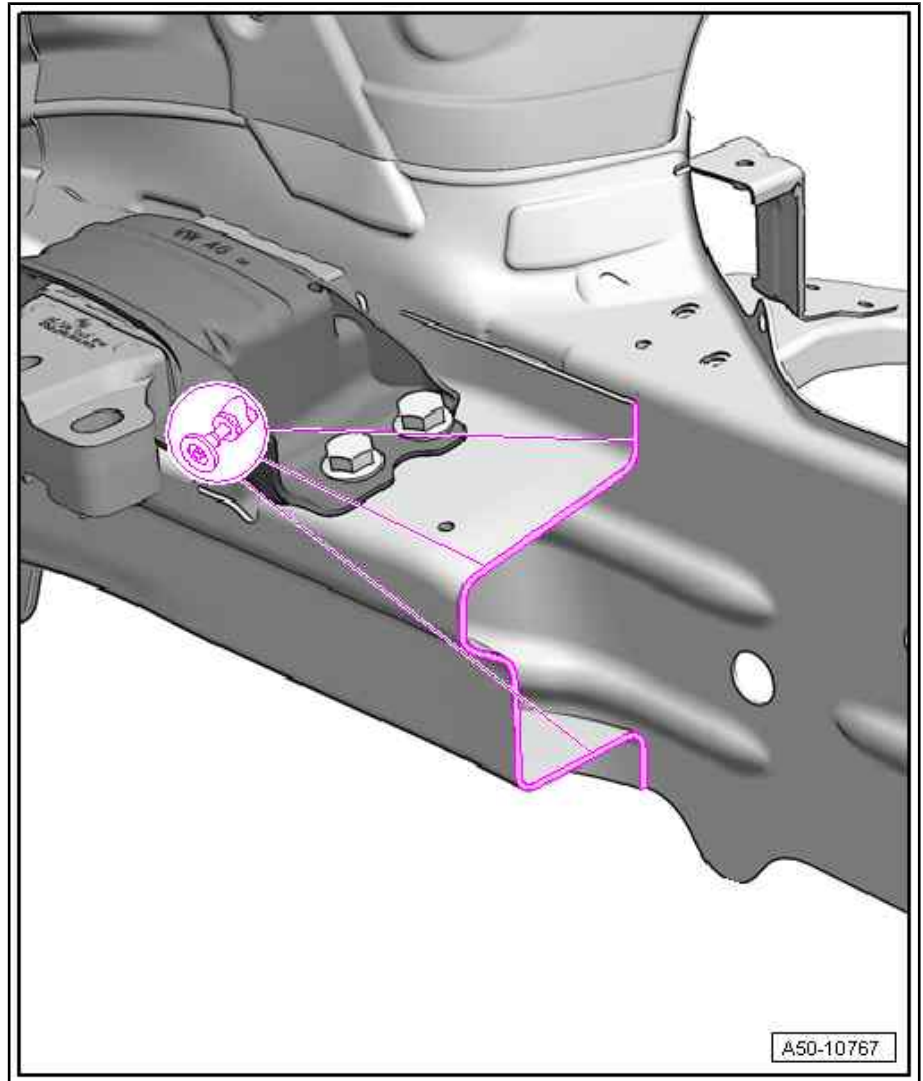


- To obtain a step, cut only longitudinal member according to dimension -1- using body saw (keep to indicated dimension).

Dimension -1- = 25 mm



- Remove remaining material using compact angle grinder .



### Replacement parts

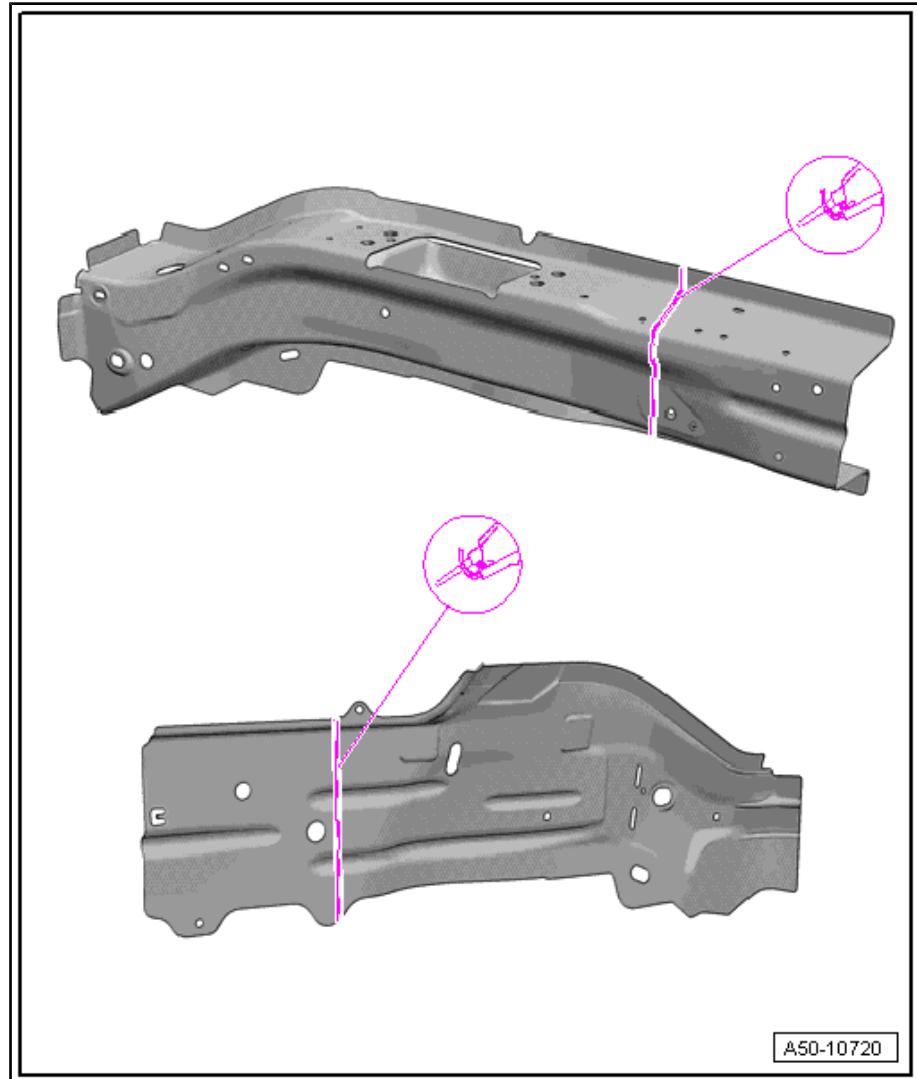
- ◆ Cover plate for longitudinal member
- ◆ Front longitudinal member

### Pre-treatment - applies to replacement part only

- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.

### Preparing new part

- Transfer separating cuts to longitudinal member and to cover plate for front longitudinal member and cut parts to shape using body saw .

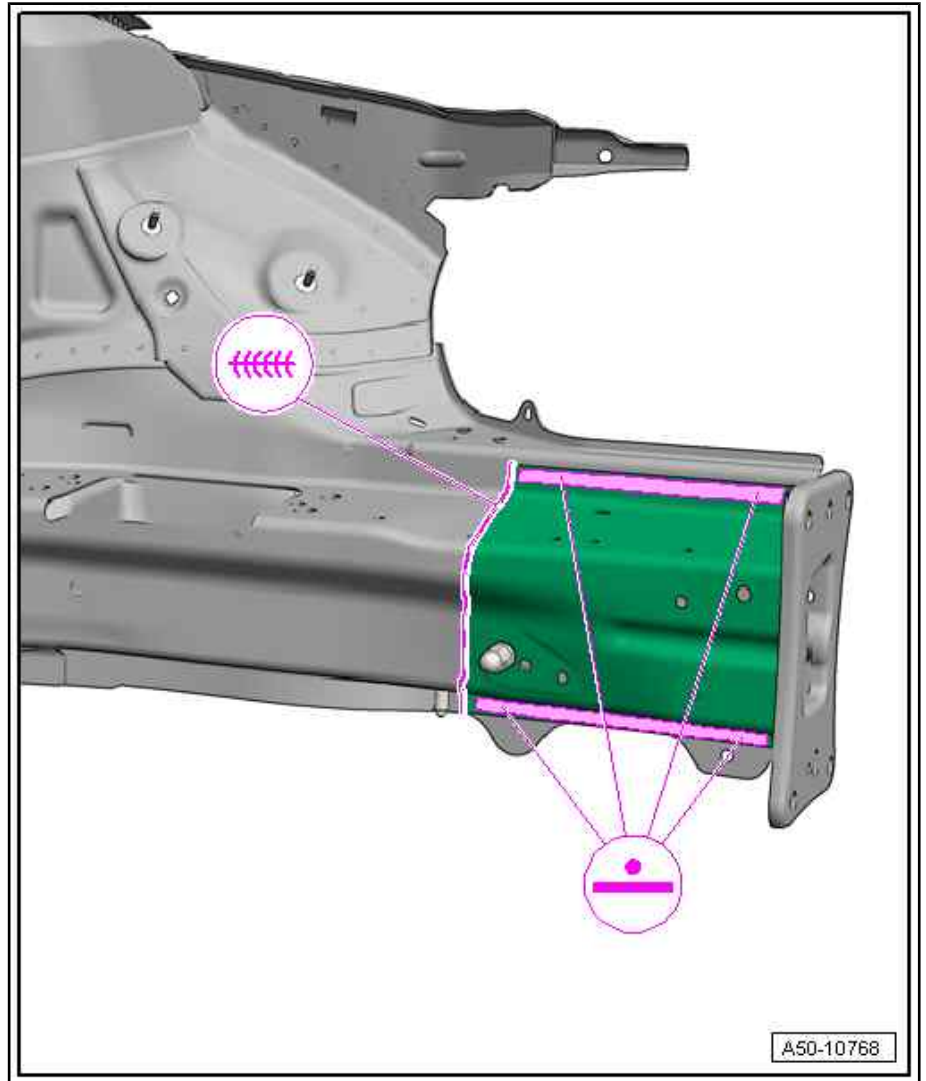


**!** NOTICE

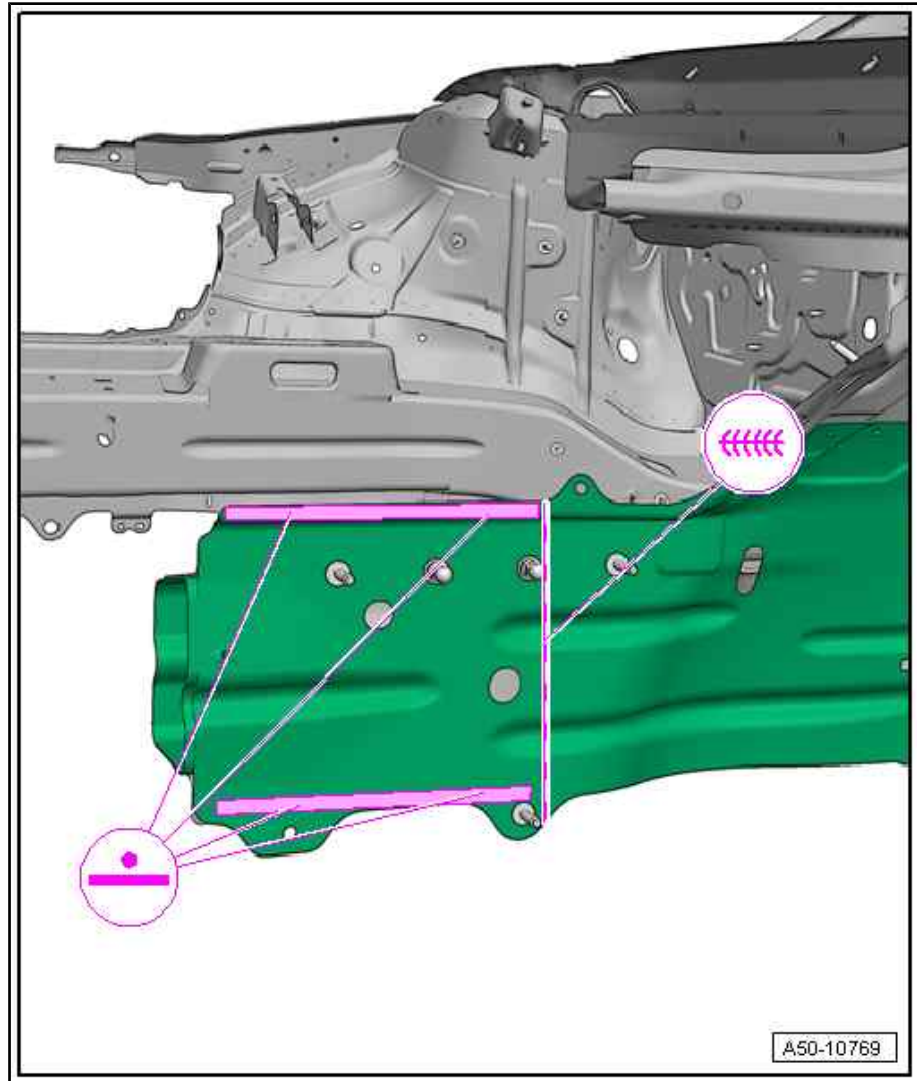
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- With vehicle standing on alignment bracket set, match up new part and fix in position.
- Check fit relative to adjacent parts.
- Weld front longitudinal member all round at separating cut using shielded arc welding equipment : SG continuous seam.
- Weld in longitudinal member (part section) using resistance spot welder : RP spot weld seam.



- Weld cover plate for longitudinal member using shielded arc welding equipment : SG continuous seam.
- Weld in cover plate for longitudinal member using resistance spot welder : RP spot weld seam.



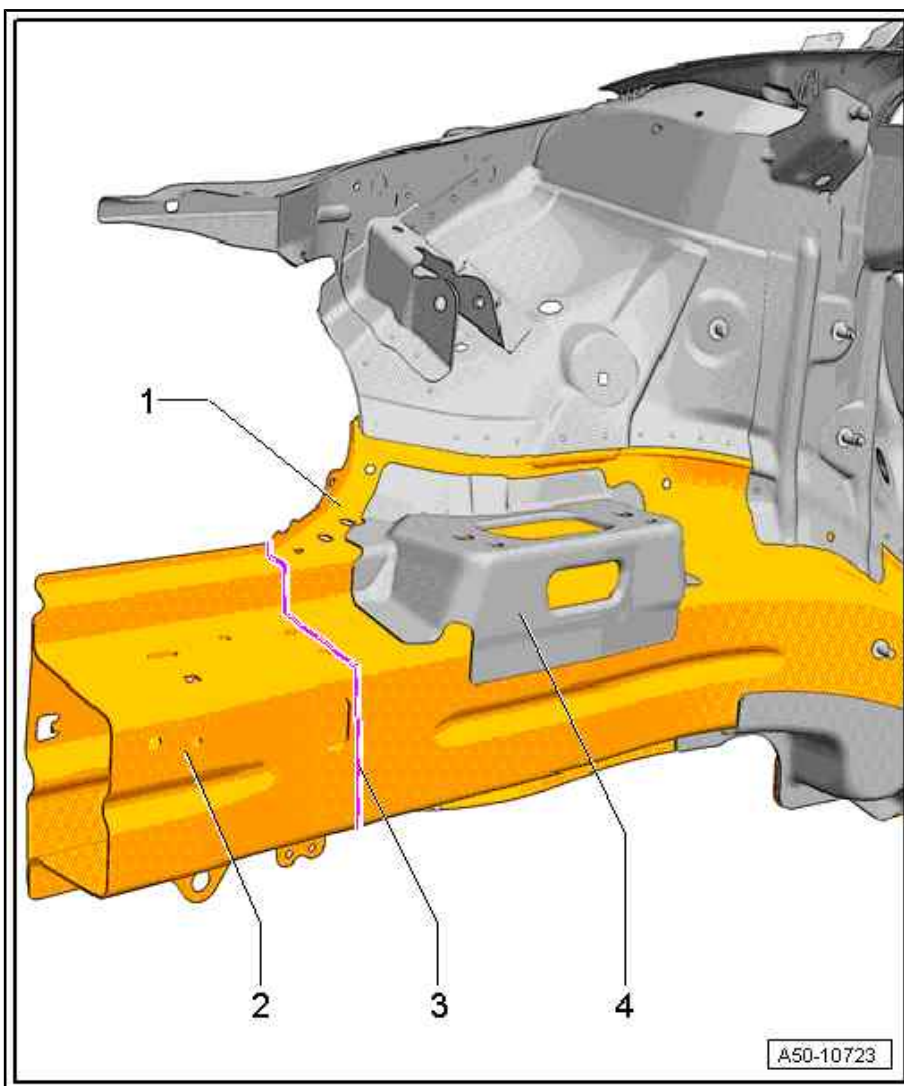


RO: 50 79 55 02

## 7 Front longitudinal member (right-side) - Partial renewal

A3, Sportback and Saloon identical

- 1 - Cover piece for longitudinal member (front right)
- 2 - Front longitudinal member
- 3 - Separating cut for longitudinal member
- 4 - Engine console



### 7.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Drill
- ◆ Spot weld breaker



**!** NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

## 7.2 Procedure

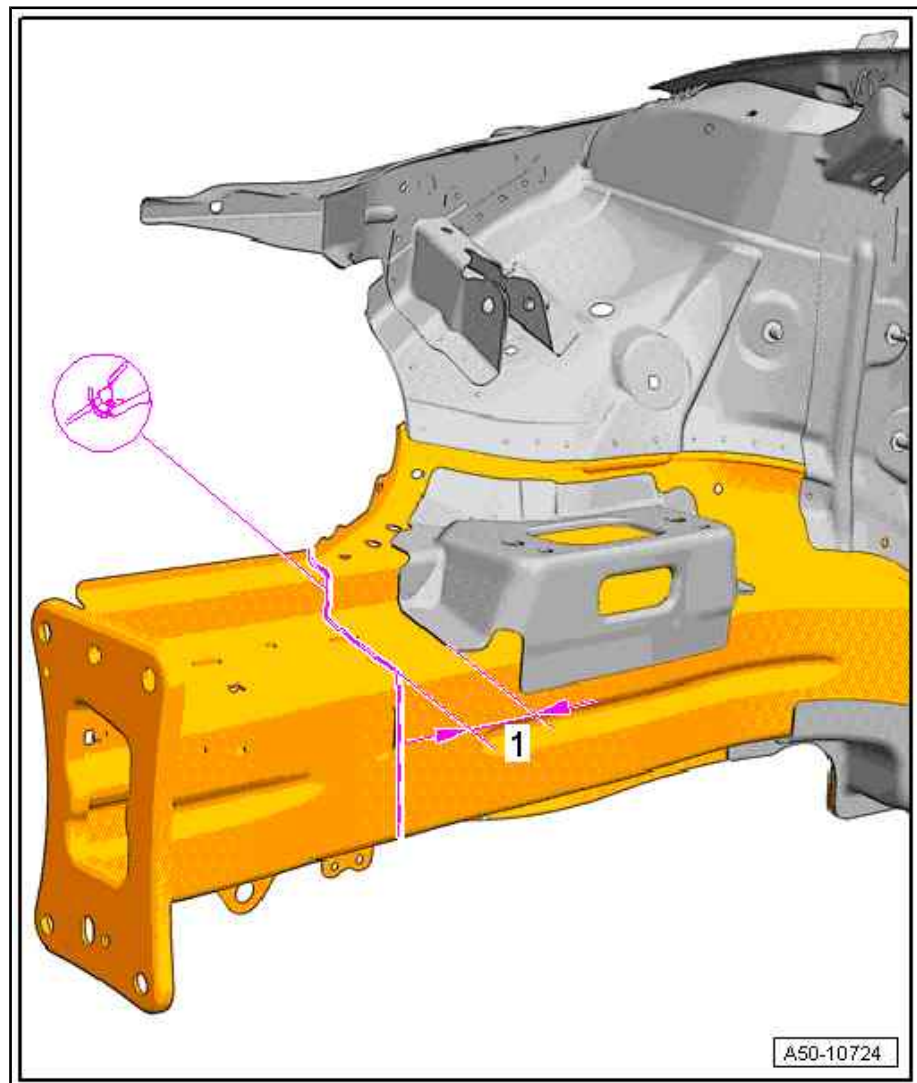
### Cutting locations

**!** CAUTION

This separating cut on the longitudinal member may only be made in the area shown. If damage to the longitudinal member extends further it must be renewed completely.

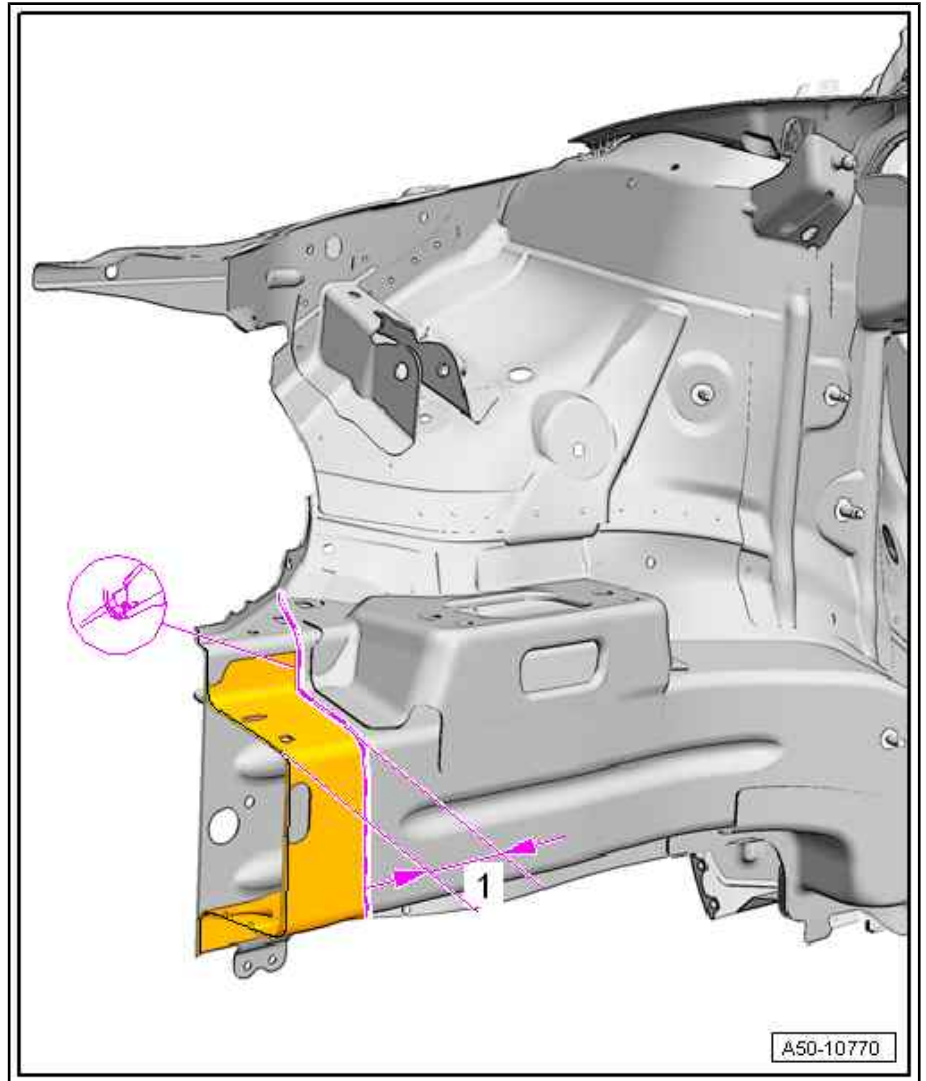
- Cut through longitudinal member completely using body saw (important: keep to dimension -1- for separating cut).

Dimension -1- = 40 mm

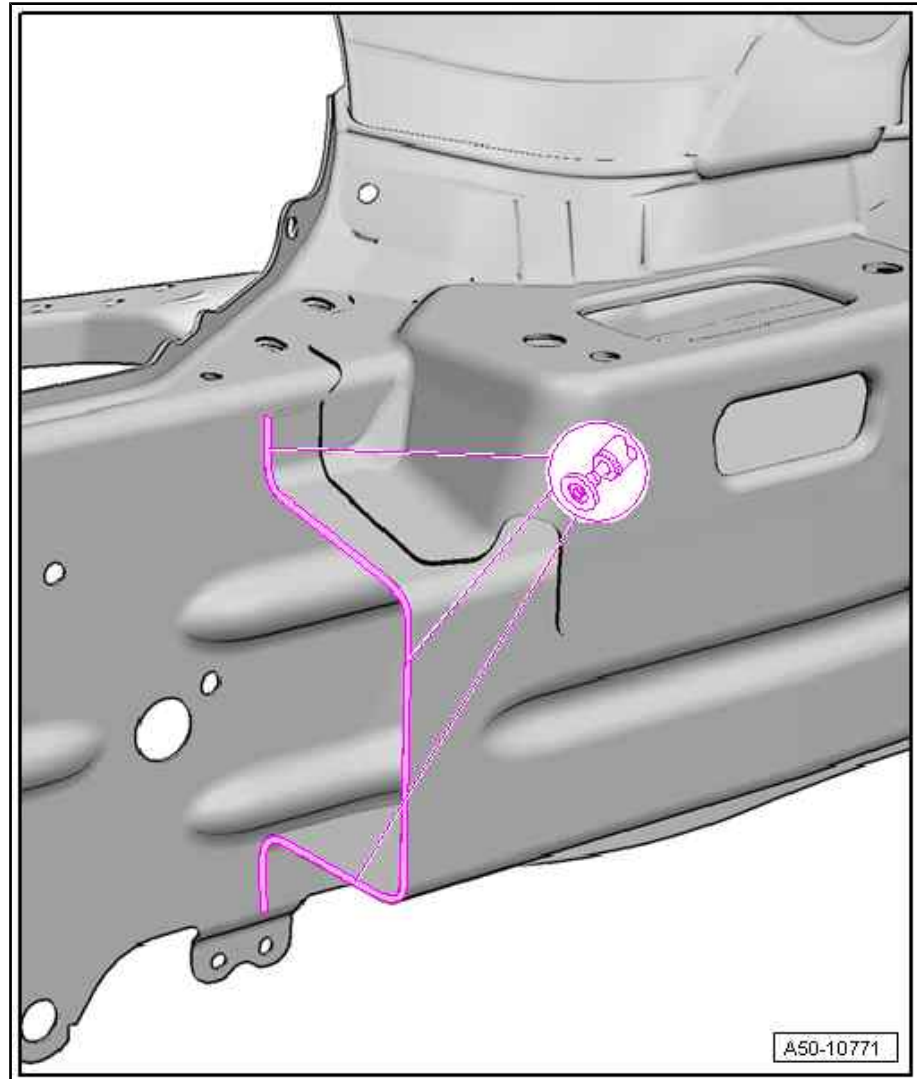


- To obtain a step, cut only longitudinal member according to dimension -1- using body saw (keep to indicated dimension).

Dimension -1- = 25 mm



- Remove remaining material using compact angle grinder .



#### Replacement parts

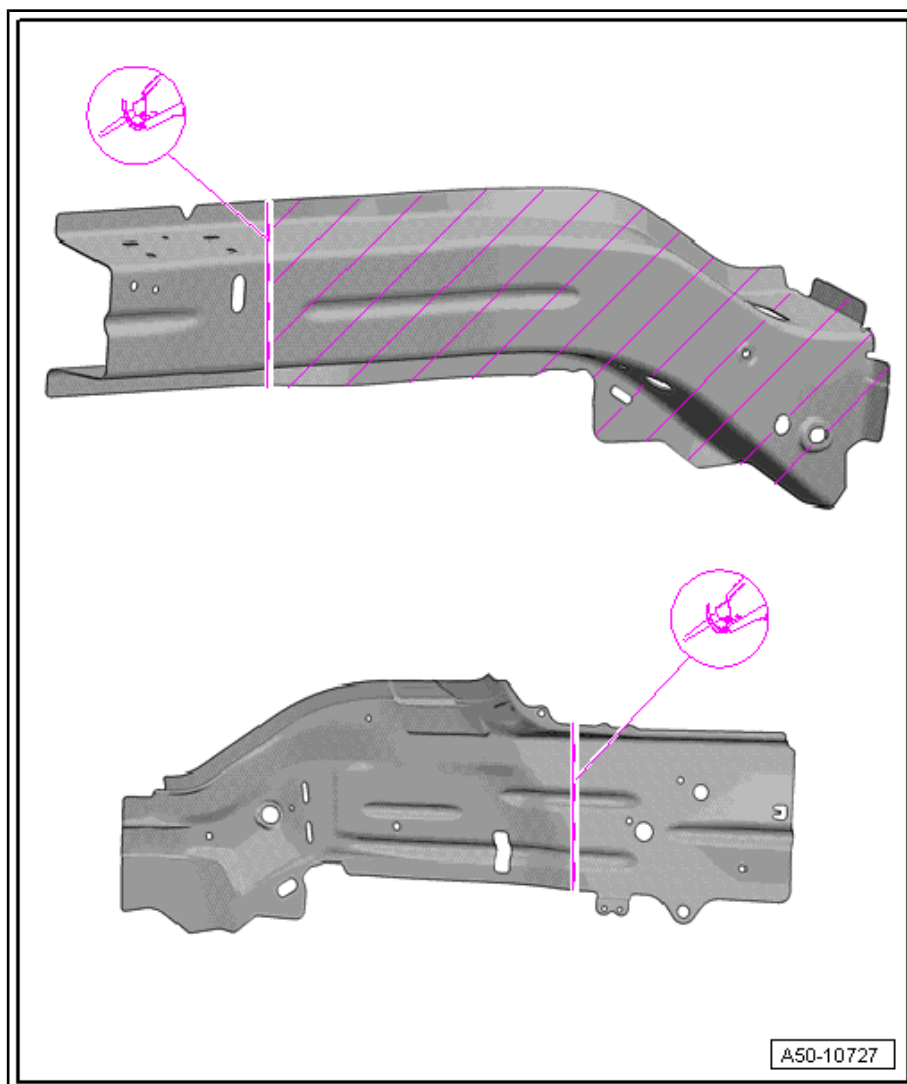
- ◆ Cover plate for longitudinal member (front right)
- ◆ Bumper bracket extension
- ◆ Front longitudinal member

#### Pre-treatment - applies to replacement part only

- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.

#### Preparing new part

- Transfer separating cuts to longitudinal member and to cover plate for front longitudinal member and cut parts to shape using body saw .

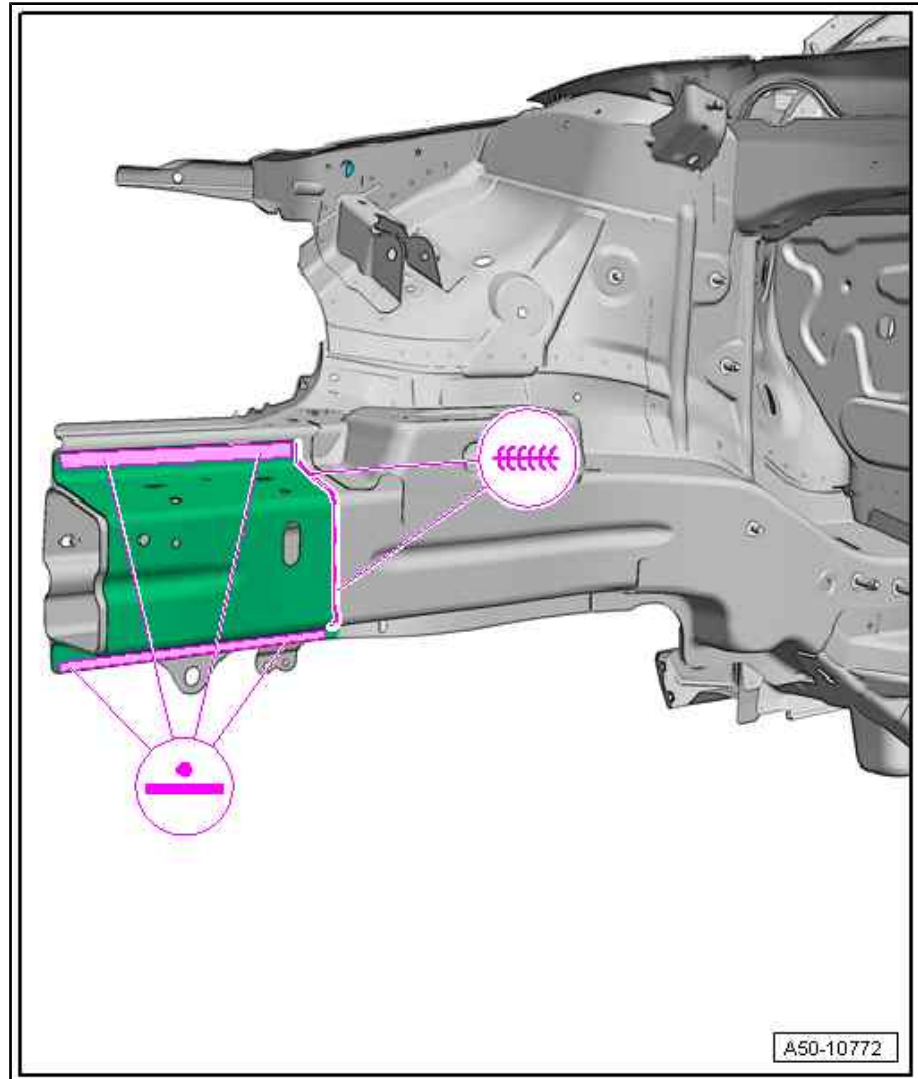


**!** NOTICE

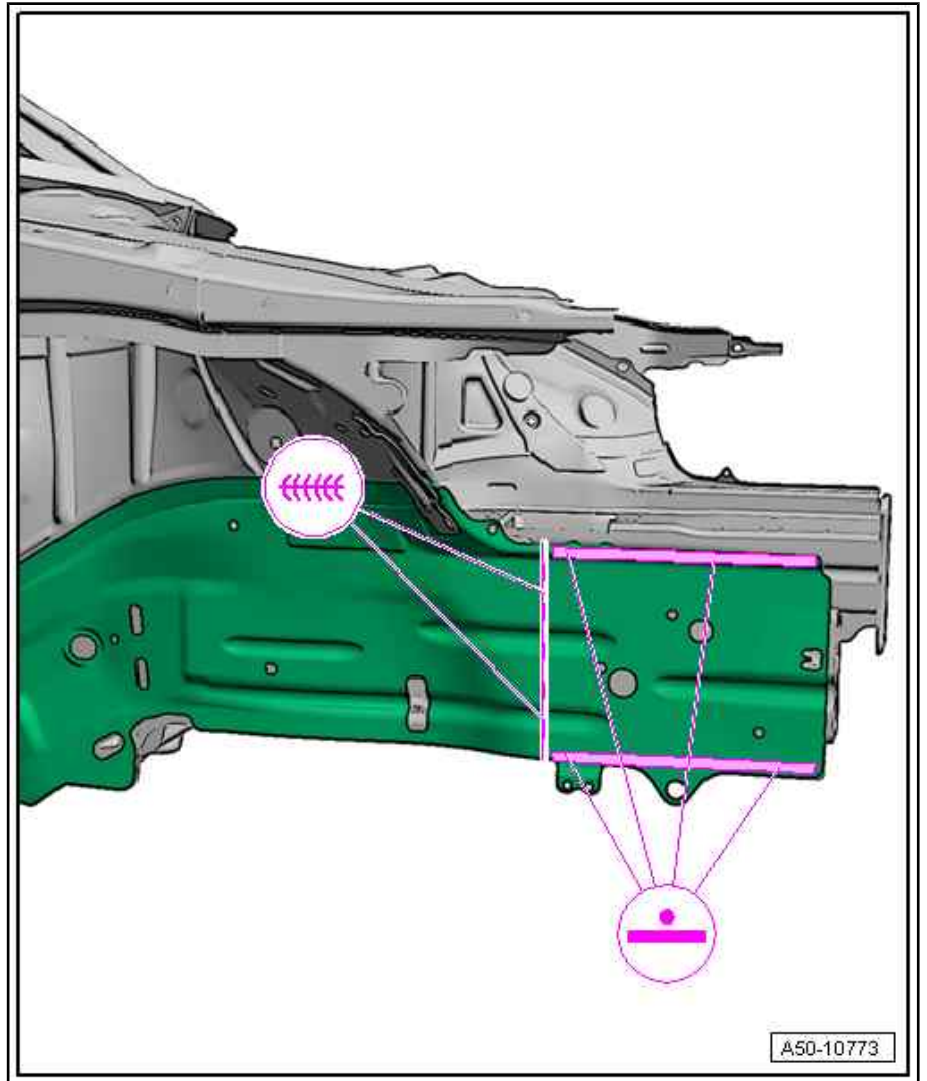
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- With vehicle standing on alignment bracket set, match up new part and fix in position.
- Check fit relative to adjacent parts.
- Weld front longitudinal member all round at separating cut using shielded arc welding equipment : SG continuous seam.
- Weld in longitudinal member using resistance spot welder : RP spot weld seam.



- Weld in cover plate for longitudinal member at separating cut using shielded arc welding equipment : SG continuous seam.
- Weld in longitudinal member using resistance spot welder : RP spot weld seam.



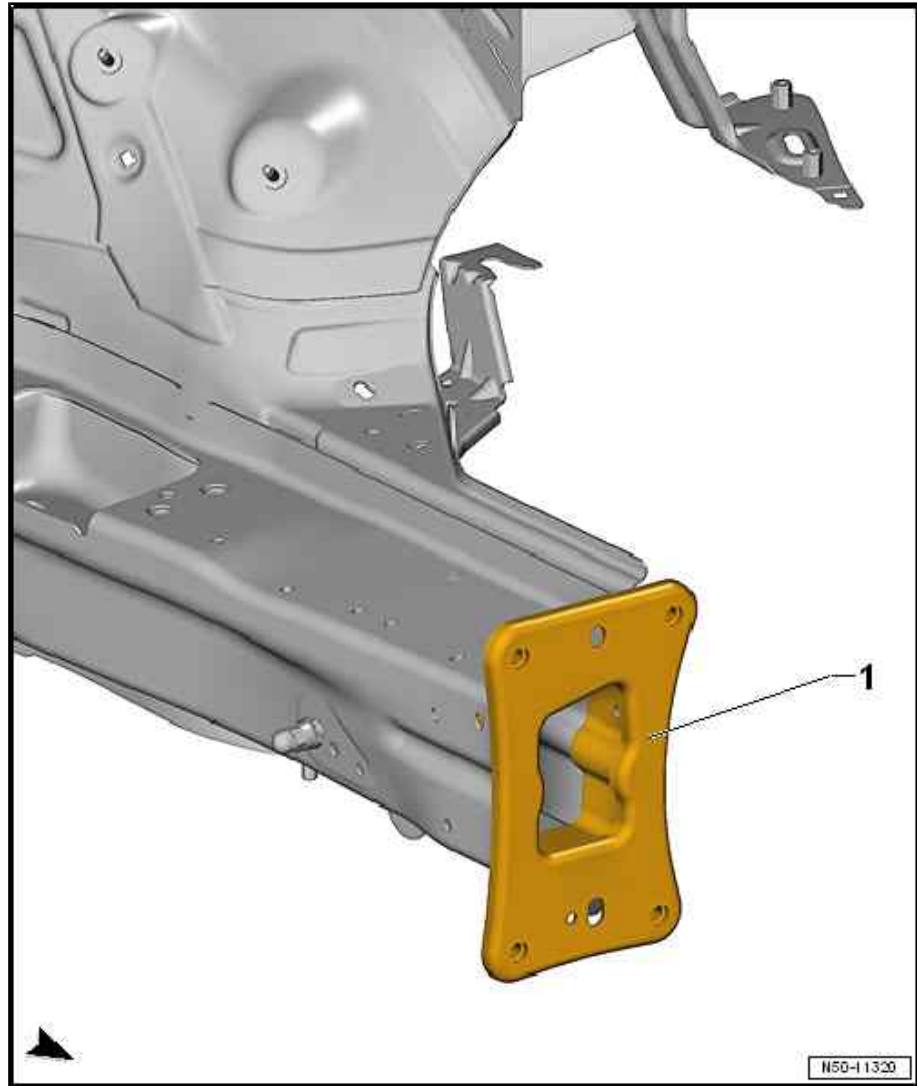


RO: 50 65 55 00

## 8 Impact damper plate - Renewal

Sportback and Saloon identical

### 1 - Bumper bracket



### 8.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Drill
- ◆ Spot weld breaker
- ◆ Body saw



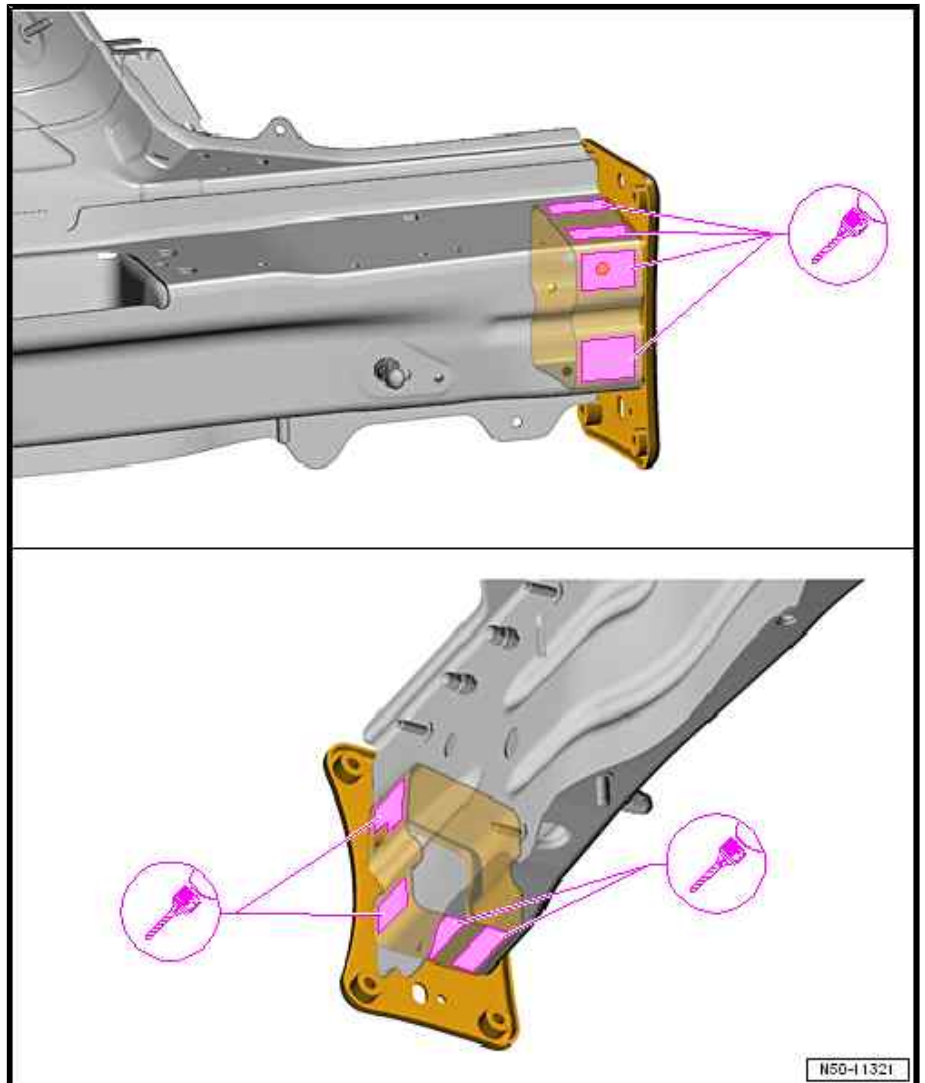
**!** NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work => [page 48](#) .

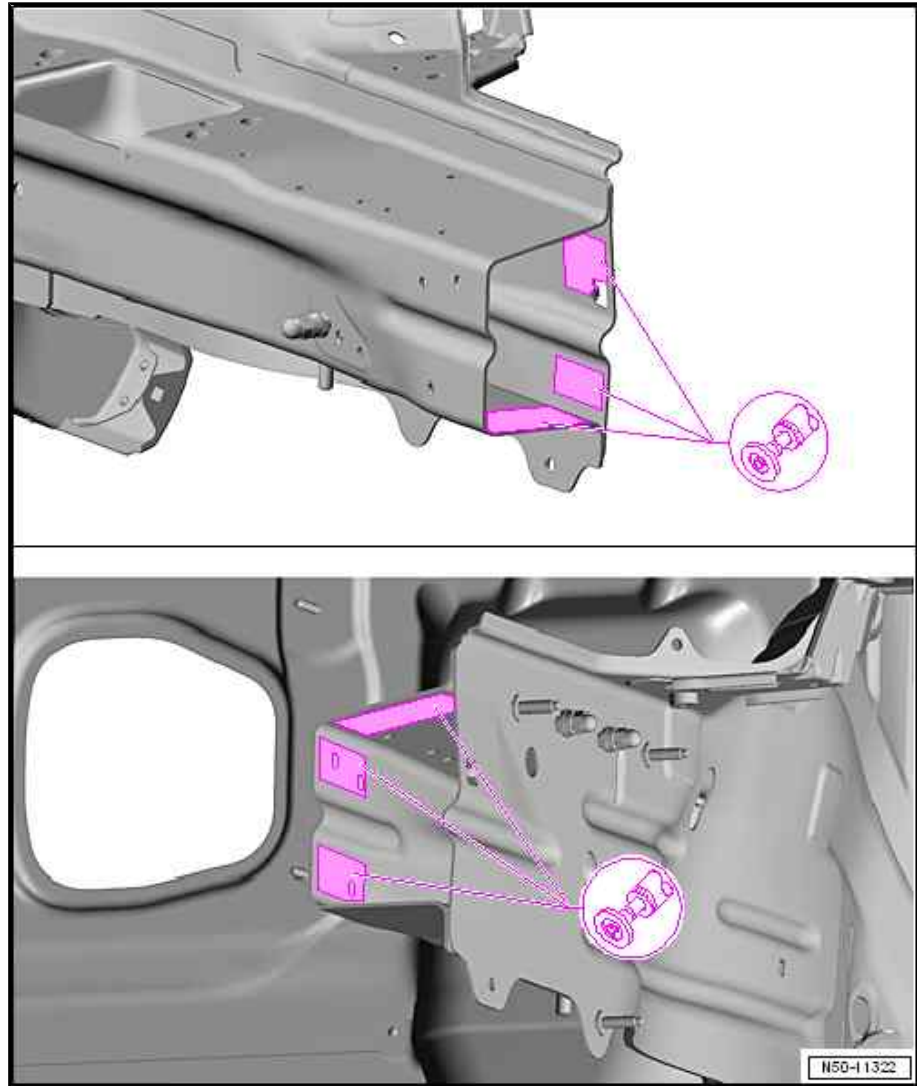
## 8.2 Procedure

### Cutting locations

- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .



### Replacement part

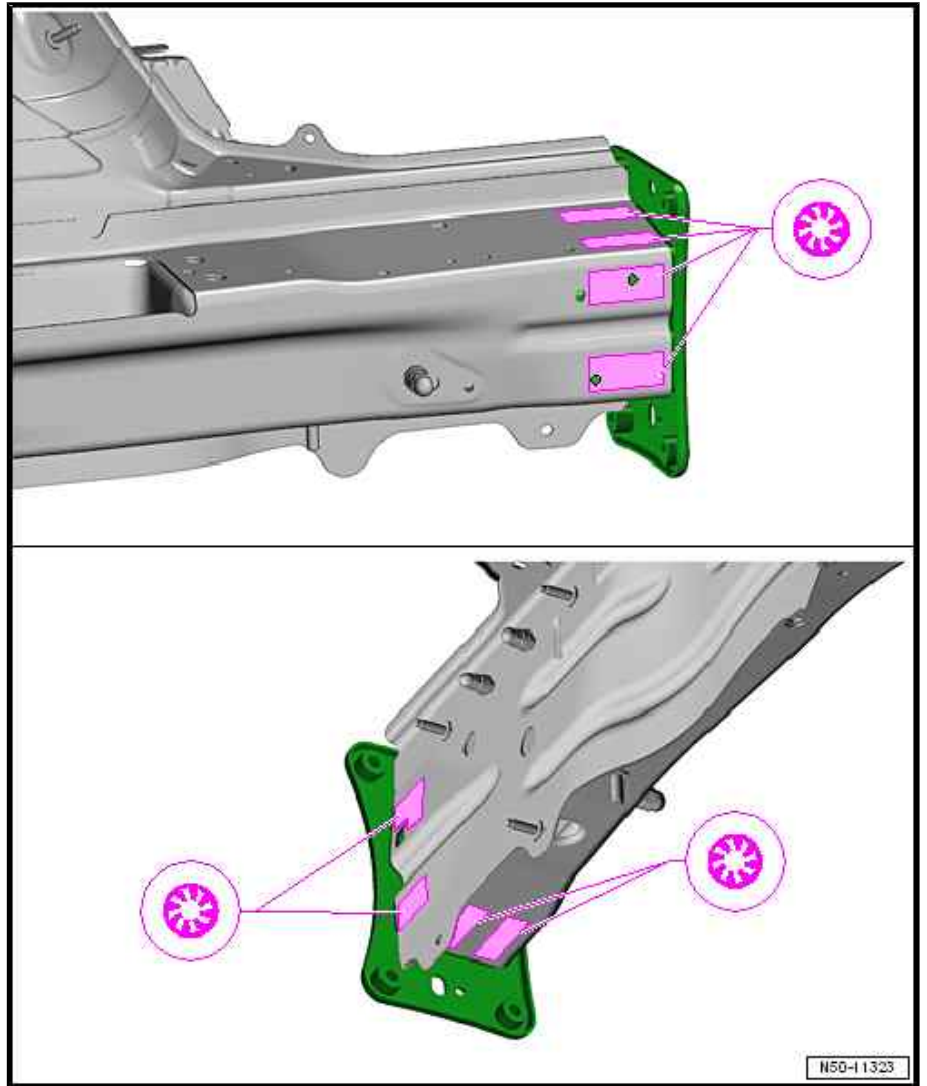
- ◆ Impact damper plate

#### NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

### Welding in

- Match up new part with vehicle positioned on alignment bracket set and fix in place.
- Weld in impact damper plate using shielded arc welding equipment : SG plug weld seam.



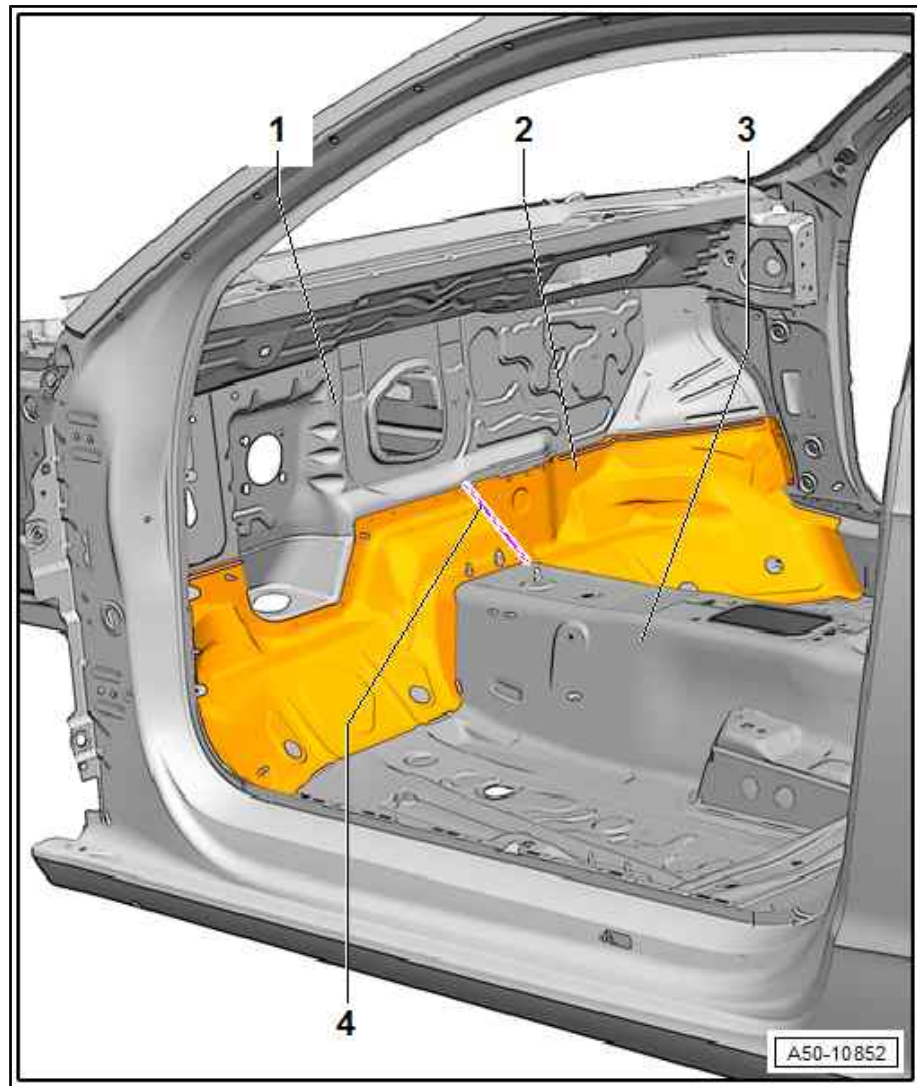


RO: 50 81 55 00

## 9 Upper footwell cross member - Renewal

A3, Sportback and Saloon identical

- 1 - Bulkhead
- 2 - Upper footwell cross member
- 3 - Tunnel
- 4 - Separating cut in cross member



### 9.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Drill
- ◆ Spot weld breaker
- ◆ Body saw



**!** NOTICE

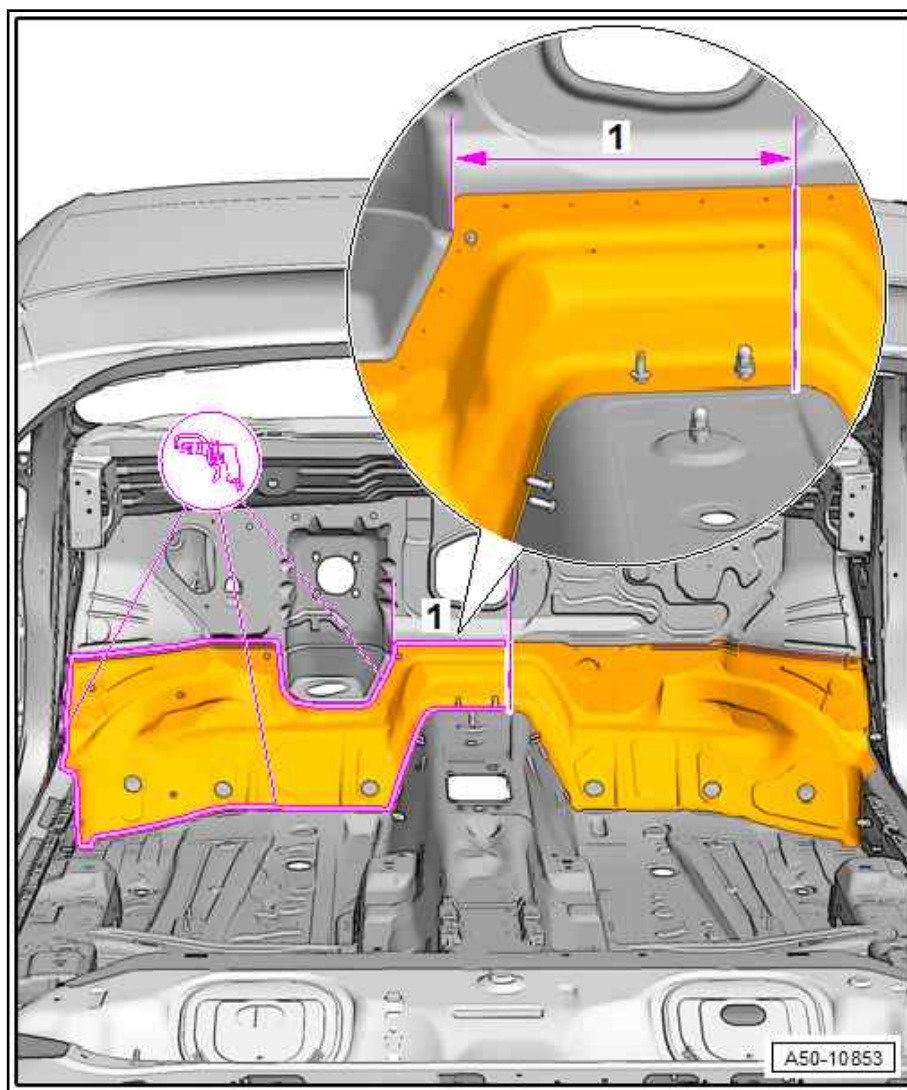
One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

## 9.2 Procedure

### Cutting locations

- Separate original joint using spot weld breaker .
- Make separating cut -1- in cross member as shown using compact angle grinder .

Dimension -1- = 210 mm



- Remove remaining material using compact angle grinder .



### Replacement parts

- ◆ Upper footwell cross member

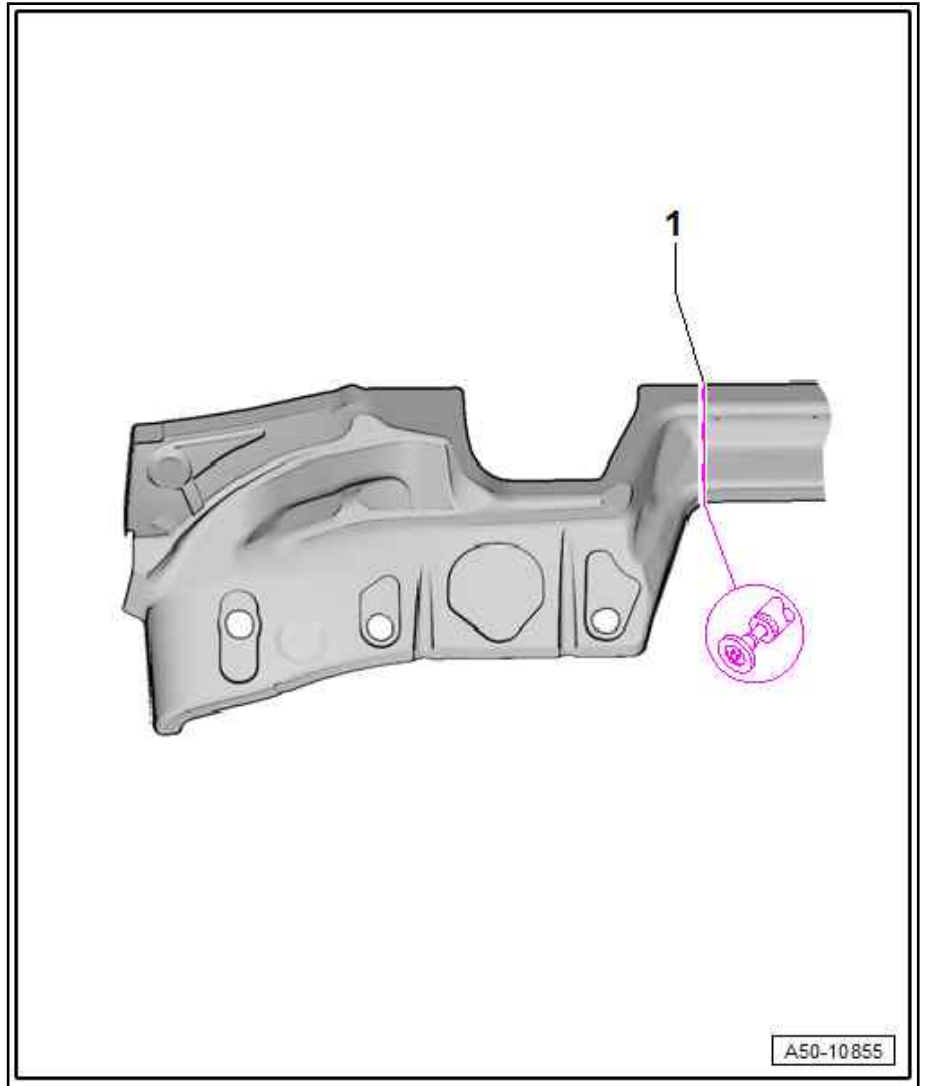
### Pre-treatment - applies to replacement part only

- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.

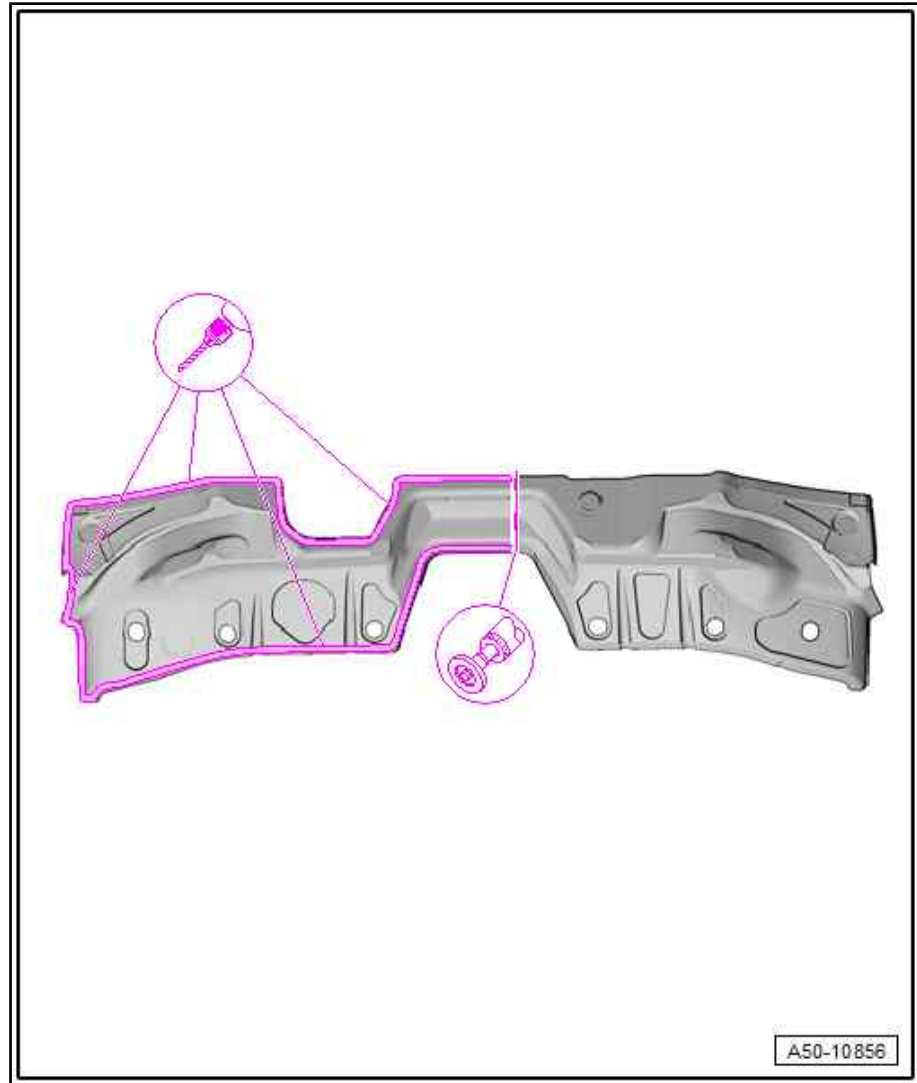
### Preparing new part

- Make up backing plate from old part.
- Keep to separating cut -1- for backing plate.

**Dimension -1- = 80 mm**



- Make separating cut -1- in cross member as shown using compact angle grinder .
- Drill holes for SG plug weld seam, 8 mm  $\varnothing$  using drill .

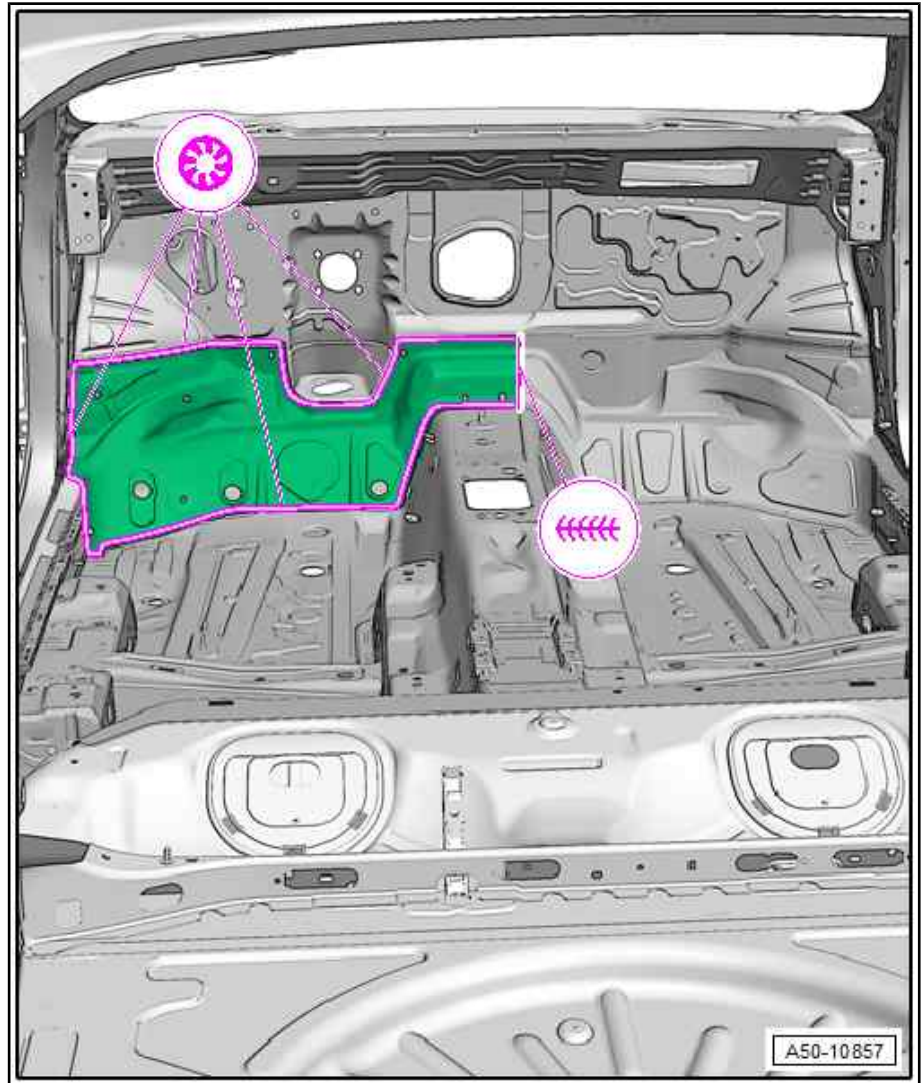


**!** NOTICE

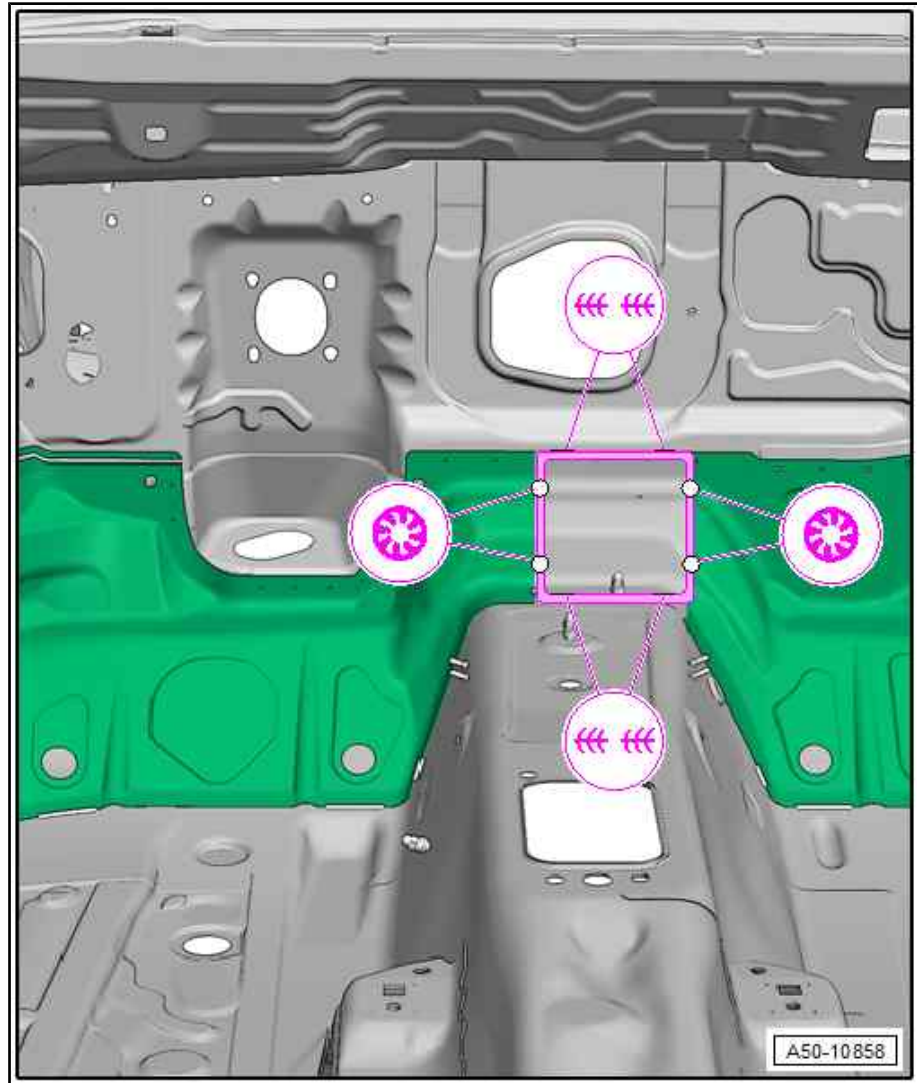
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Weld in cross member using shielded arc welding equipment : SG plug weld seam.
- Weld in at separating cut using shielded arc welding equipment : SG continuous seam.



- Weld in backing plate for cross member using shielded arc welding equipment : 2x SG plug weld seam (left and right).
- Weld in cross member at top and bottom using shielded arc welding equipment : 2 x 20 mm SG continuous seam (staggered - with gaps).



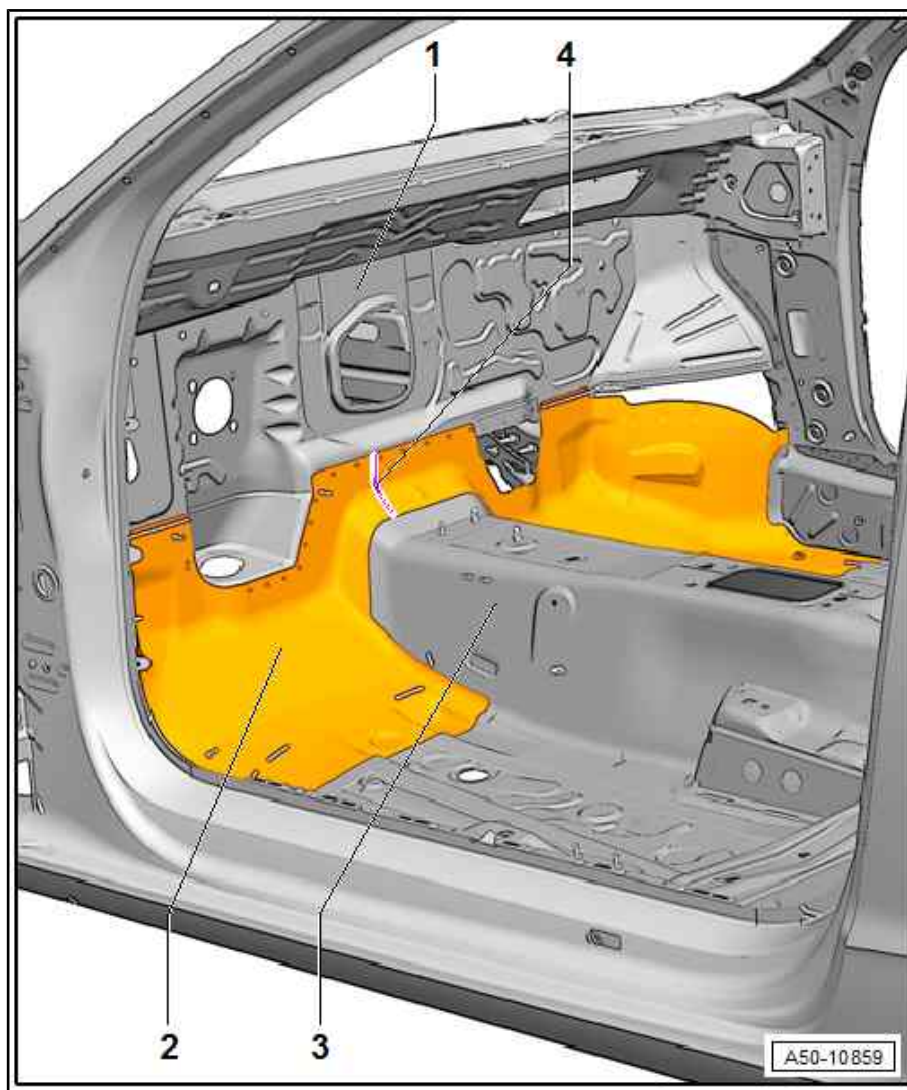


RO: 50 81 55 00

## 10 Outer footwell cross member - Partial renewal

A3, Sportback and Saloon identical

- 1 - Bulkhead
- 2 - Outer footwell cross member
- 3 - Tunnel
- 4 - Separating cut in outer cross member



### 10.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Drill
- ◆ Spot weld breaker
- ◆ Body saw



**!** NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

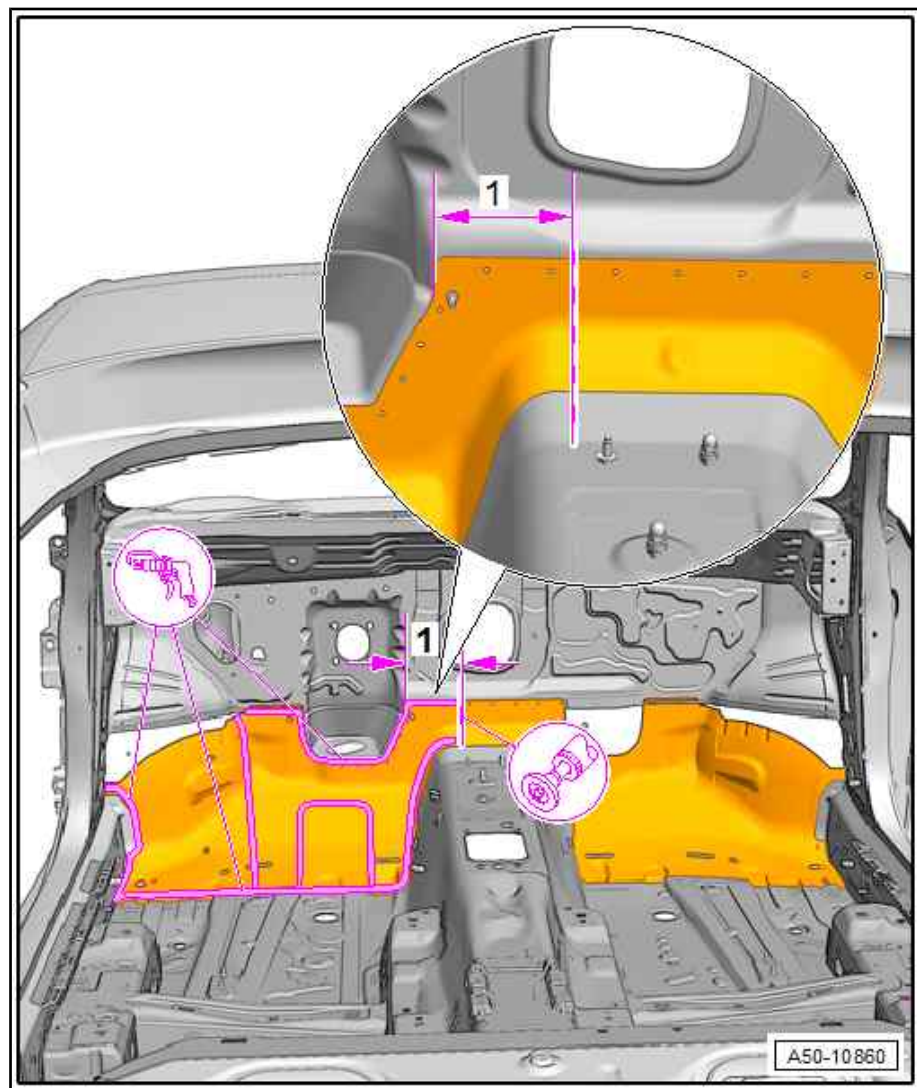
## 10.2 Procedure

- Removing inner footwell cross member ⇒ [page 106](#)

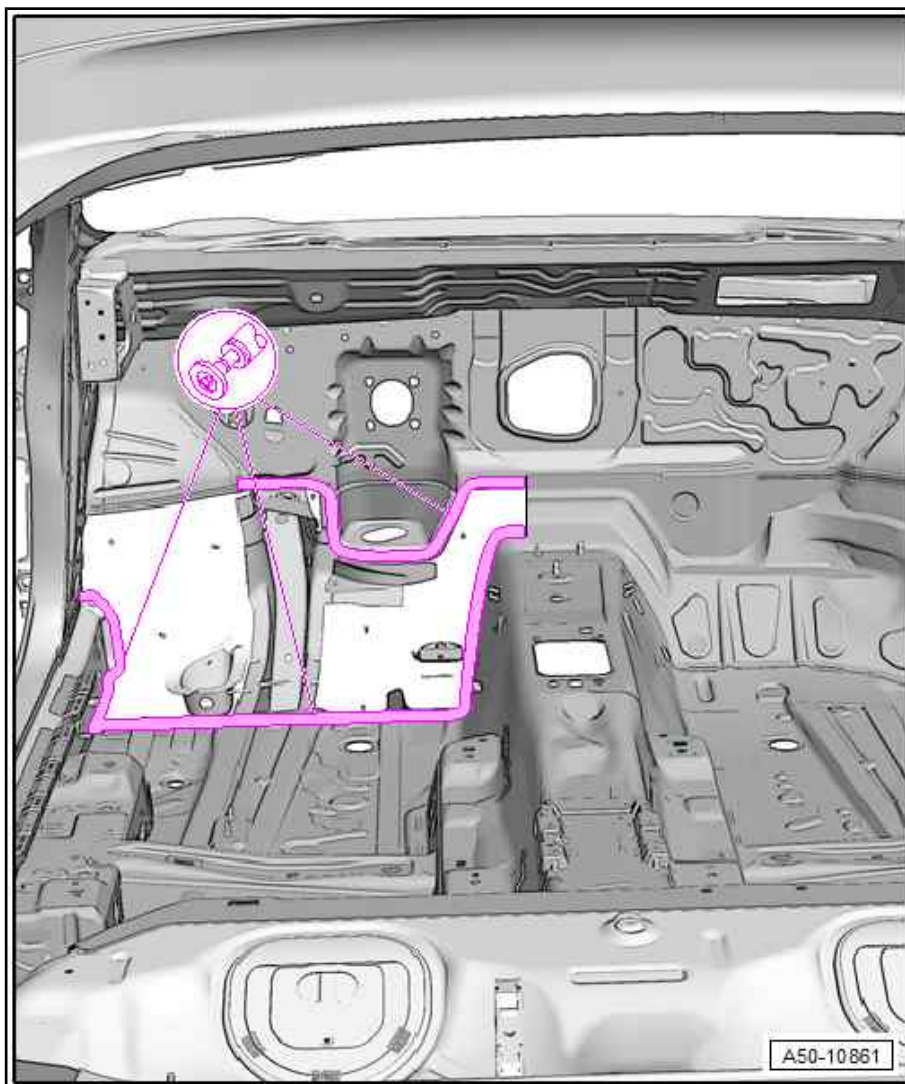
### Cutting locations

- Separate original joint using spot weld breaker .
- Make separating cut -1- in cross member as shown using compact angle grinder .

Dimension -1- = 110 mm



- Remove remaining material using compact angle grinder .



### Replacement parts

- ◆ Inner footwell cross member

### Pre-treatment - applies to replacement part only

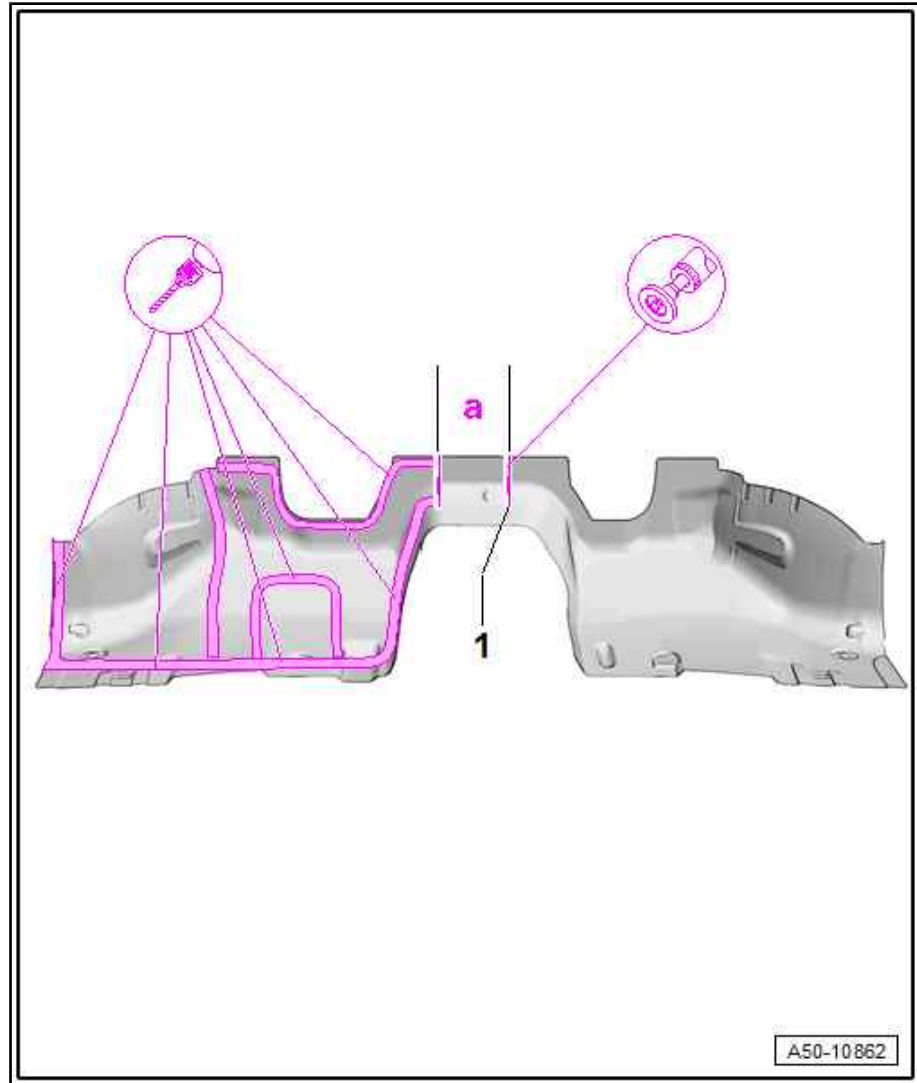
- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.

### Preparing new part

- Transfer separating cut for outer cross member -1- to new part and cut to size using compact angle grinder .
- Make up backing plate from old part; keep to dimension -a-.

### Dimension -a- = 80 mm

- Drill holes for SG plug weld seam, 8 mm Ø using drill .



**!** NOTICE

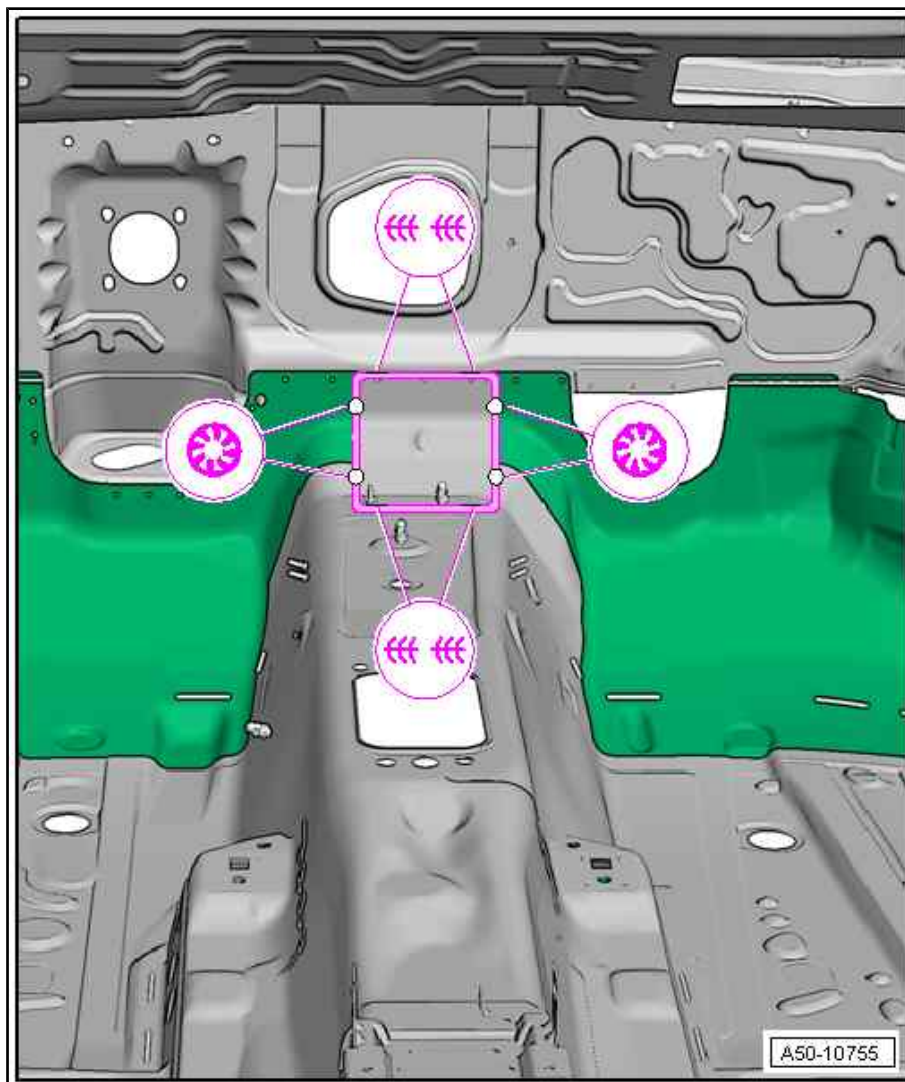
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Weld in cross member using shielded arc welding equipment : SG plug weld seam.
- Weld in at separating cut -1- using shielded arc welding equipment : SG continuous seam.



- Weld in backing plate for outer cross member using shielded arc welding equipment : 2x SG plug weld seam (left and right).
- Weld in cross member at top and bottom using shielded arc welding equipment : 2 x 20 mm SG continuous seam (staggered - with gaps).



- Welding in inner footwell cross member ⇒ [page 106](#)



RO: 50 79 49 50

## 11 Repairing threads for attachment of subframe

**A3, Sportback and Saloon identical**

- Subframe removed ⇒ Running gear, axles, steering; Rep. gr. 40 ; Subframe, anti-roll bar, suspension links



### Note

*The following description shows the thread repair for the front subframe attachment; the procedure for the other attachments is basically the same.*

### 11.1 Tools

**Special tools and workshop equipment required**

- ◆ Thread repair kit M12x1.5 - VAS 6058-
- ◆ Brush grinder - VAS 6446-
- ◆ Drill - VAS 6267-
- ◆ Compact angle grinder - VAS 5167-



### NOTICE

**One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .**



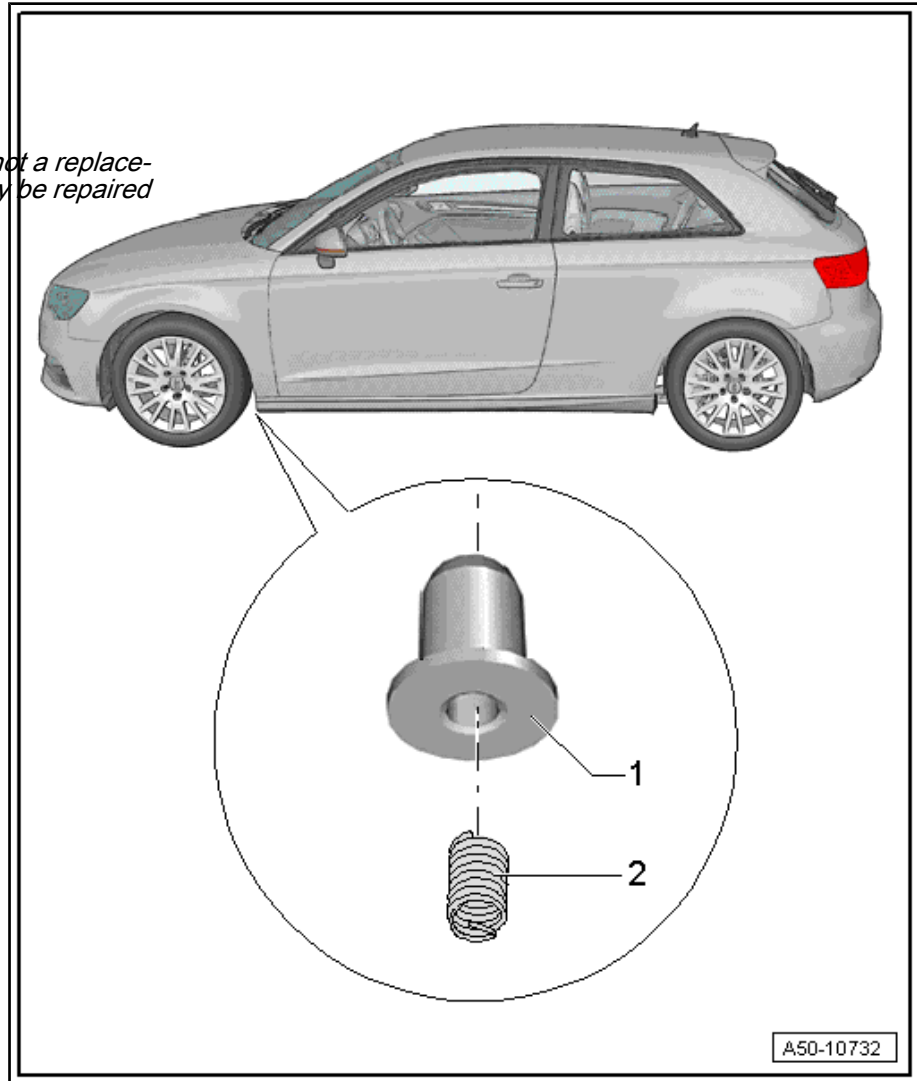
**1 - Threaded plate (welded into subframe)**



**Note**

*The threaded plate is not a replacement part and may only be repaired once if damaged.*

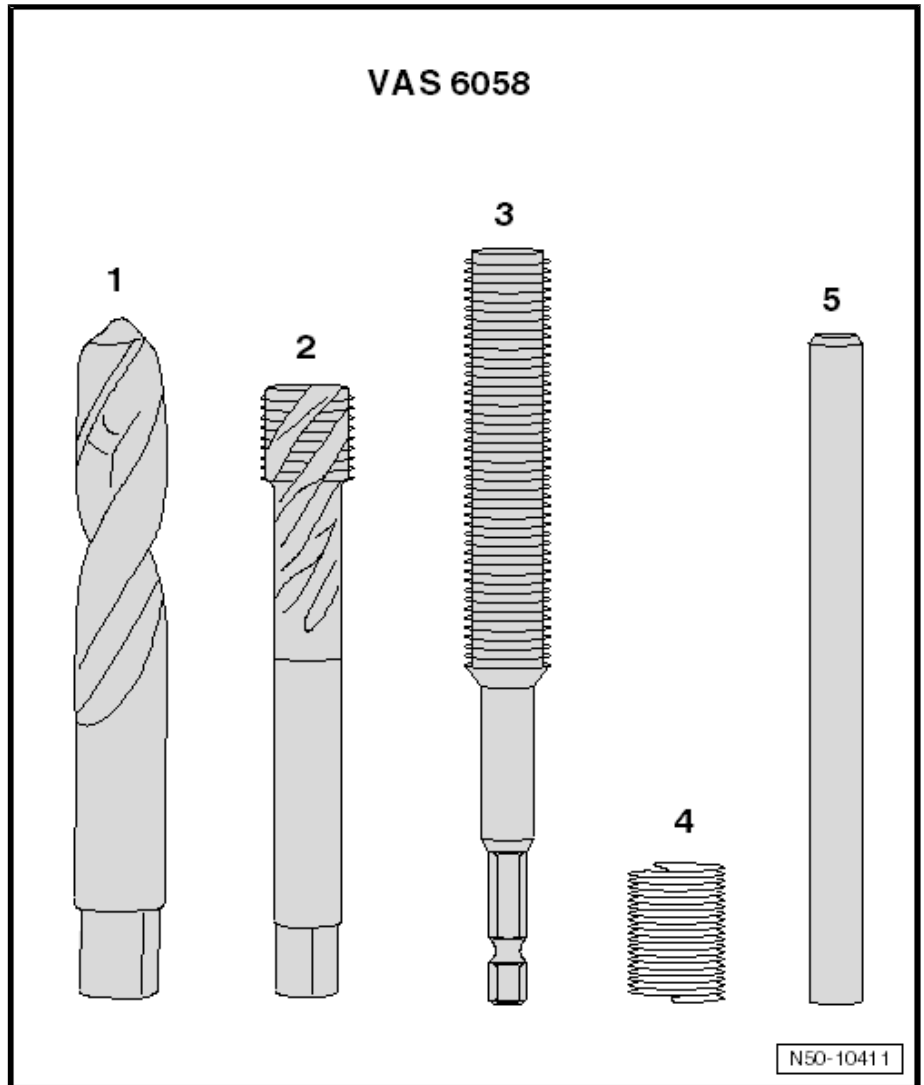
**2 - Helicoil thread insert**



**Contents of thread repair kit**



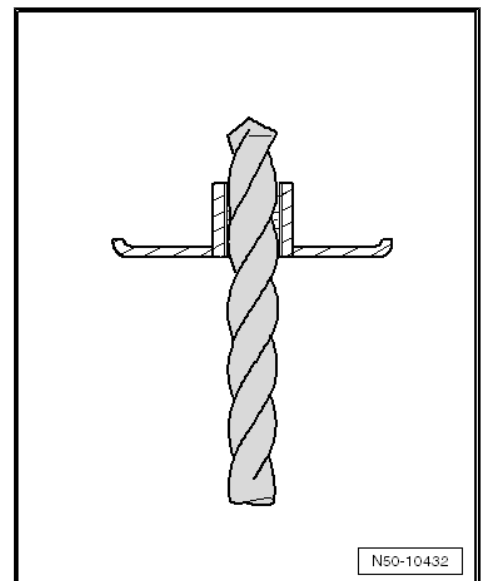
- 1 - Drill bit  $\varnothing$  12.5 mm
- 2 - Thread tap M 12 x 1.5
- 3 - Fitting spindle
- 4 - Thread insert M 12 x 1.5 x 24 (-VAS 6058/1-)
- 5 - Pin breaker with magnetic tip



### Repairing thread

#### Making drilling for thread

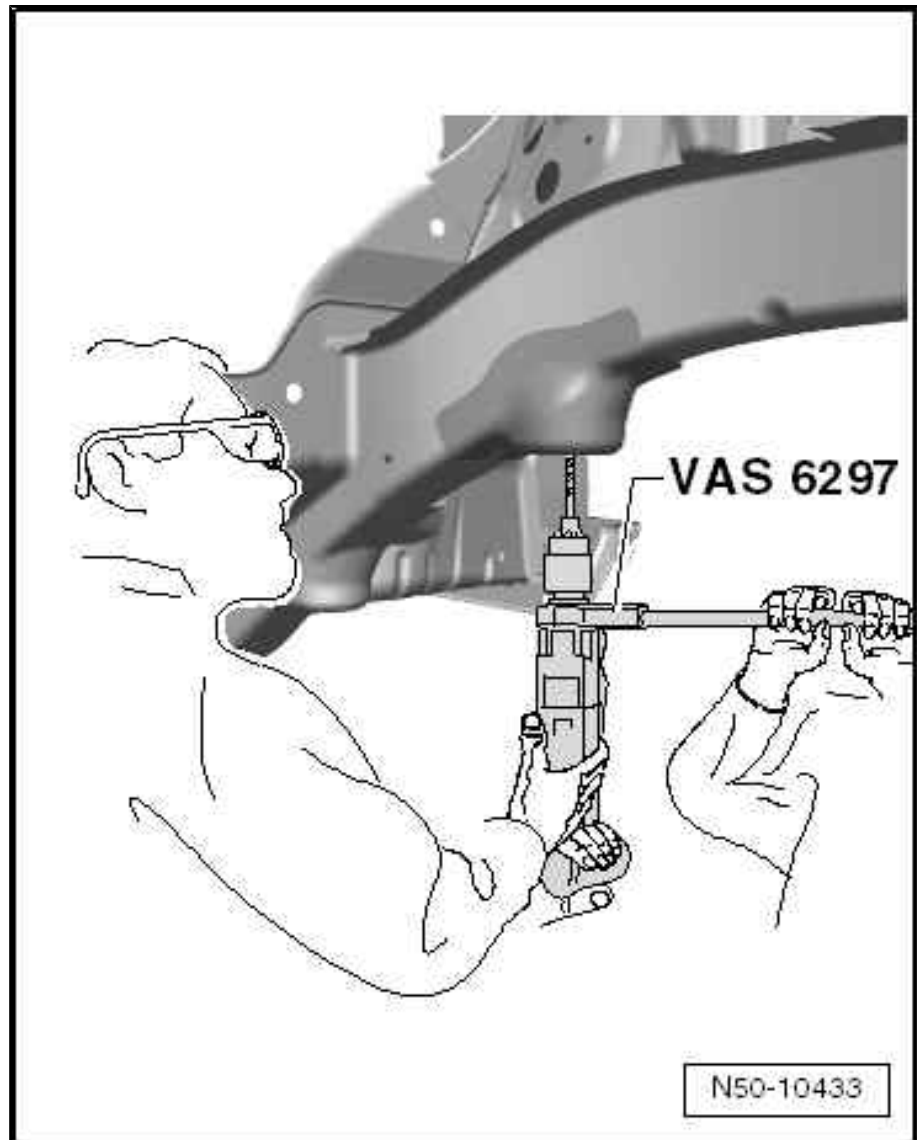
- Drill hole for thread using drill bit (twist drill).





### Note

- ◆ Use drill - VAS 6267- for drilling and cutting.
- ◆ The drill must be supported by a second mechanic using the additional handle.
- ◆ Take care to keep the drill straight.



### Cutting thread

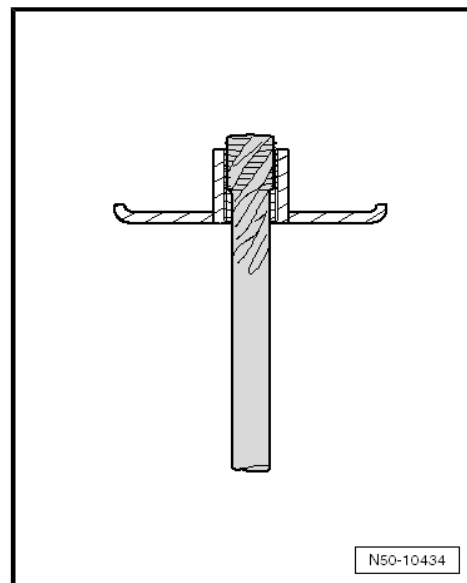
#### CAUTION

Always wear eye protection when cutting the thread and blowing out the threaded drilling.

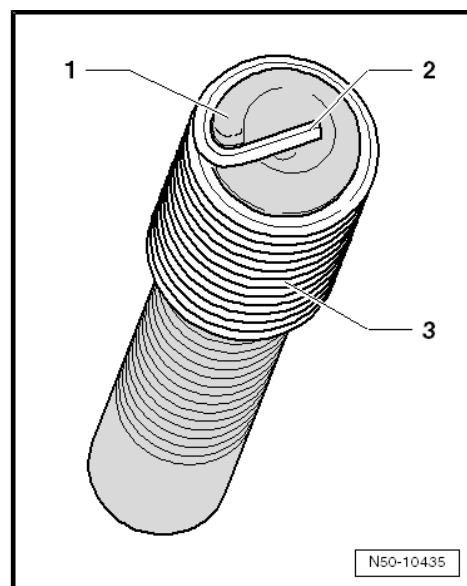


- Cut thread using thread tap.

#### Fitting thread insert



- Screw thread insert -3- onto fitting spindle until driving pin -2- on thread insert makes contact with driving lug -1- on fitting spindle.



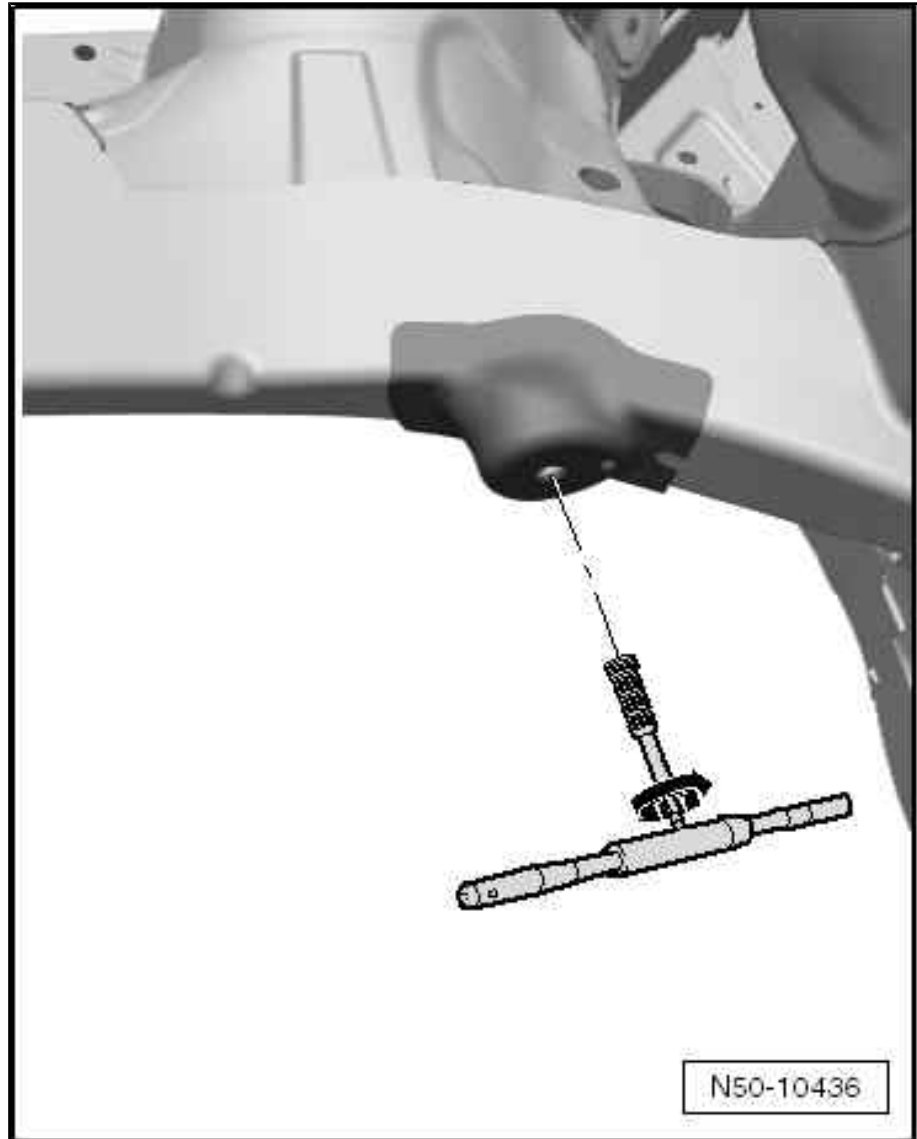
- Blow out threaded drilling with compressed air.



#### Note

*The thread insert should screw in easily.*

- Screw thread insert into threaded plate until it is flush with outside of threaded plate (visual check).



- Install subframe and tighten to specified torque ⇒ Running gear, axles, steering; Rep. gr. 40 ; Subframe, anti-roll bar, suspension links .



## 51 – Body - centre

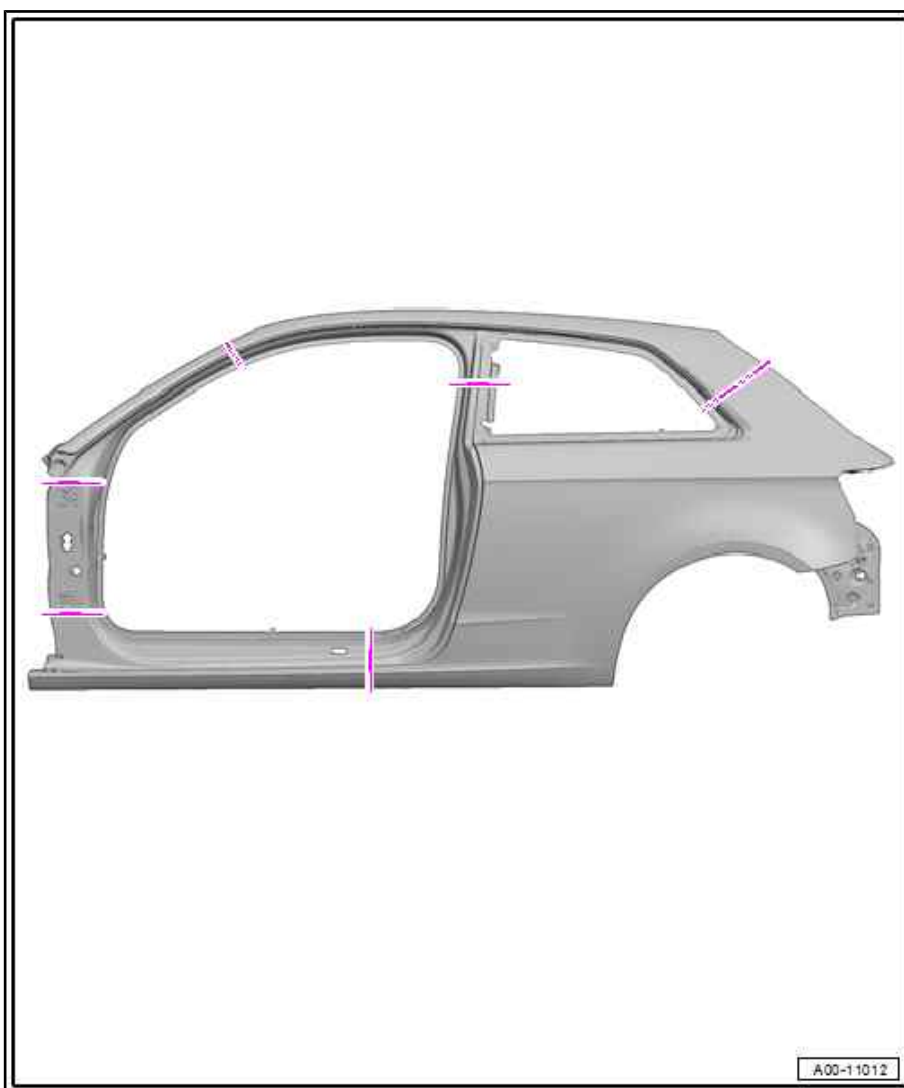
### 1 Permitted separating cuts on complete side panel



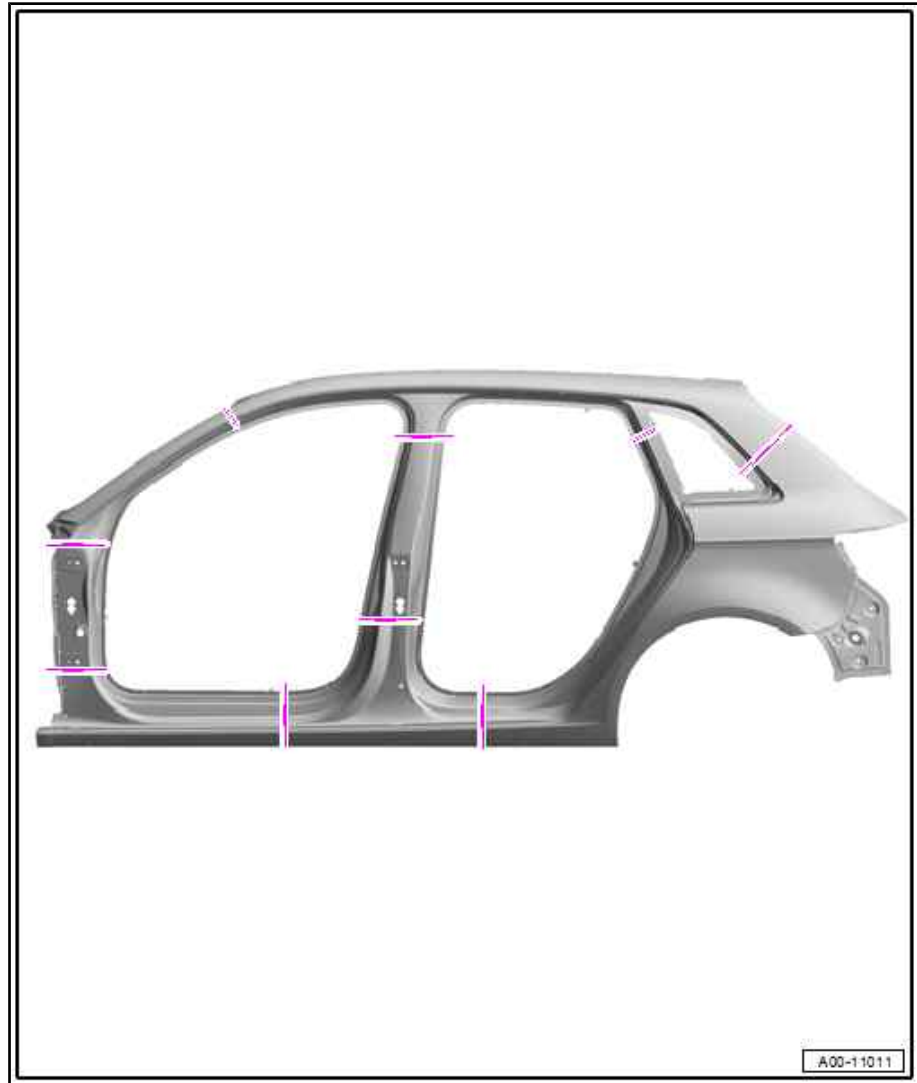
#### Note

- ◆ Use only welding equipment approved by AUDI AG.
- ◆ SG continuous weld seams are approved for the separating cuts shown in the illustration.

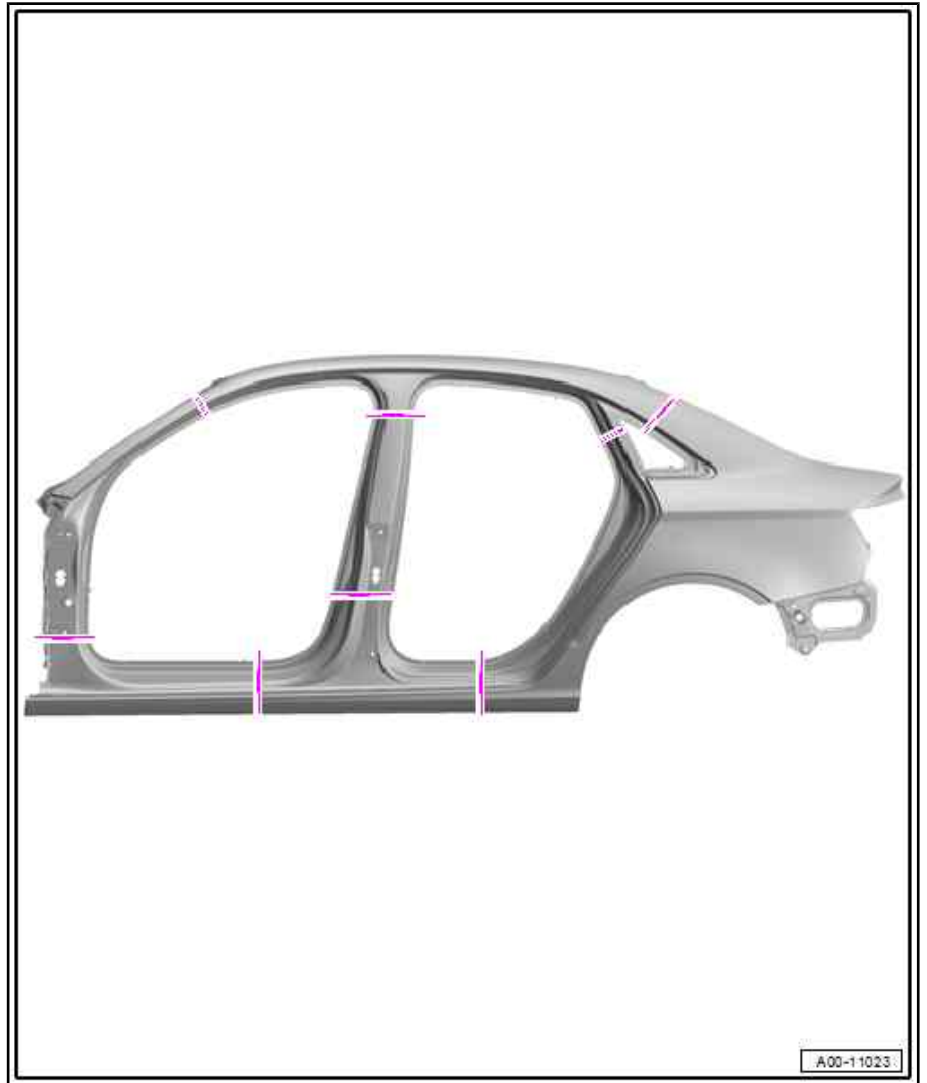
A3



A3 Sportback



A3 Saloon

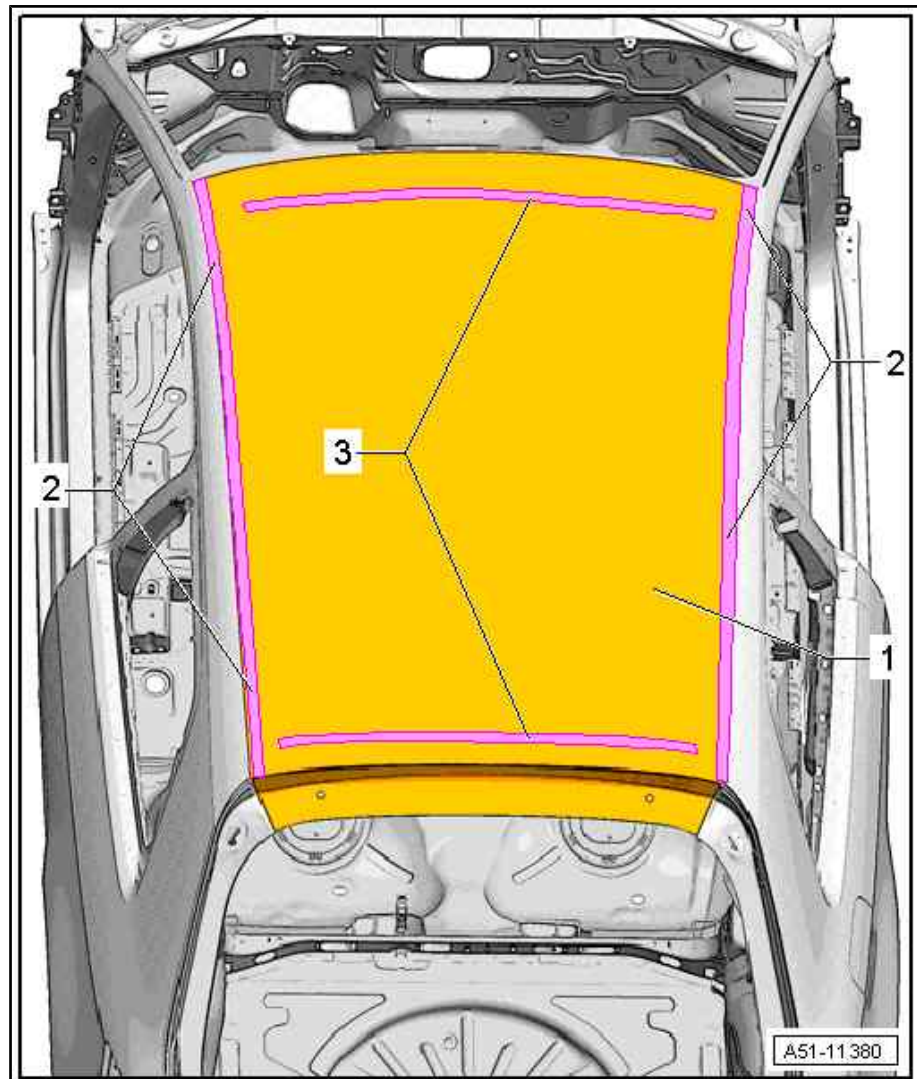




RO: 51 03 55 00

## 2 Standard roof - Renewal (A3)

- 1 - Roof
- 2 - Plasmatron weld seam
- 3 - Bonded area



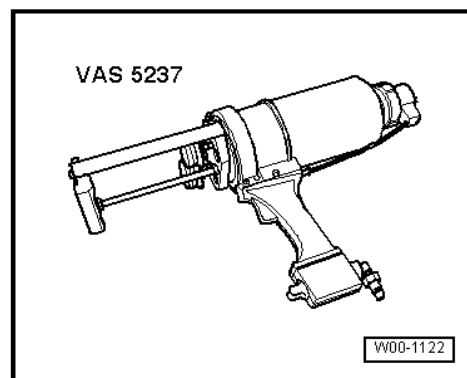
### 2.1 Tools

#### Special tools and workshop equipment required

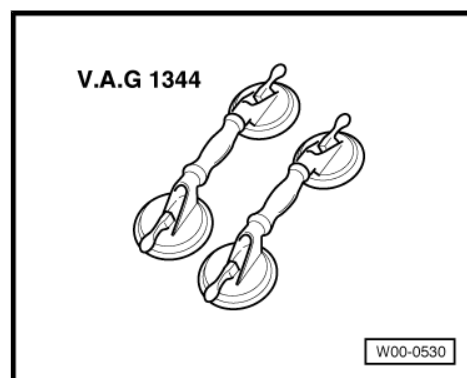
- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Drill
- ◆ Spot weld breaker
- ◆ Body saw
- ◆ Electric cutter
- ◆ Mole grips, 18-18 - VAS 5430/1-
- ◆ Double cartridge gun - VAS 6453-



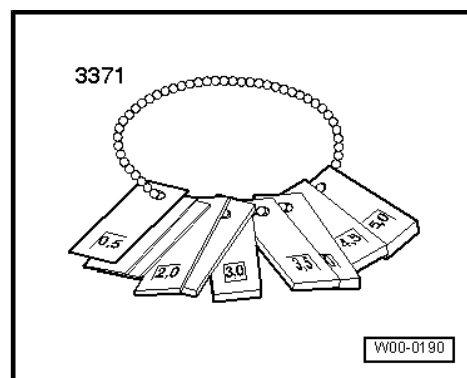
- ◆ Double cartridge gun - VAS 5237-



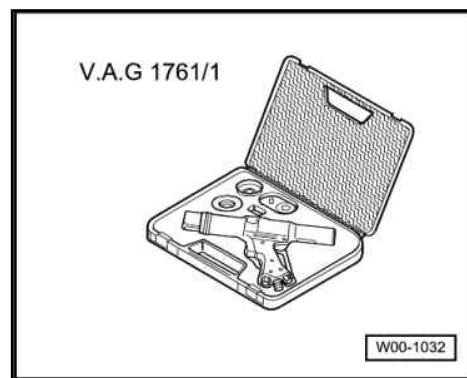
- ◆ Suction lifter - V.A.G 1344- or magnet - VAS 6739-



- ◆ Setting gauge - 3371-

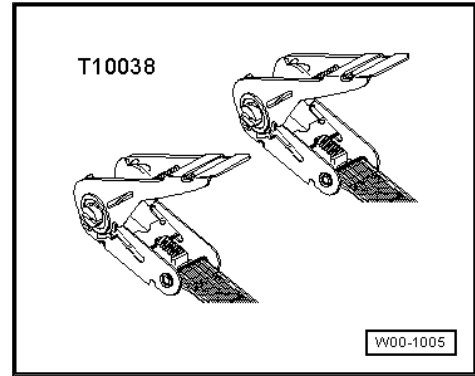


- ◆ Compressed-air gun - V.A.G 1761/1-





◆ Tensioning strap - T 10038-



**!** NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

1 - 2-component window adhesive - D 004 660 M2 -

- Open cap.

2 - Static mixer

3 - Extension hose

Part number 000 809 937

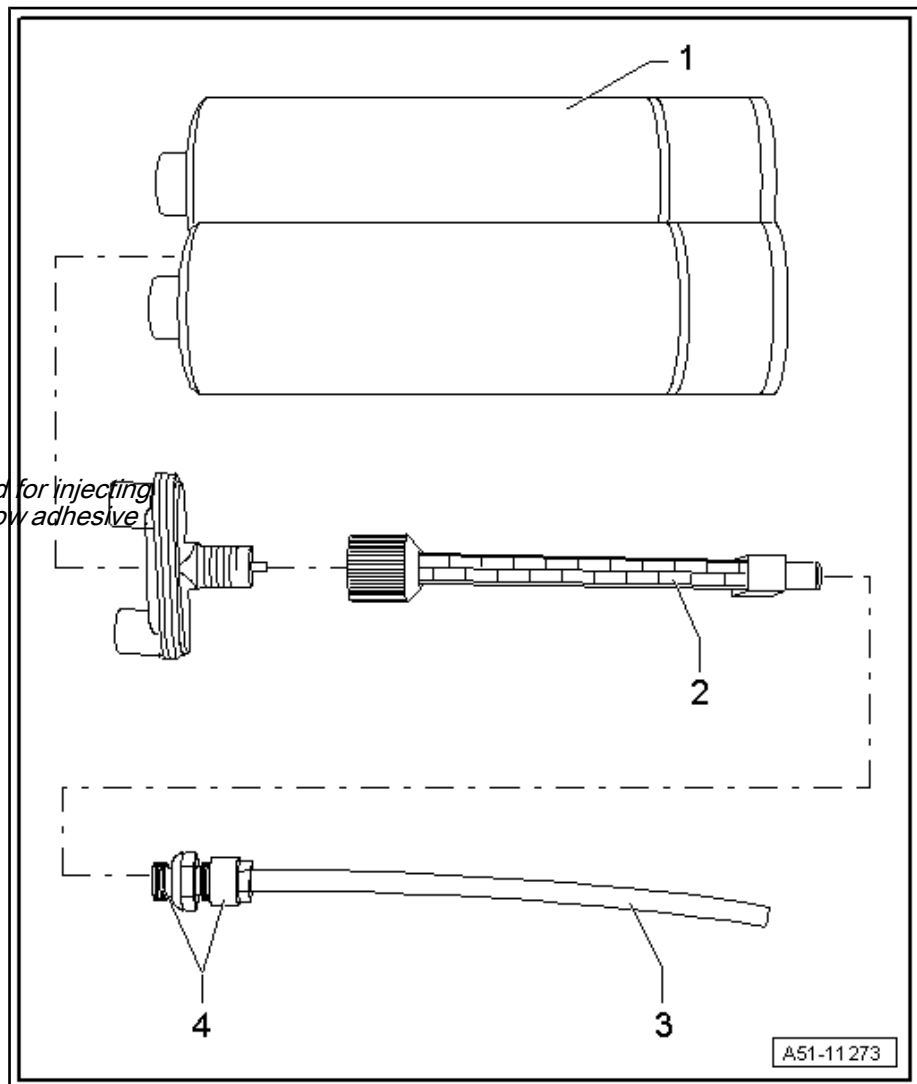
- Screw onto static mixer -2- with adapter -4-.

4 - Adapter



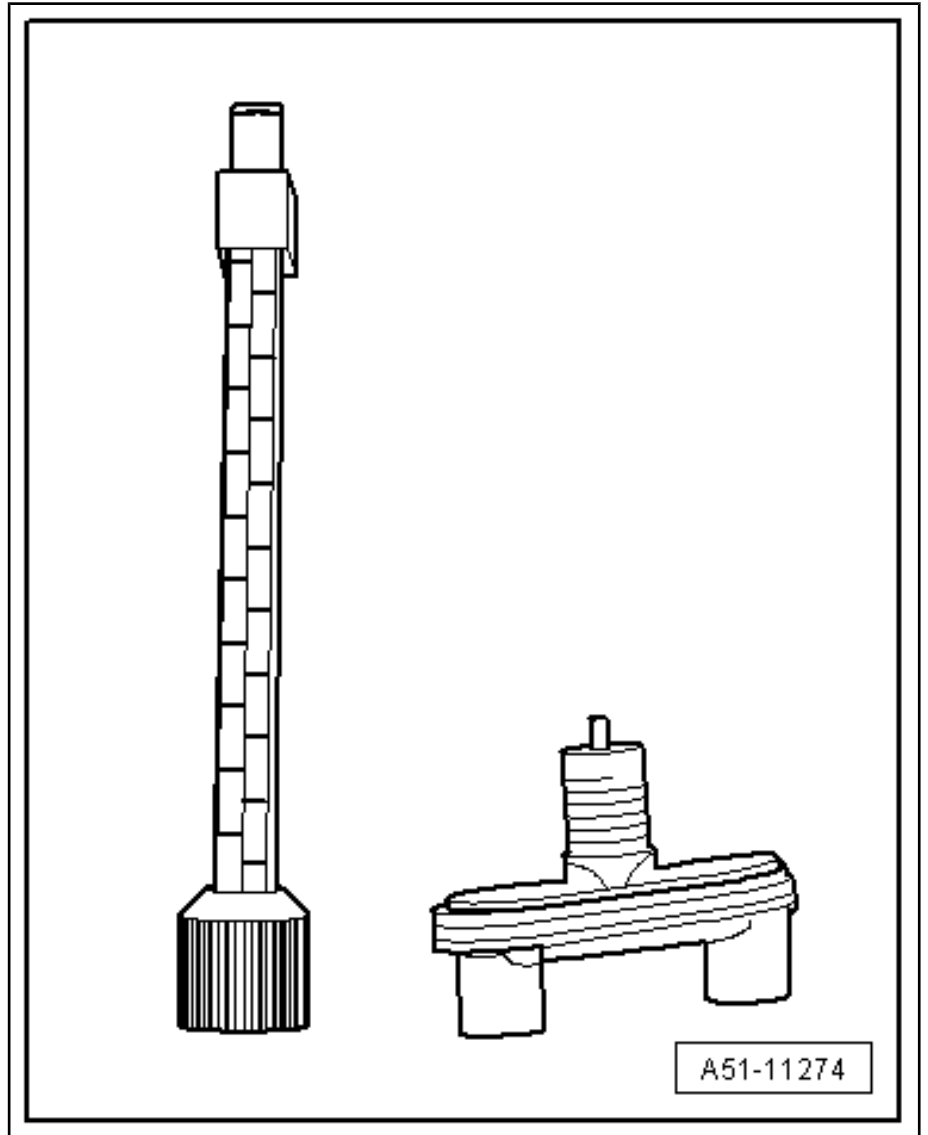
**Note**

*The adapter is required for injecting the 2-component window adhesive!*

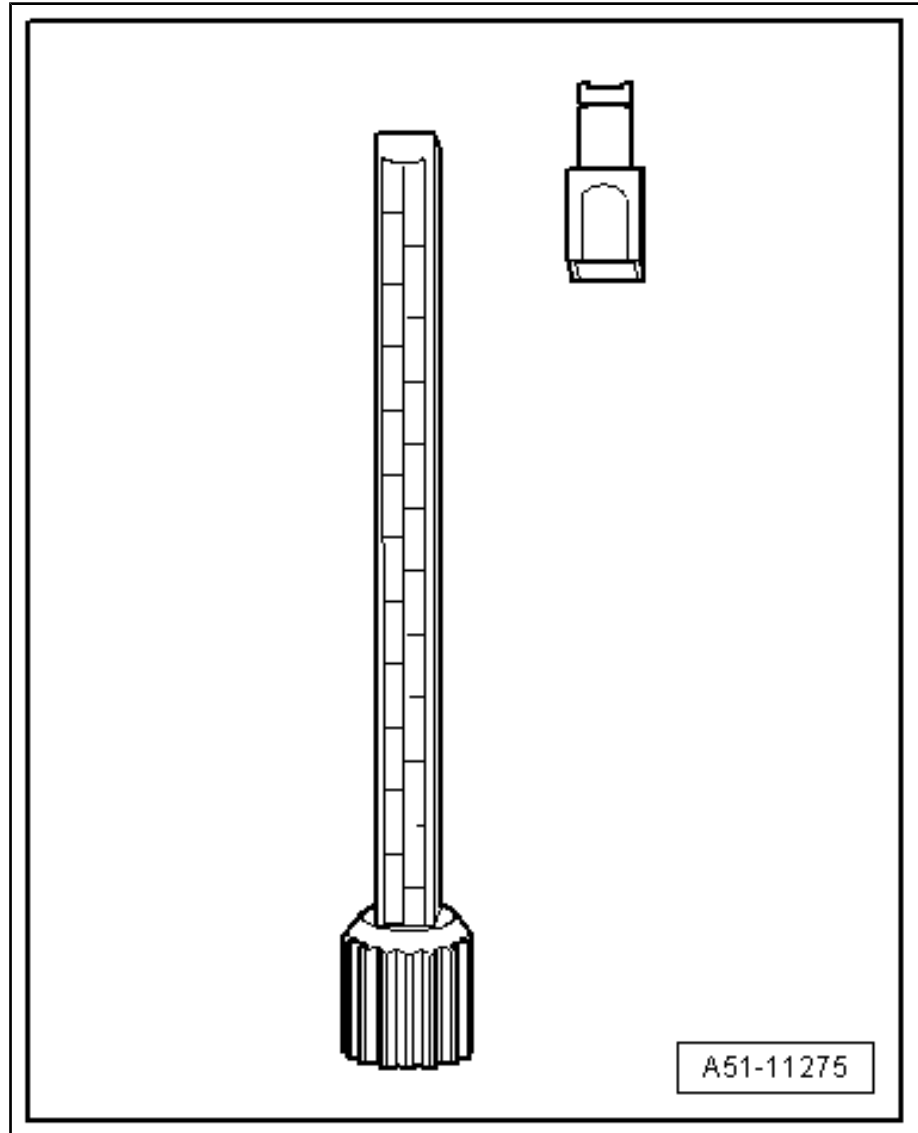


**Instructions for using extension hose for window adhesive**

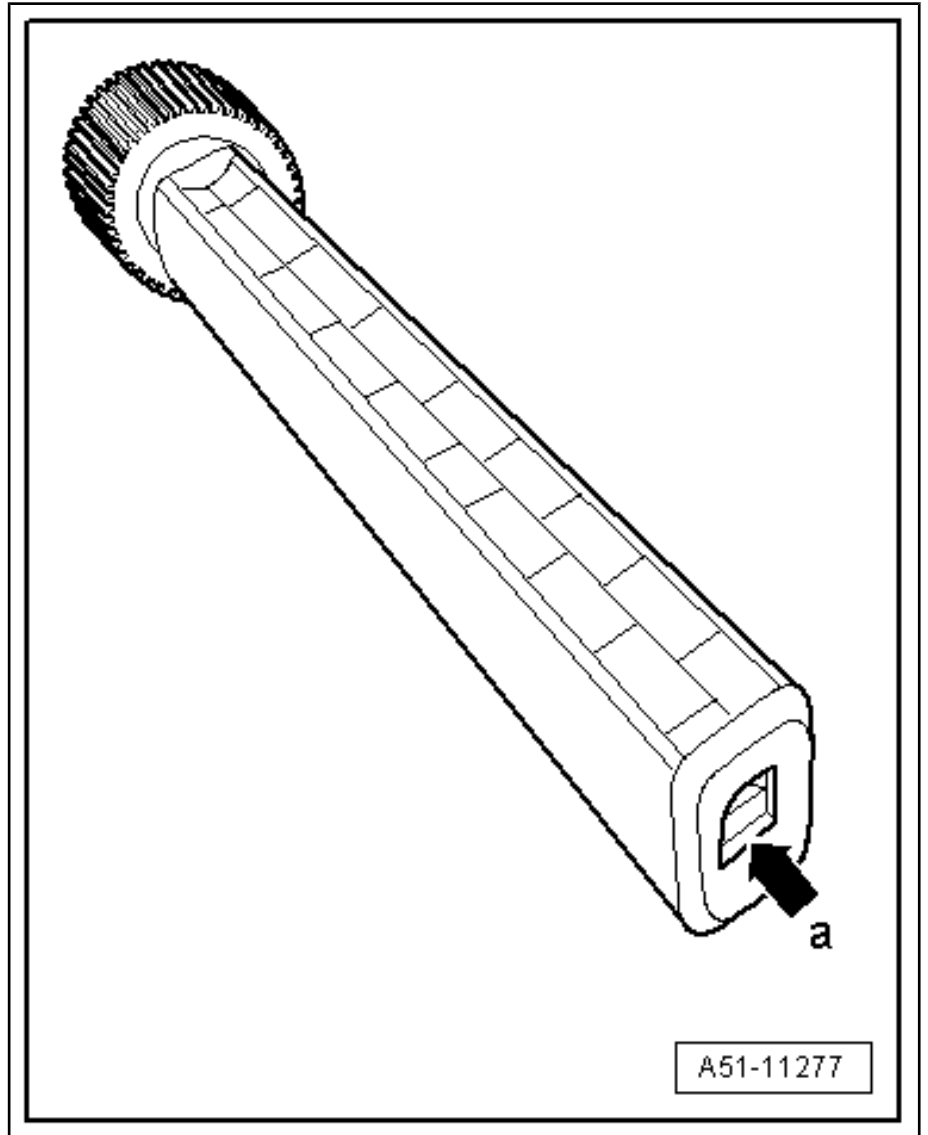
- Take static mixer out of window adhesive kit.



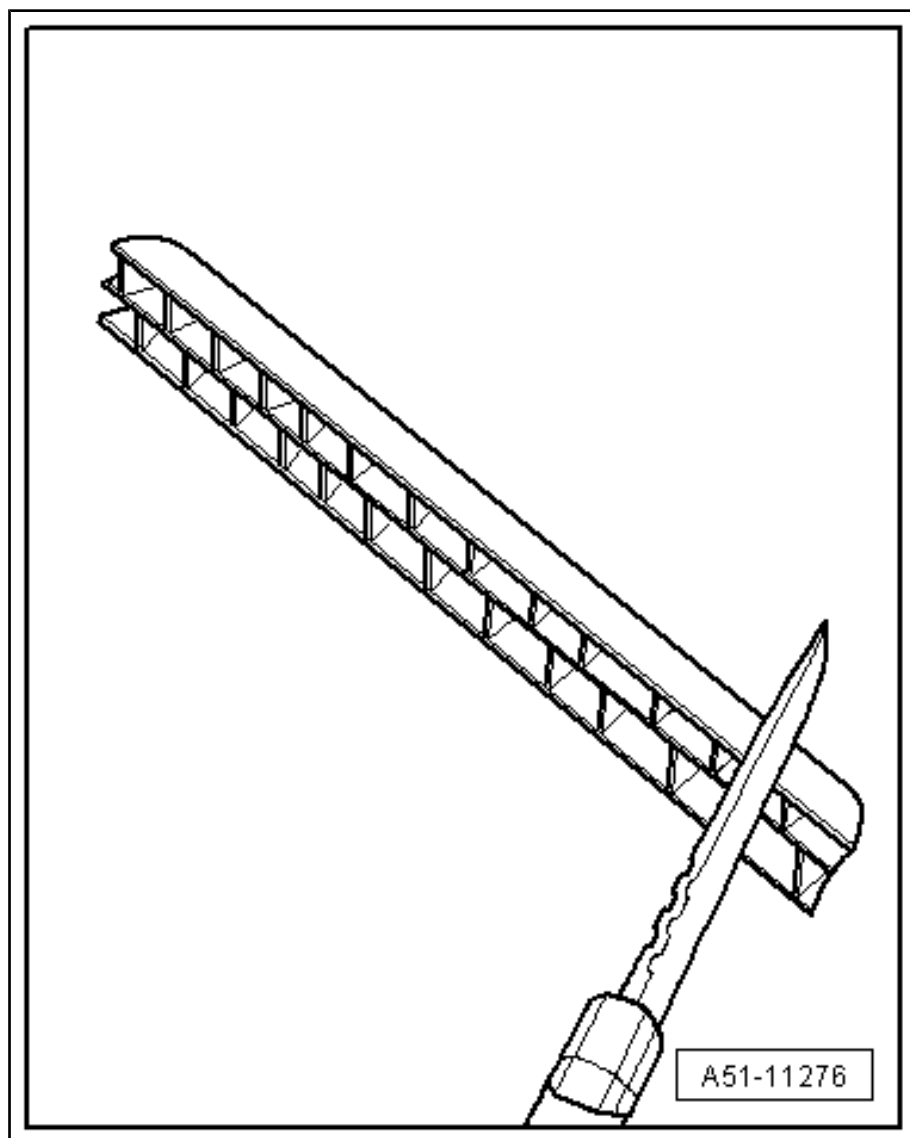
- Remove front cap from static mixer.



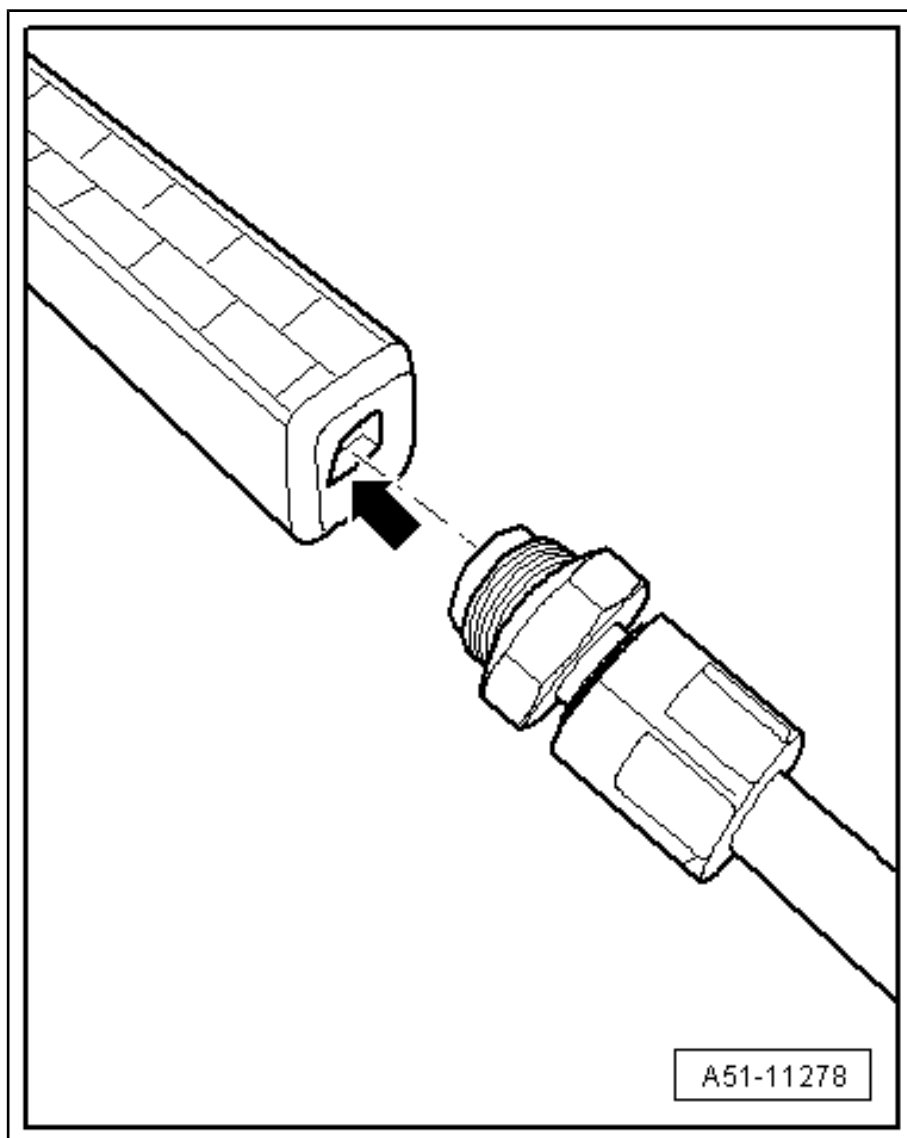
- Drill out opening in static mixer -a- to 9 mm  $\varnothing$  using drill .



- Shorten inner section of mixer so that hose can be screwed in fully.



- Screw extension hose onto mixer.



## 2.2 Procedure

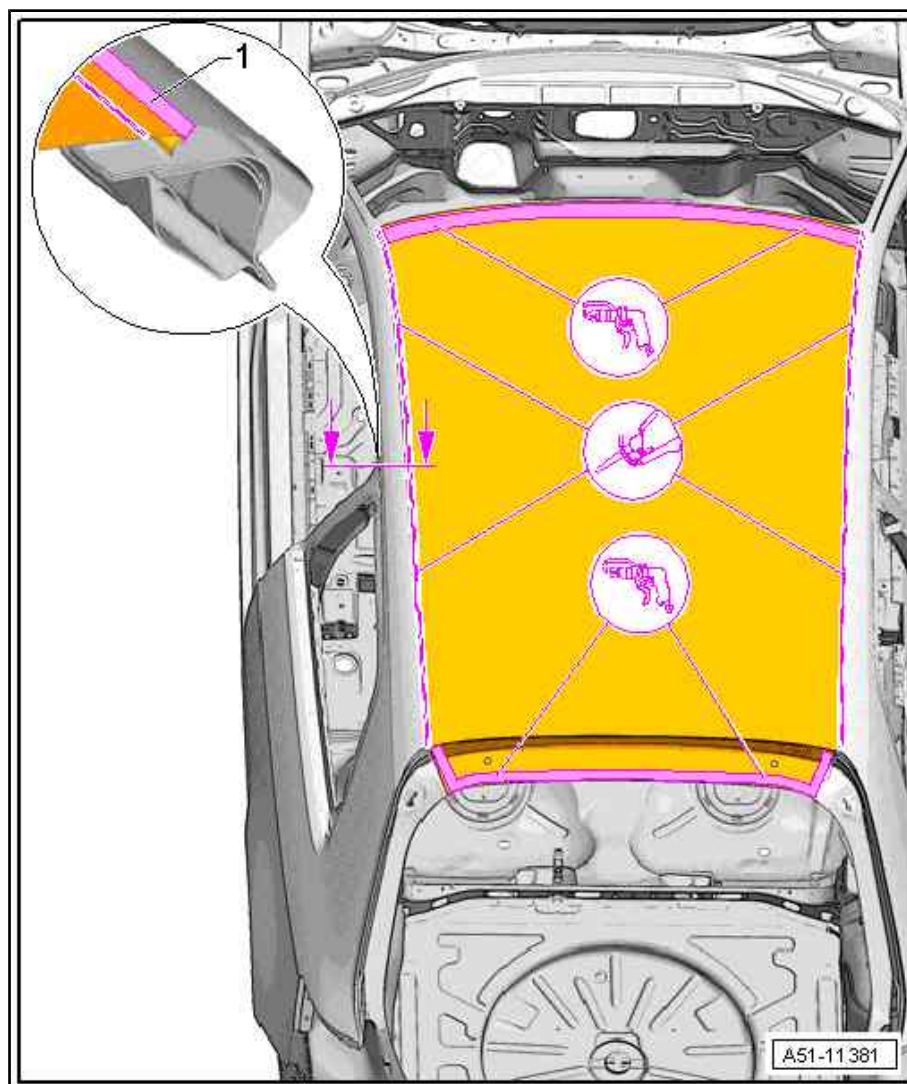
### Cutting locations



#### NOTICE

Do not damage roof cross member (front and rear) when separating.

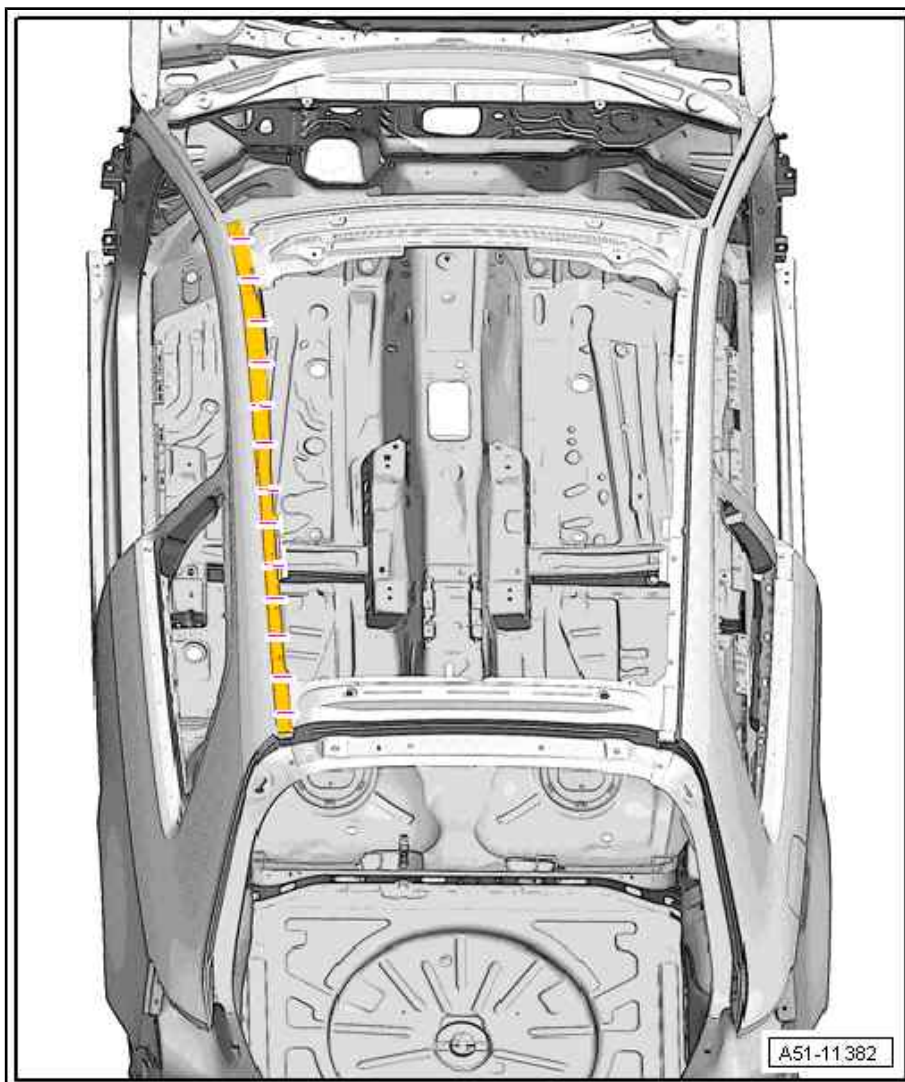
- Roughly cut out roof parallel with plasmatron weld seam -1- at a distance of approx. 30 mm using body saw .
- Drill off original joint to windscreen opening and rear lid opening using spot weld breaker .
- Working from passenger compartment, separate bonded joints between roof and roof compartment, separate bonded joints between roof and roof cross members using electric cutter - V.A.G 1561 A- .



**Note**

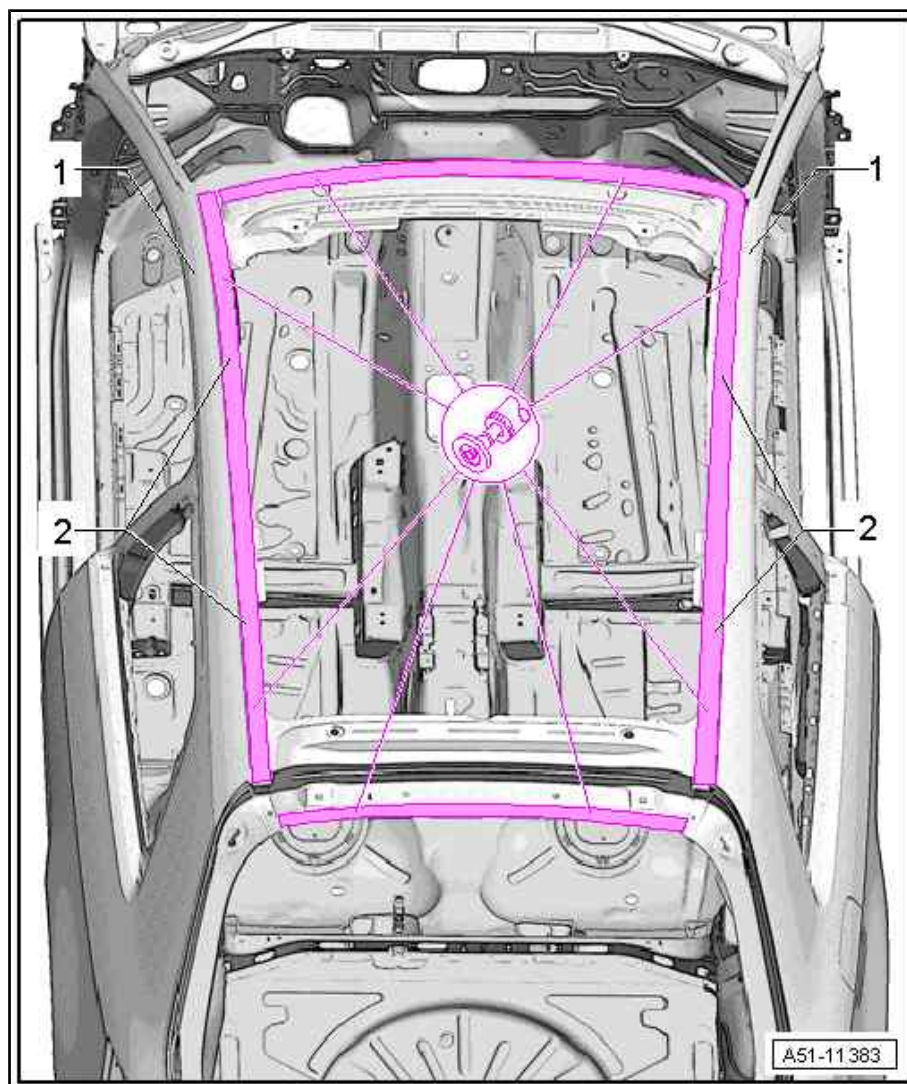
*Take care not to damage the roof side members when making cuts and when moving the remaining sections of the roof up and down.*

- Make cuts in remaining sections of roof using tin snips - VAS 5357- .
- Grip remaining sections with pliers and break open plasmatron weld seam by moving up and down.



**i** Note

- ◆ *Take care not to damage the roof side members -1- when removing the remaining sections of the roof -2-.*
- ◆ *Use a suitable flap disc; do not use a cutting disc or rough-filing disc.*
- Remove remaining material using compact angle grinder .
- Remove all residual adhesive and sealing compound from roof cross members at front and rear using scraper - VAS 5448- .
- Grind bonding areas down to bare metal.



### Replacement parts

- ◆ Standard roof
- ◆ Single-component assembly adhesive - D 190 MKD A3 - , 1 cartridge
- ◆ 2-component epoxy adhesive - DA 180 A00 A2 - , 2 sets of cartridges
- ◆ Cleaning solution - D 009 401 04-
- ◆ 2-component window adhesive - D 004 660 M2 - , 5 sets of cartridges
- ◆ Glass and paint primer - D 009 200 02-



## Preparing new part

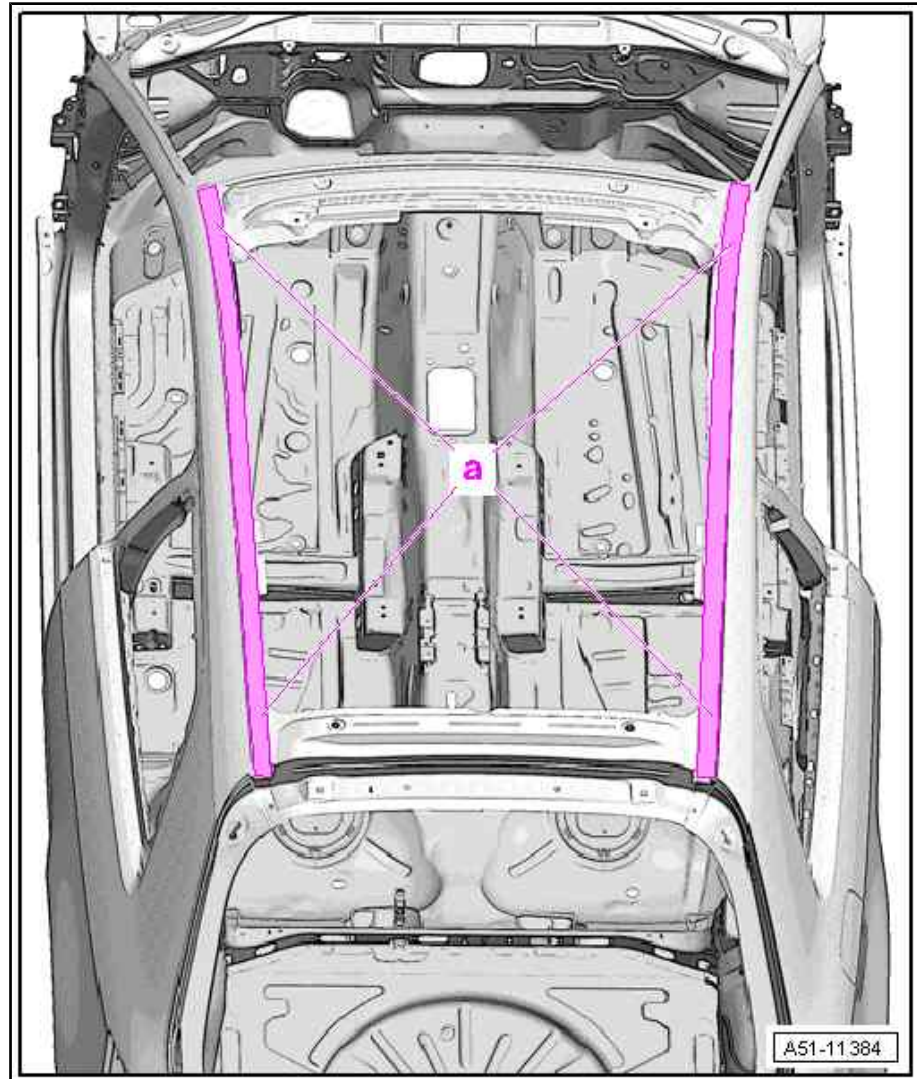


### Note

- ◆ *It is important to keep to the following procedure to ensure a satisfactory and effective roof repair.*
- ◆ *Bonded areas must not be treated with filler coat (surfacers) and painted before bonding in the roof.*
- ◆ *The adhesive materials must be applied very quickly.*
- ◆ *Make sure adhesive is applied before pot life is exceeded.*
- ◆ *Use a pneumatic cartridge gun to apply the bonding materials.*
- ◆ *Affixing adhesive tape to the roof parallel with the bonded seam on the side prevents soiling when bonding.*

## Bonding in

- Position roof on roof frame and check alignment of roof with roof side members (visual inspection).
- Check fit of roof with rear lid and windscreen.
- Fix roof in position in windscreen flange and sealing flange of rear lid using one self-tapping screw at each end.
- Remove roof.
- Apply glass and paint primer - D 009 200 02- in area of roof frame -a-.

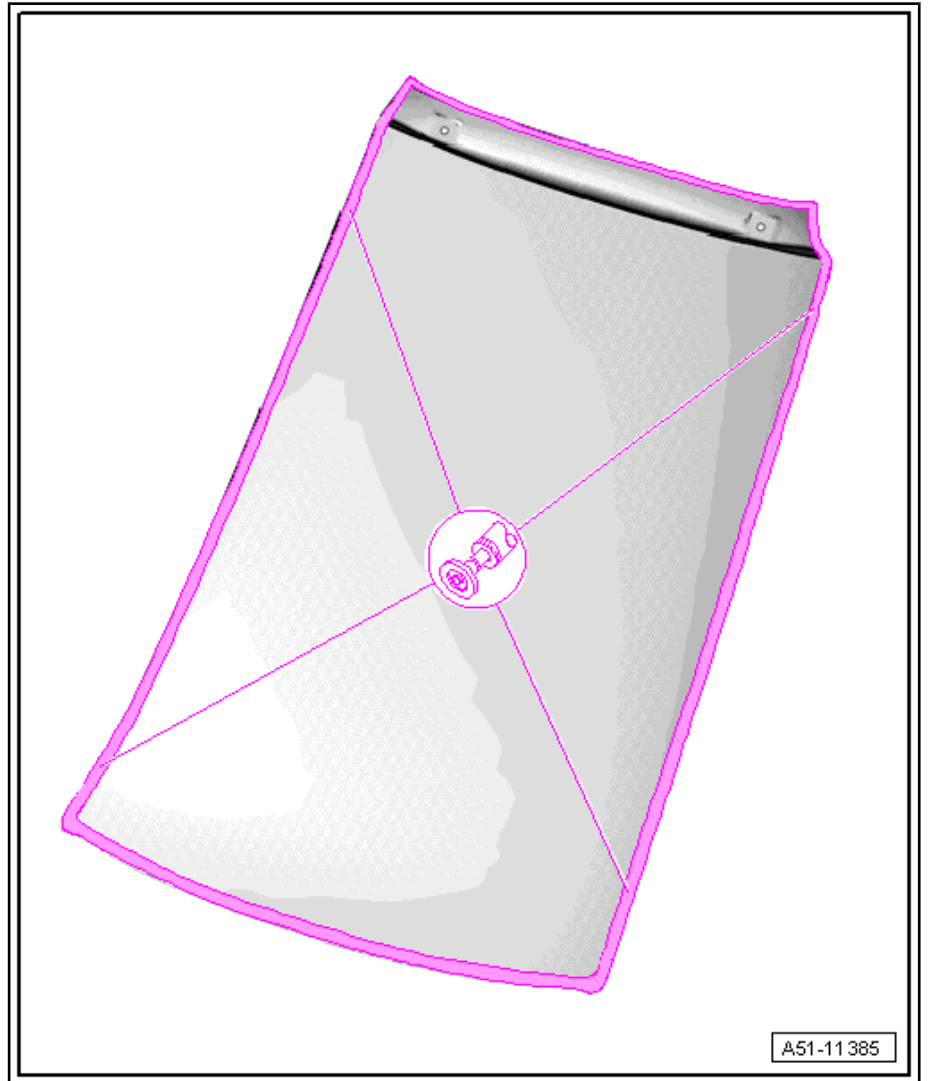


- Mask outside of roof panel parallel with side bonding area using adhesive tape.
- Attach four suction lifters - V.A.G 1344- or magnets - VAS 6739- to outside of roof panel.

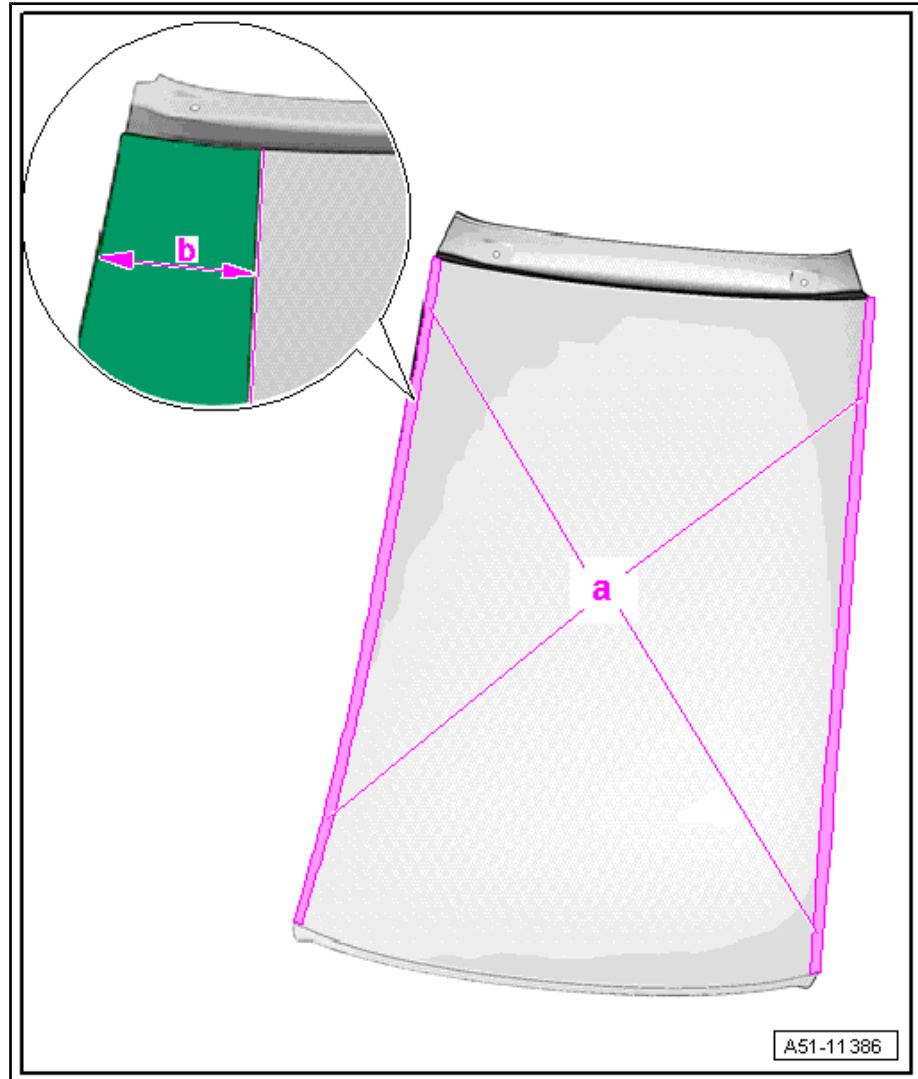
**Pre-treatment - applies to replacement part only**

- Grind welding surfaces down to bare metal.
- Roughen bonding surfaces using a clean sanding disc (grit size P 80 or P 100).
- Clean roof frame, roof reinforcement and roof with cleaning solution - D 009 401 04- .

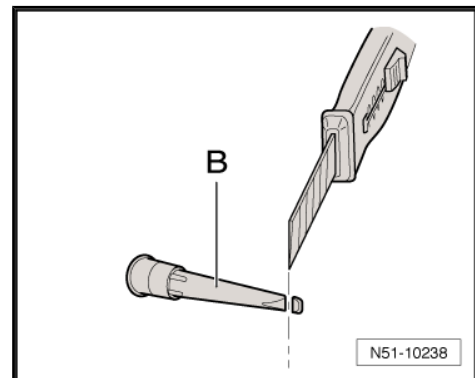
This ensures that the 2-component epoxy adhesive - DA 180 A00 A2 - forms a good joint with the bonding area.



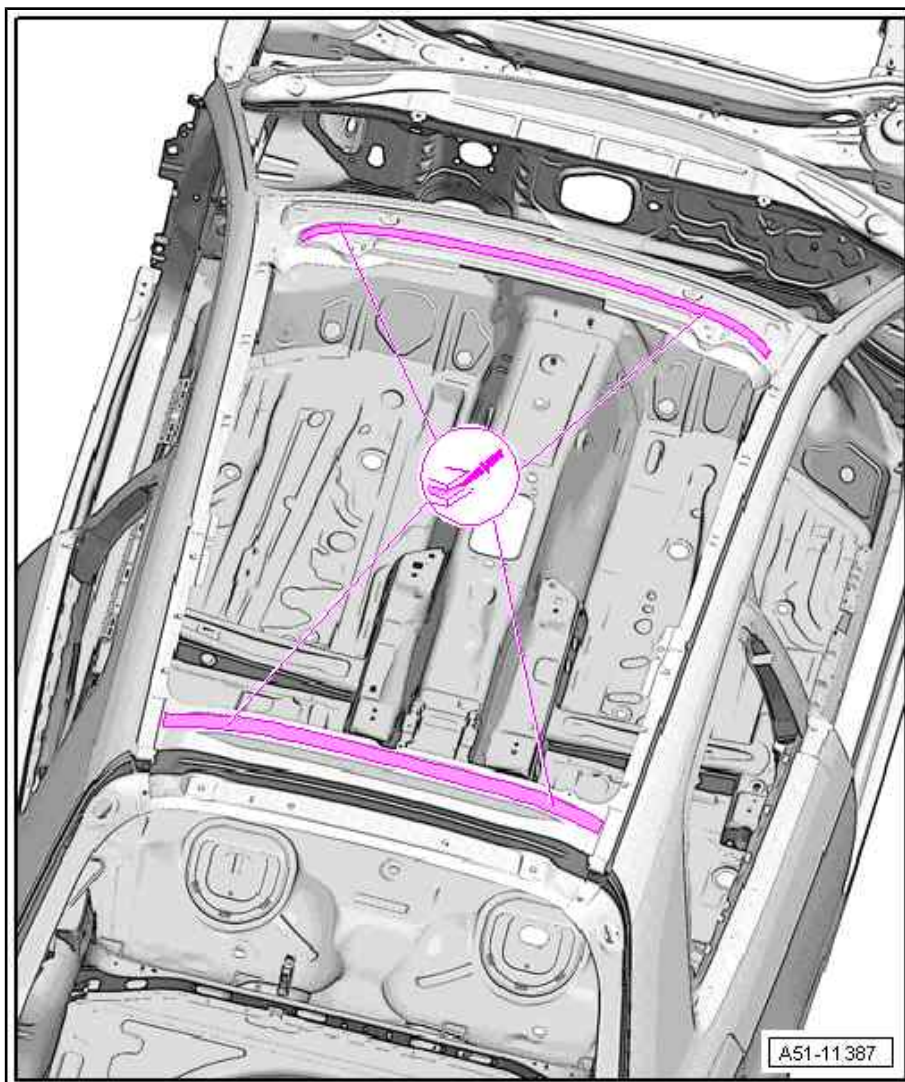
- Apply glass and paint primer - D 009 200 02- approx. 5 cm wide -b- on inner section of roof and inner side flange -a-.



- Cut off approx. 2 mm from nozzle -B- to obtain appropriate bead geometry.



- Apply single-component assembly adhesive - D 190 MKD A3- to roof cross members in the area of the factory bonding location using pneumatic cartridge gun - V.A.G 1761/1- .



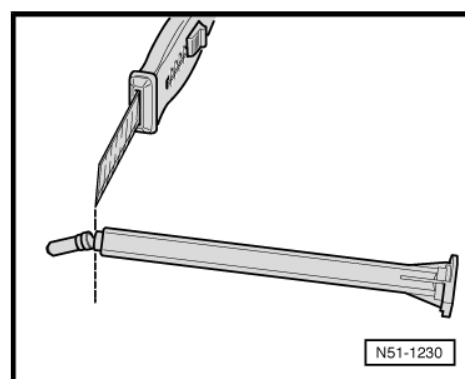
### Preparing new part

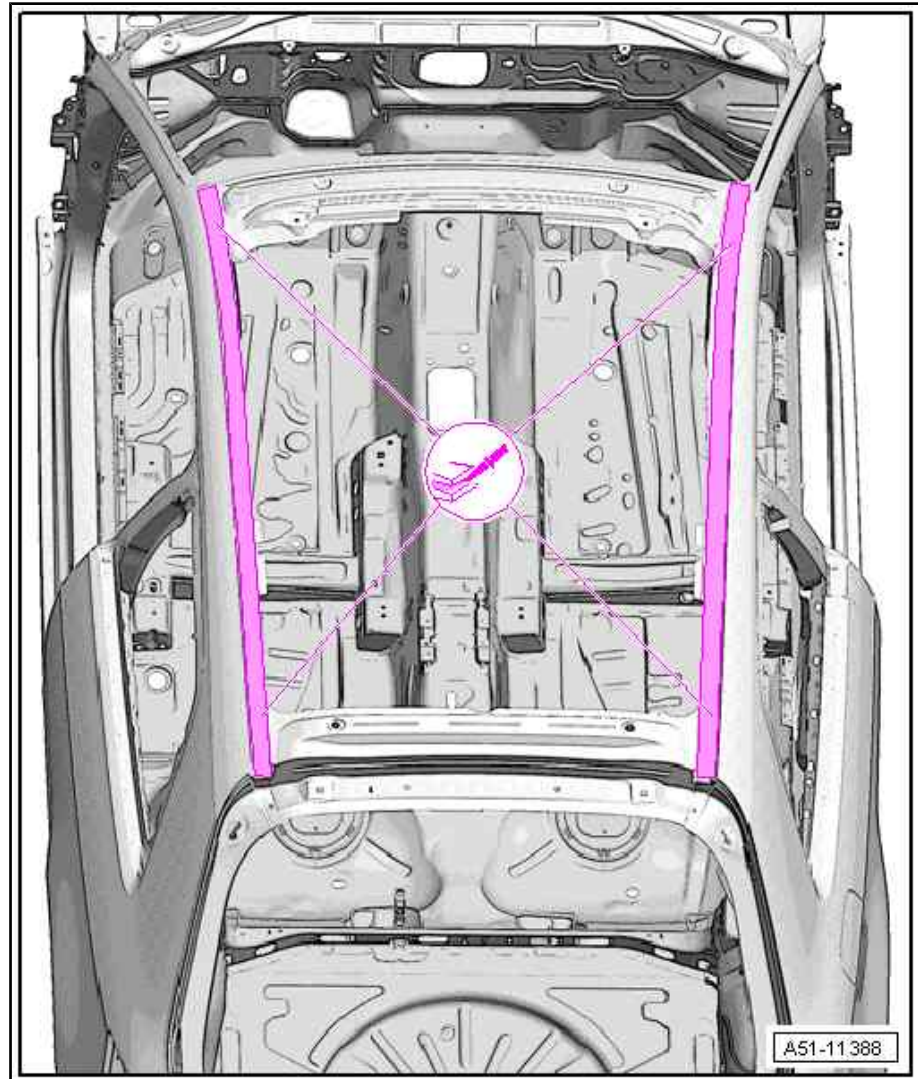
- Cut static mixer from 2-component epoxy adhesive set - DA 180 A00 A2 - down to 4th notch to obtain required bead cross section.

#### Note

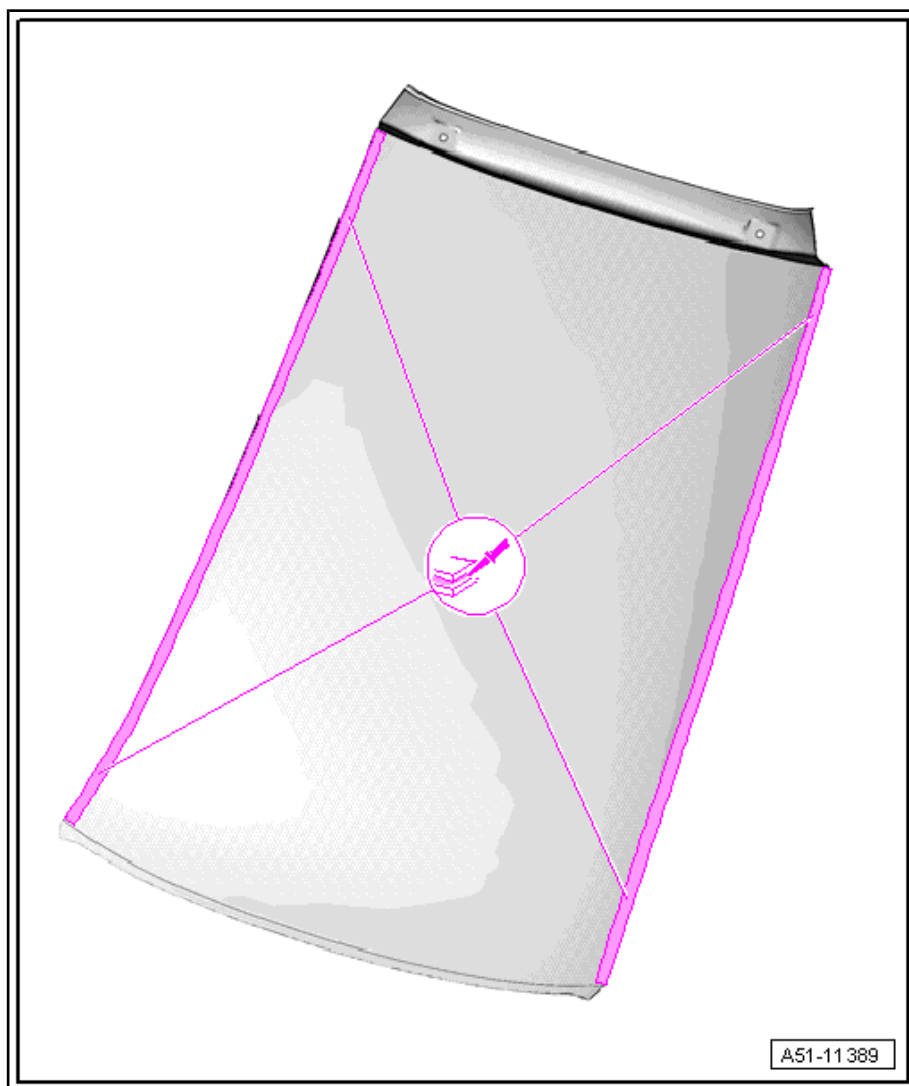
- ◆ *The pot life of the 2-component epoxy adhesive - DA 180 A00 A2 - is roughly 90 minutes.*
- ◆ *A second mechanic is required for the next steps.*

- Apply two continuous beads of 2-component epoxy adhesive - DA 180 A00 A2 - to bevelled sections of roof side members in area of zero-gap joint using double cartridge gun - VAS 6453- .





- Apply one continuous bead of 2-component epoxy adhesive - DA 180 A00 A2 - to side flanges of roof using double cartridge gun - VAS 6453- .



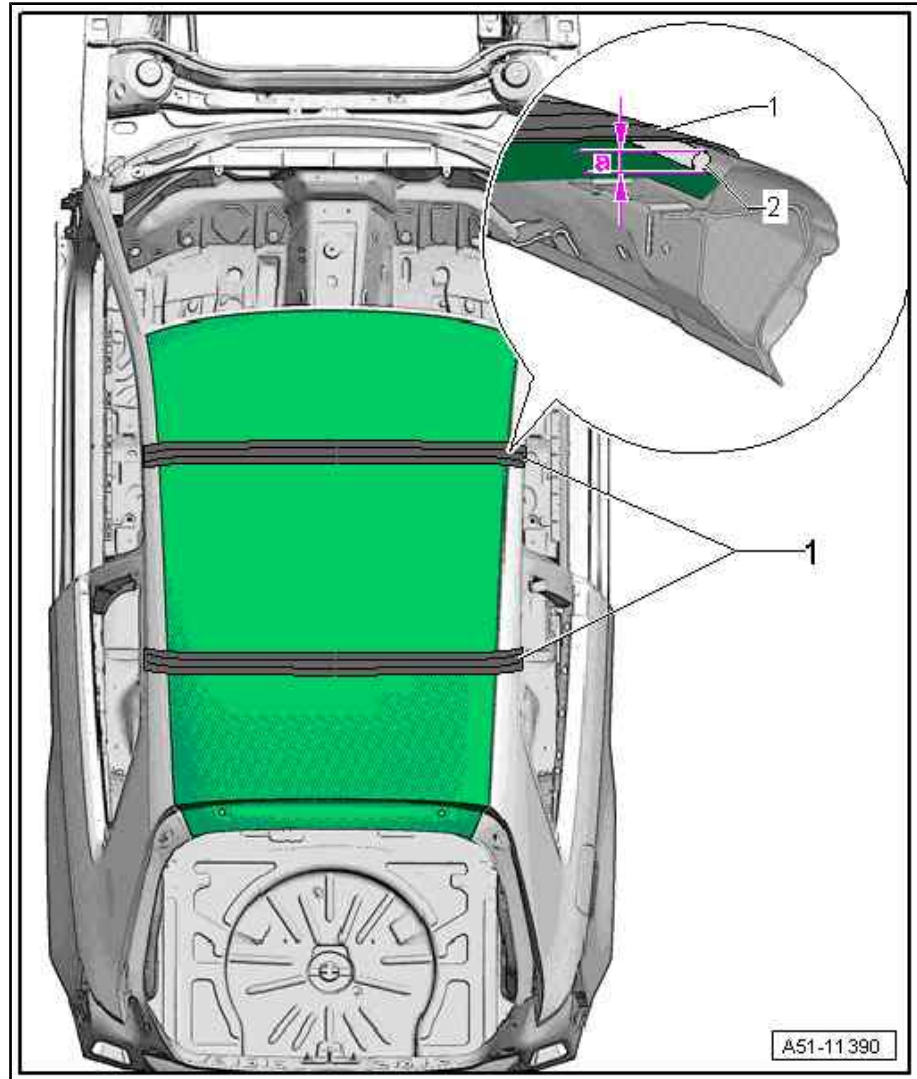
- Immediately fit and align roof.
- Use one self-tapping screw at each end to fix roof in position in centring hole in windscreen flange and sealing flange for rear lid.
- Fix roof in position at windscreen opening and rear window opening using mole grips, 18-18 - VAS 5430/1- .

#### Adjusting roof depth

- Additionally fix roof in position with two tensioning straps - T 10038- -1-.
- Set required depth using e.g. drill bit or suitable wooden spacer -2-.

Depth setting in centre part of front door -a = 3.0 mm -

Depth setting for rear section -a = 2.5 mm -



- Roughly spread any 2-component epoxy adhesive - DA 180 A00 A2 - that comes out at edge of roof.

**!** NOTICE

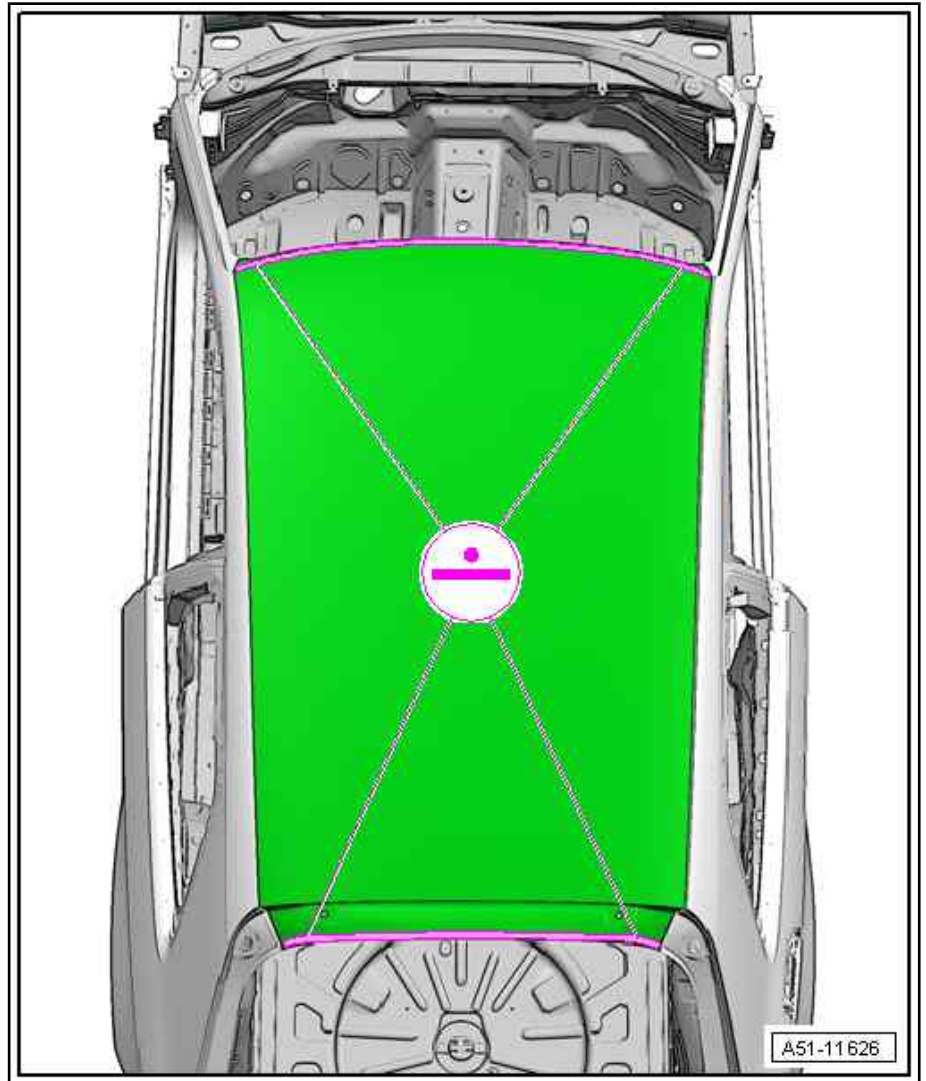
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**!** CAUTION

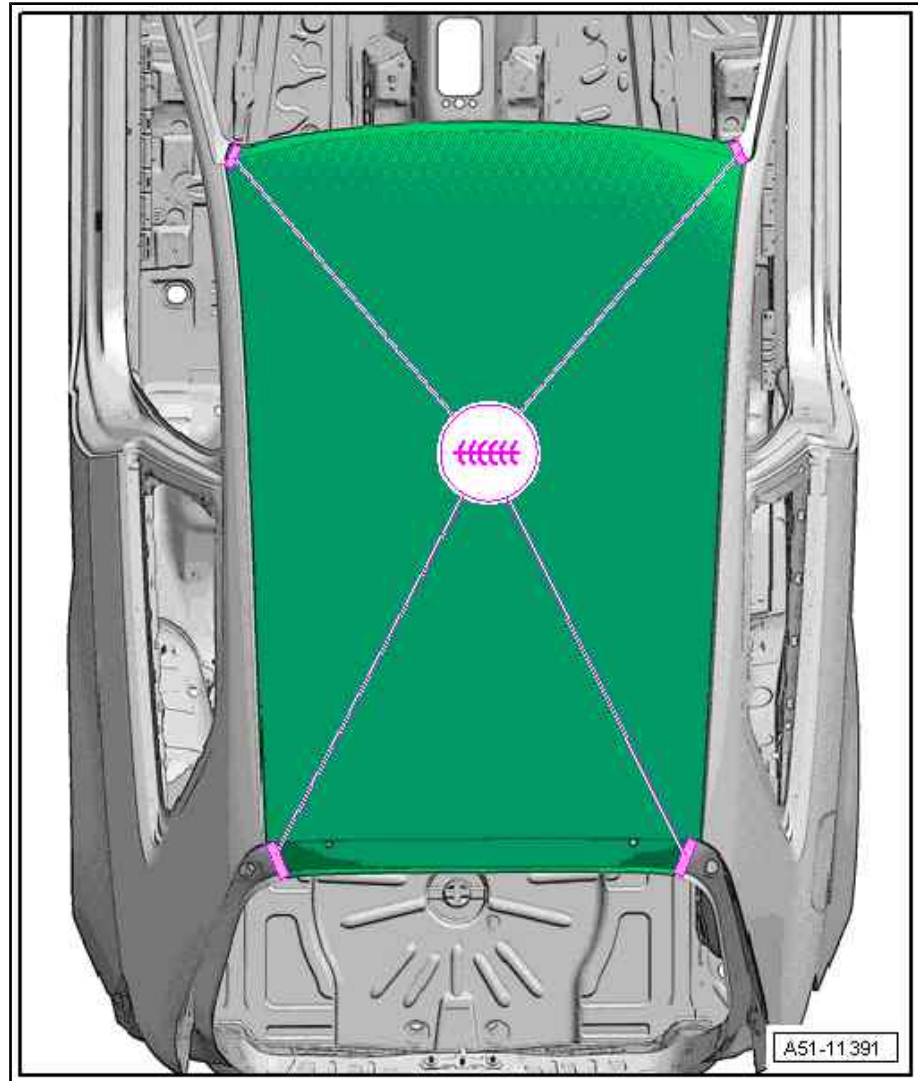
Allow bonded joint on roof to harden for 60 minutes at approx. 65° to 80° C with radiant heater. Check temperature constantly with temperature sensor.

**Welding in**

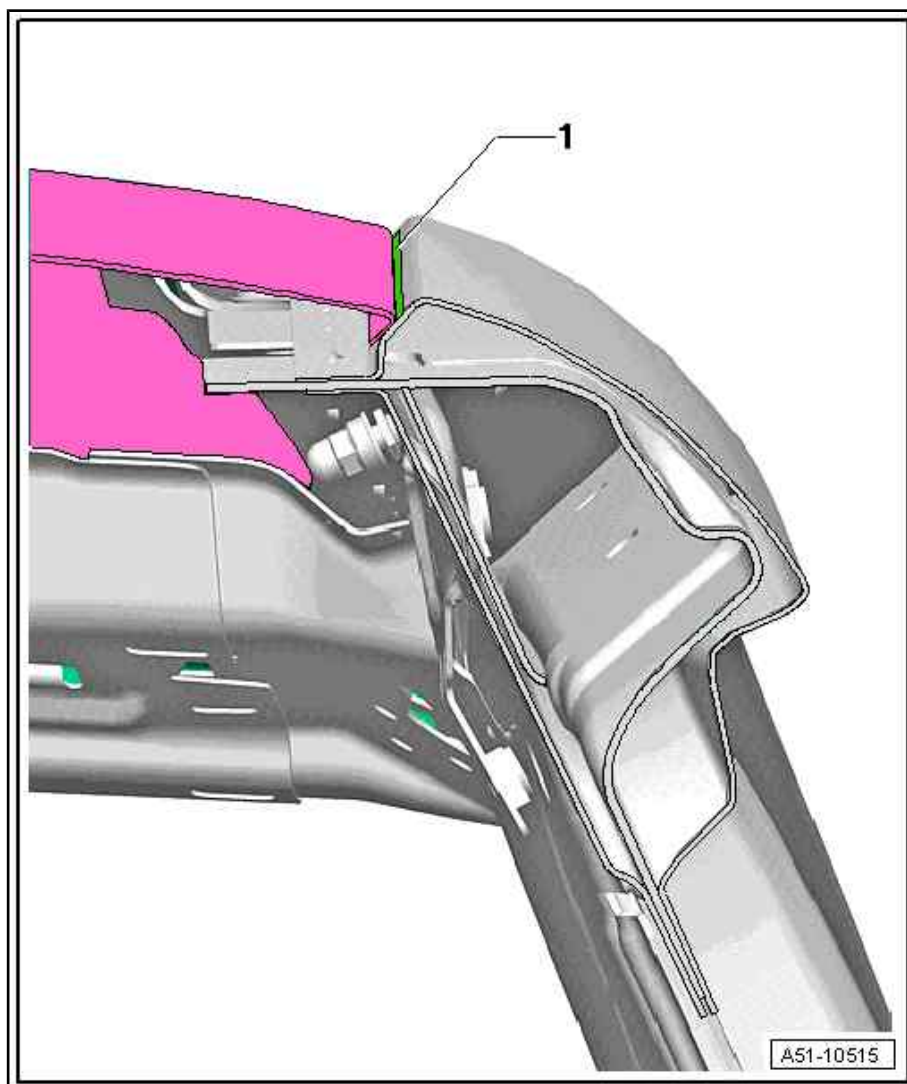
- Weld in roof using resistance spot welder : RP spot weld seam.



- Make additional welds for roof using shielded arc welding equipment : SG continuous seam.
- Grind down SG continuous weld seams using compact angle grinder .



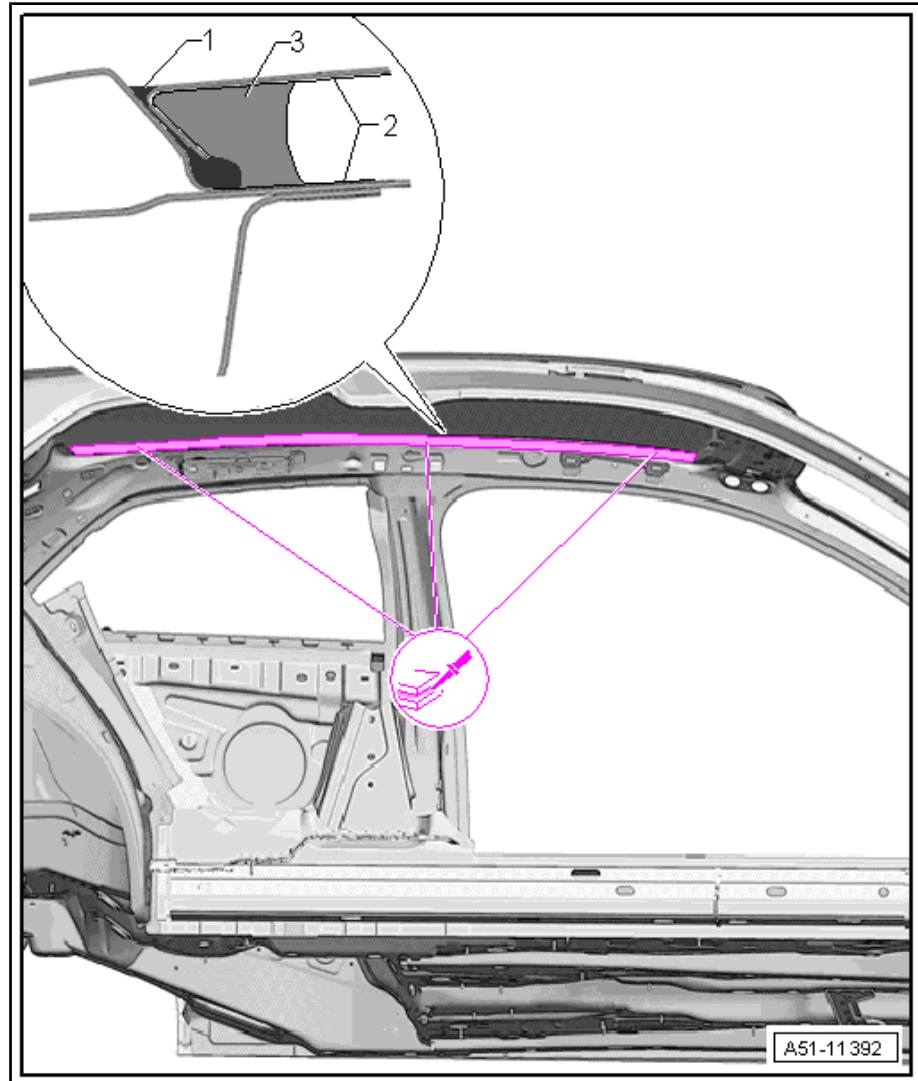
- Grind zero-gap joint -1- into shape (left and right).



**i** Note

*Please note instructions for use: window adhesive should be applied at a temperature of approx. 20°C.*

- Apply 2-component window adhesive - D 004 660 M2 - -3- in roof side member using double cartridge gun - VAS 5237- .
- ◆ 1 = 2-component epoxy adhesive - DA 180 A00 A2 -
- ◆ 2 = Glass and paint primer - D 009 200 02-
- ◆ 3 = 2-component window adhesive - D 004 660 M2 -





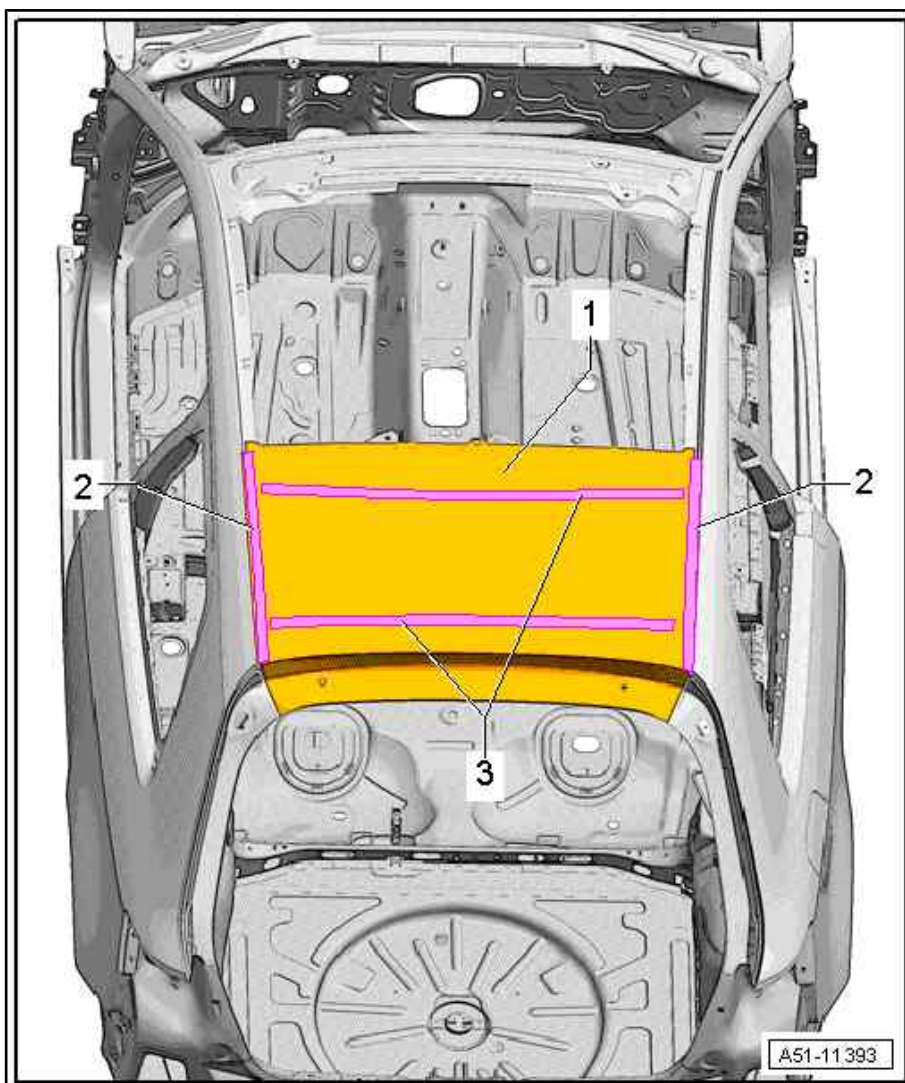
RO: 51 23 55 00

### 3 Roof - Renewal (vehicles with panoramic tilting sunroof - A3)

1 - Roof rear section

2 - Plasmatron weld seam

3 - Bonded area



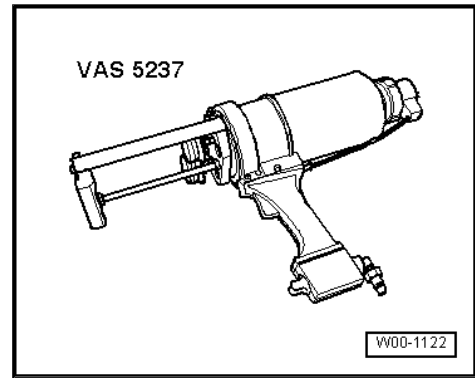
#### 3.1 Tools

##### Special tools and workshop equipment required

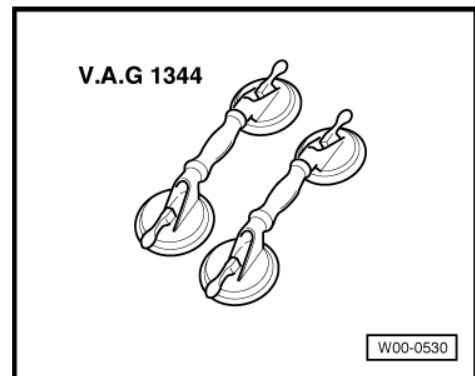
- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Drill
- ◆ Spot weld breaker
- ◆ Body saw
- ◆ Electric cutter
- ◆ Mole grips, 18-18 - VAS 5430/1-
- ◆ Double cartridge gun - VAS 6453-



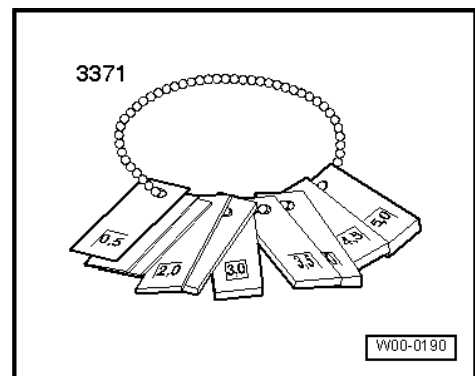
- ◆ Double cartridge gun - VAS 5237-



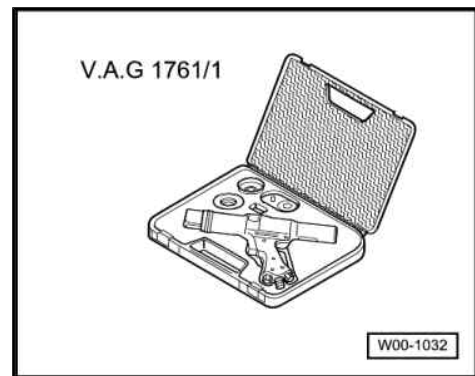
- ◆ Suction lifter - V.A.G 1344- or magnet - VAS 6739-



- ◆ Setting gauge - 3371-

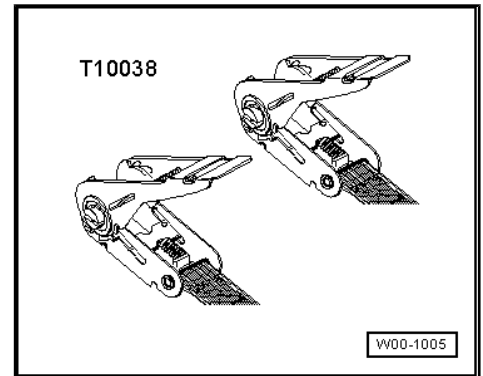


- ◆ Compressed-air gun - V.A.G 1761/1-





◆ Tensioning strap - T 10038-



**!** NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

1 - 2-component window adhesive - D 004 660 M2 -

- Open cap.

2 - Static mixer

3 - Extension hose

Part number 000 809 937

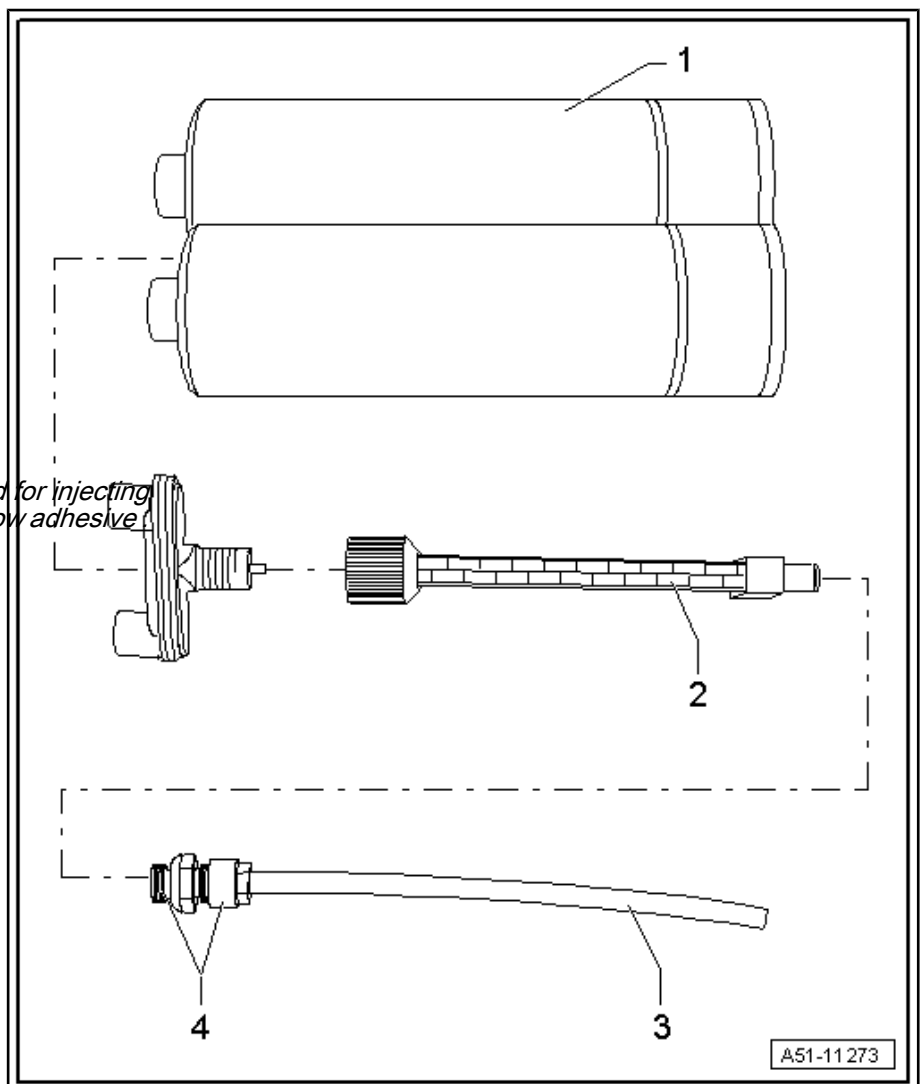
- Screw onto static mixer -2- with adapter -4-.

4 - Adapter



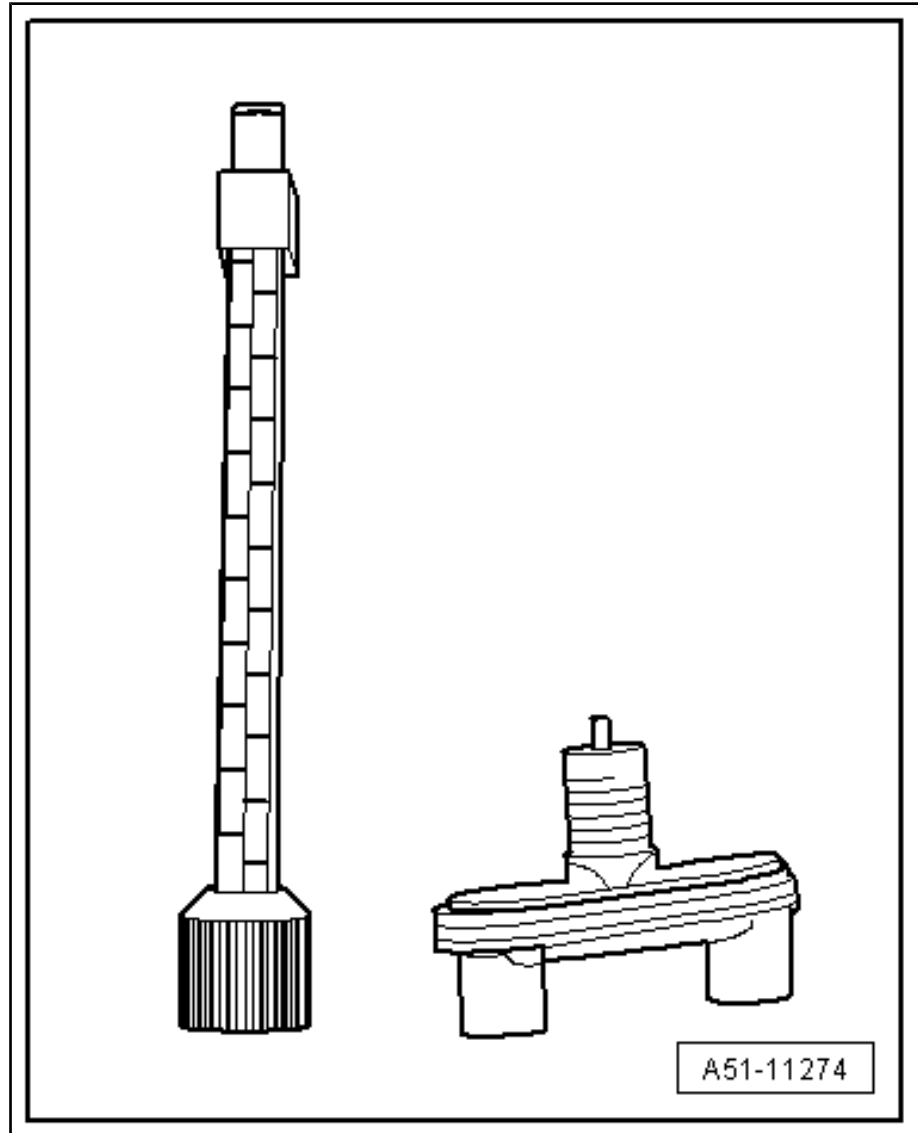
Note

*The adapter is required for injecting the 2-component window adhesive.*

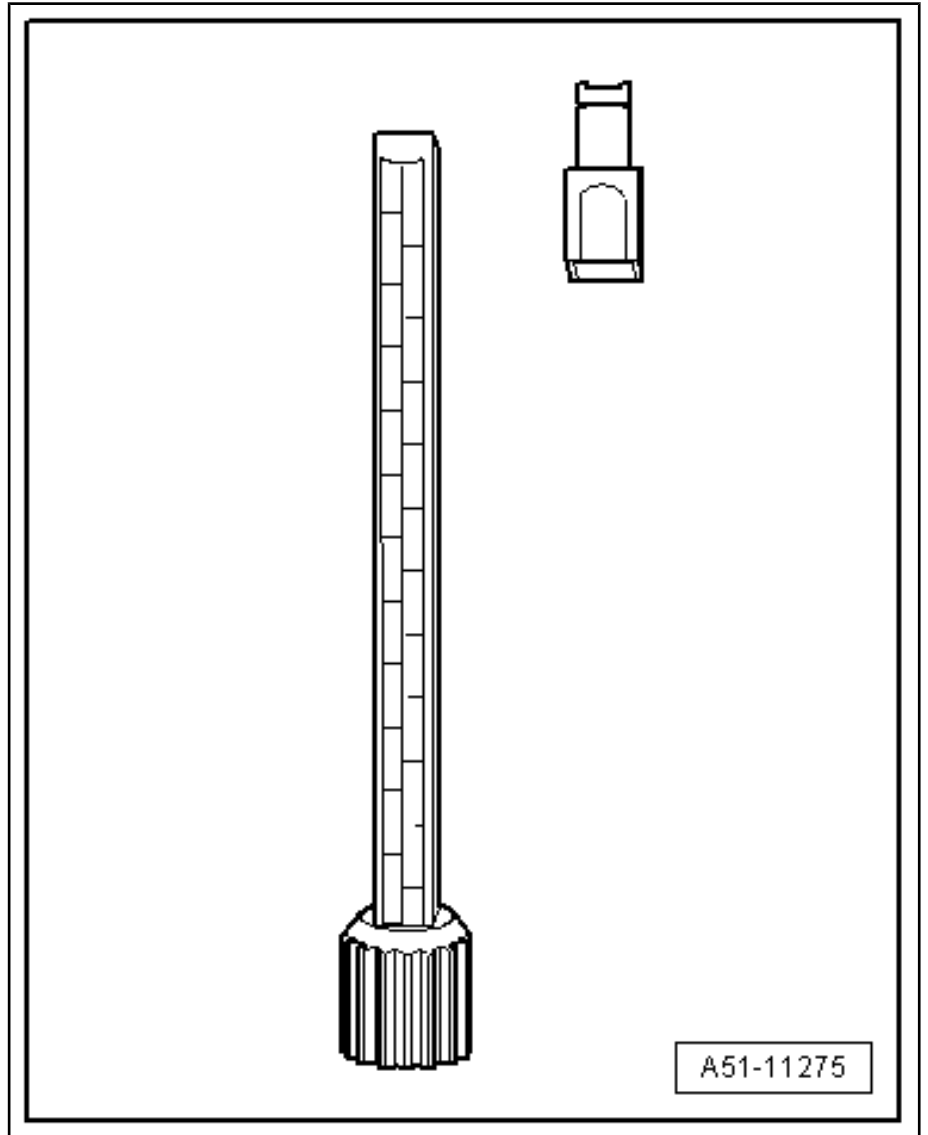


Instructions for using extension hose for window adhesive

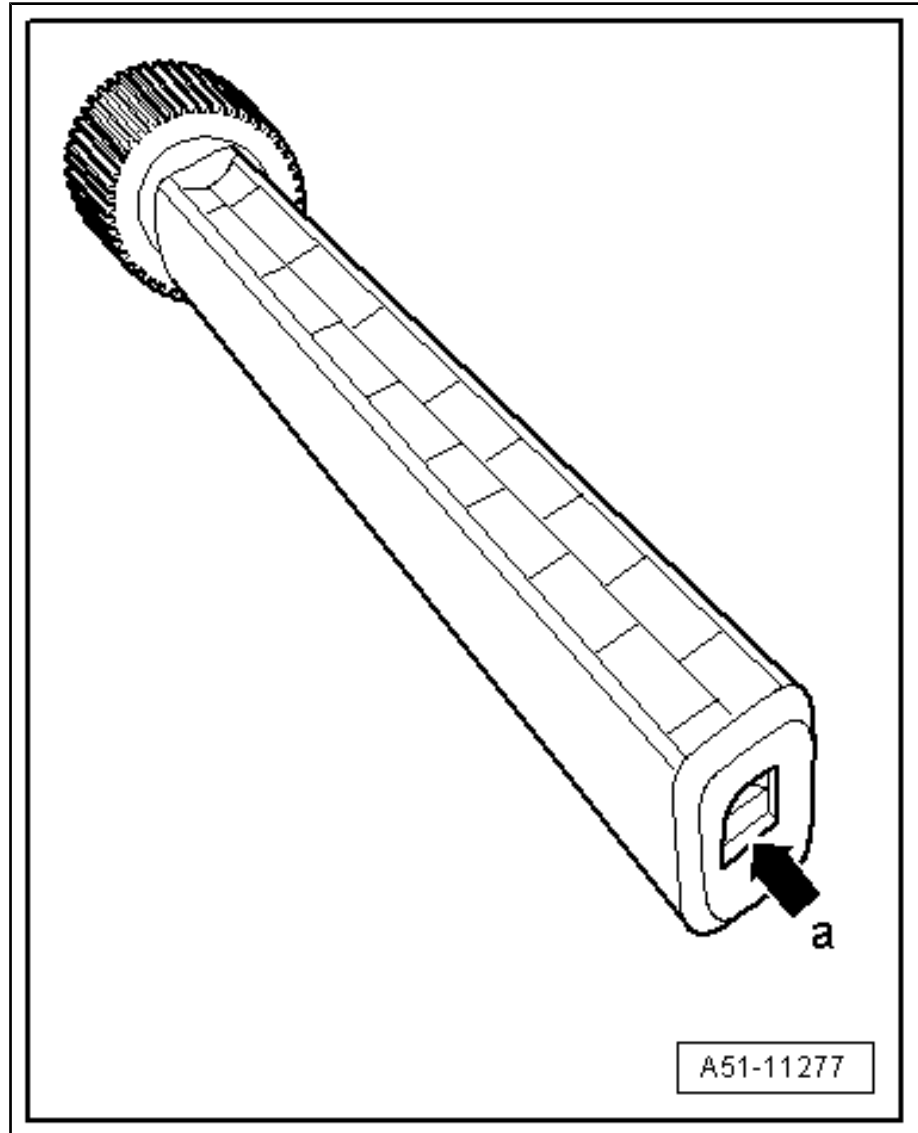
- Take static mixer out of window adhesive kit.



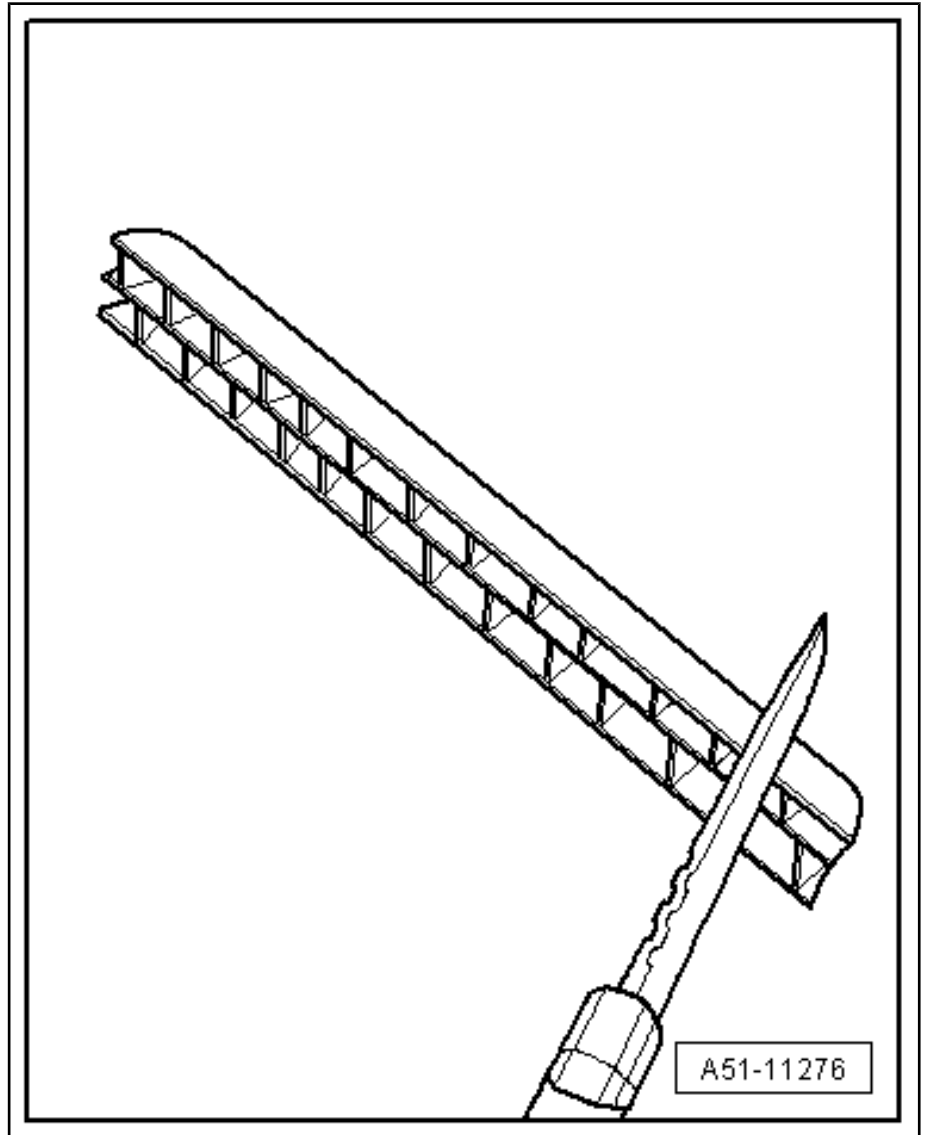
- Remove front cap from static mixer.



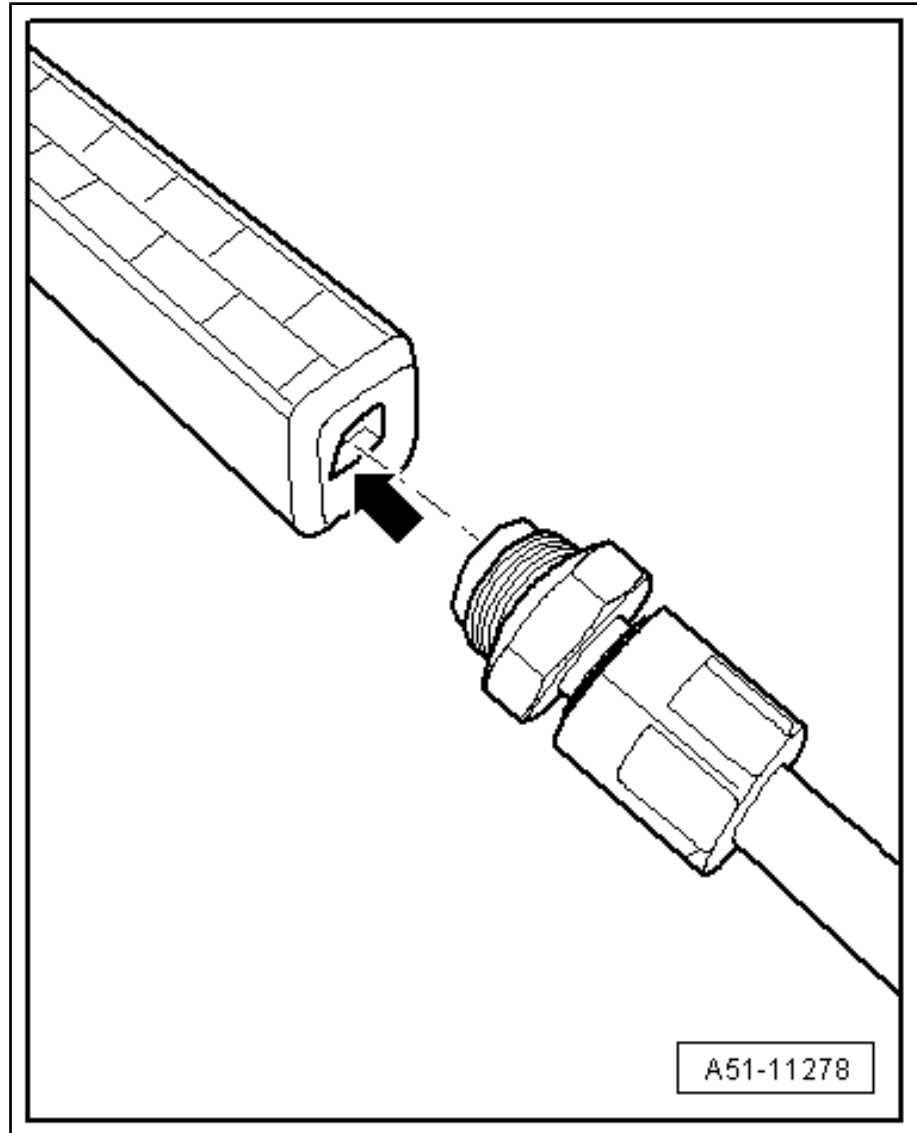
- Drill out opening in static mixer -a- to 9 mm  $\varnothing$  using drill .



- Shorten inner section of mixer so that hose can be screwed in fully.



- Screw extension hose onto mixer.



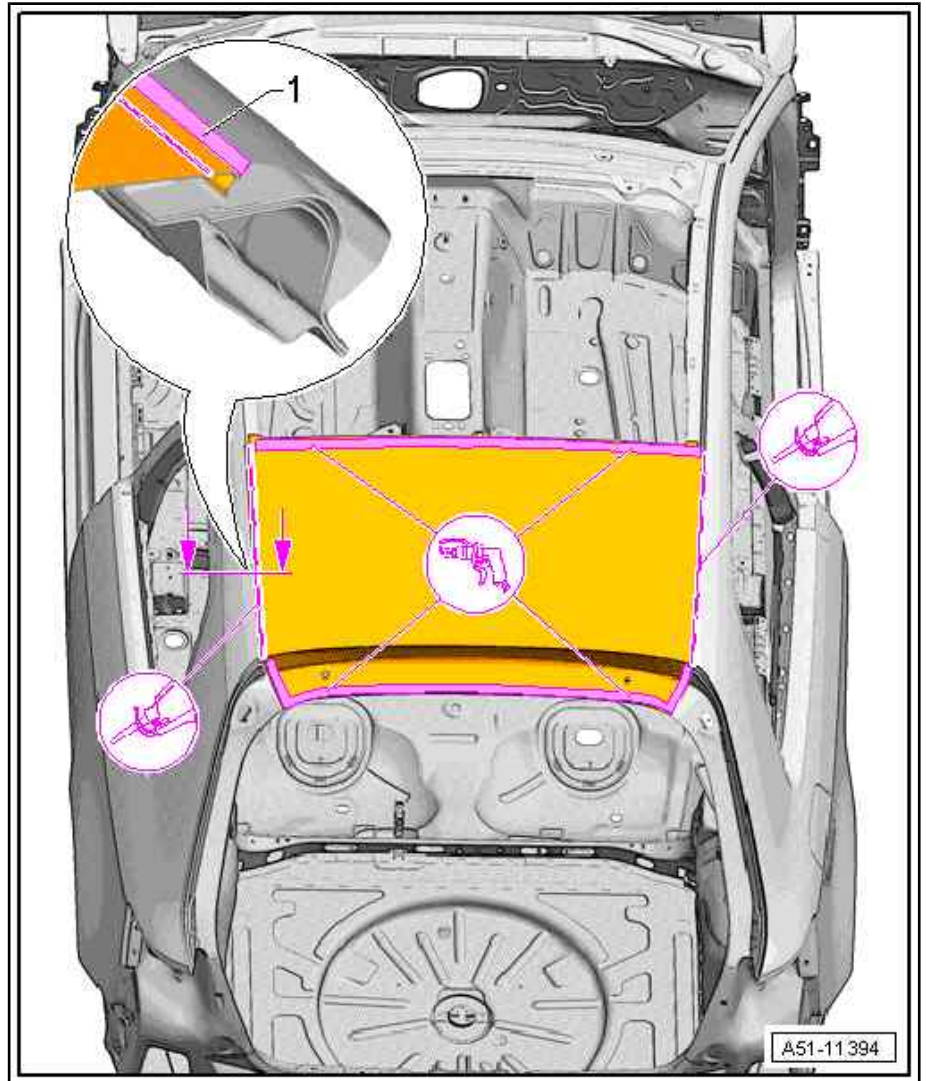
## 3.2 Procedure

### Cutting locations

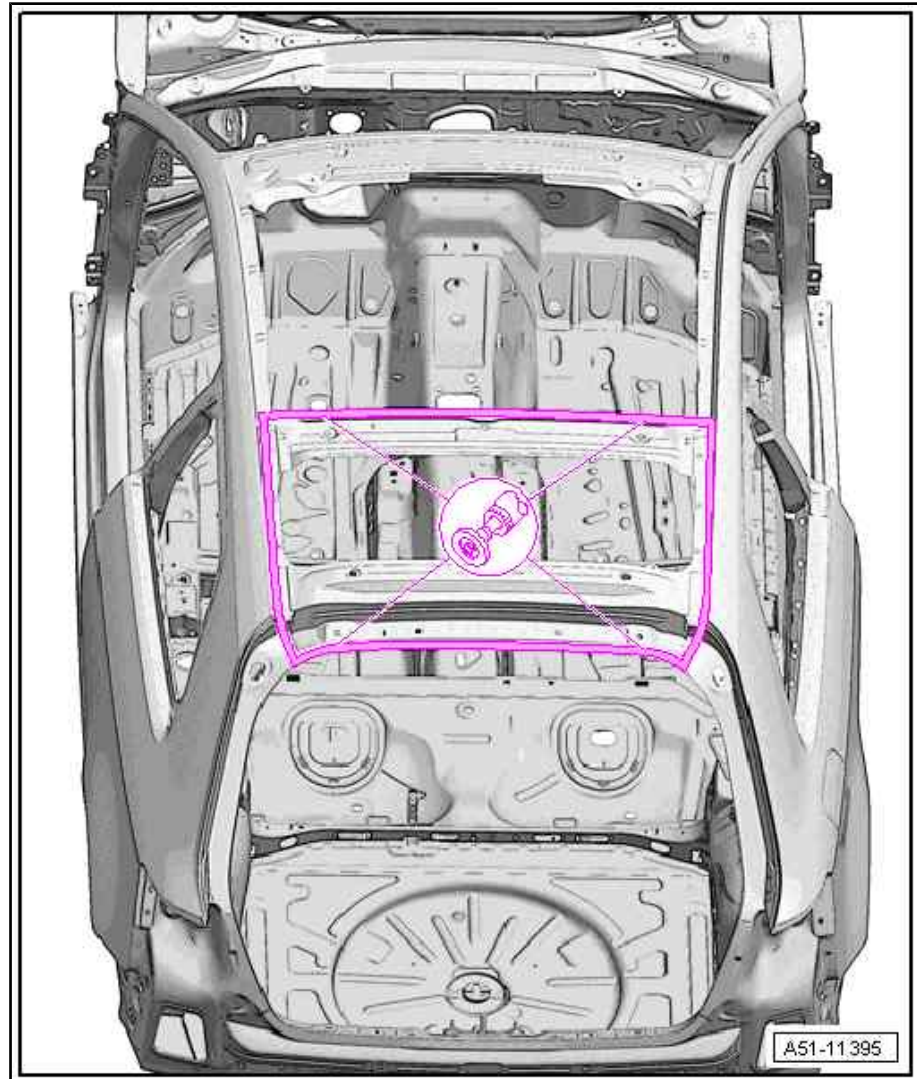


**Take care not to damage roof cross member when cutting.**

- Roughly cut out roof parallel with plasmatron weld seam -1- at a distance of approx. 30 mm using body saw .
- Working from passenger compartment, separate bonded joints between roof and roof cross members using electric cutter - V.A.G 1561 A- .
- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .  
Take care not to damage roof frame when removing remaining material from roof frame.  
Do not use cutting discs or rough-filing discs.



### Replacement parts

- ◆ Roof rear section
- ◆ Single-component assembly adhesive - D 190 MKD A3 - , 1 cartridge
- ◆ 2-component epoxy adhesive - DA 180 A00 A2 - , 1 set of cartridges
- ◆ Cleaning solution - D 009 401 04-
- ◆ 2-component window adhesive - D 004 660 M2 - , 3 sets of cartridges
- ◆ Glass and paint primer - D 009 200 02-



## Bonding in

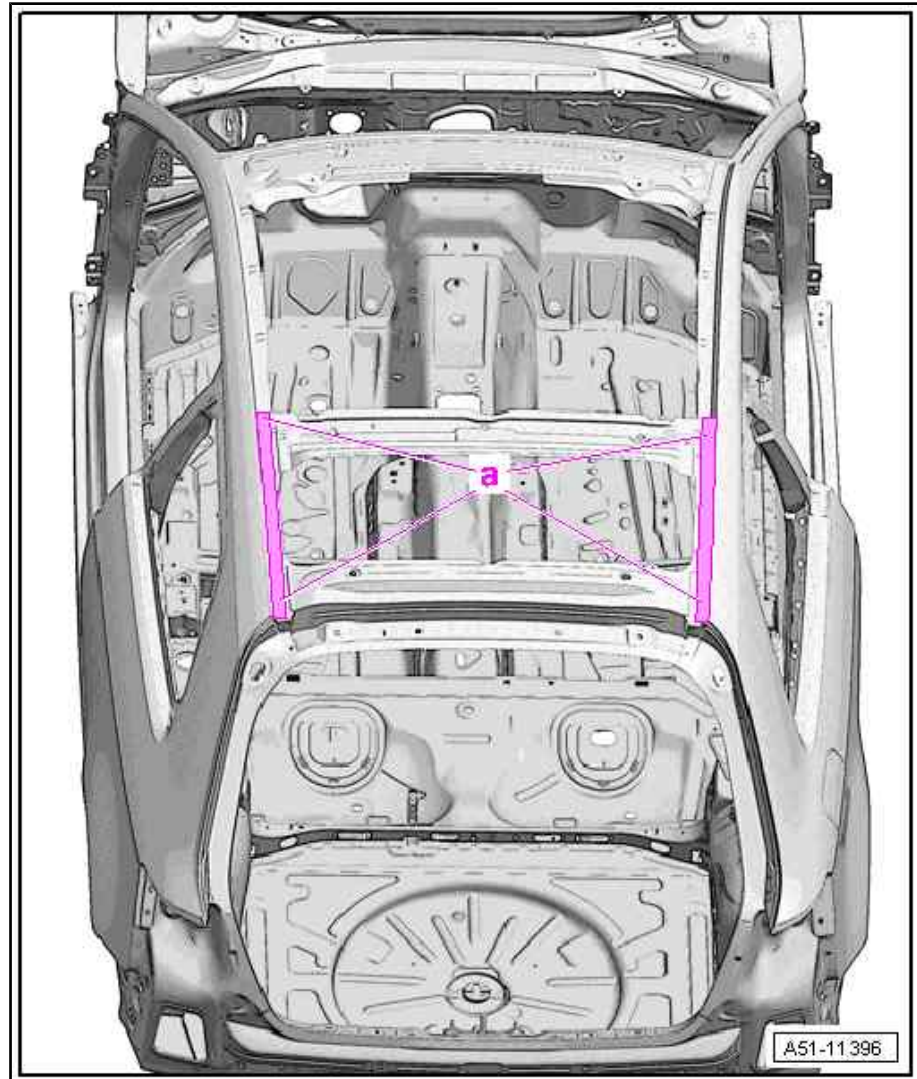


### Note

- ◆ *It is important to keep to the following procedure to ensure a satisfactory and effective roof repair.*
- ◆ *Bonded areas must not be treated with filler coat (surfacers) and painted before bonding in the roof.*
- ◆ *The adhesive materials must be applied very quickly.*
- ◆ *Make sure adhesive is applied before pot life is exceeded.*
- ◆ *Use a pneumatic cartridge gun to apply the bonding materials.*
- ◆ *Affixing adhesive tape to the roof parallel with the bonded seam on the side prevents soiling when bonding.*

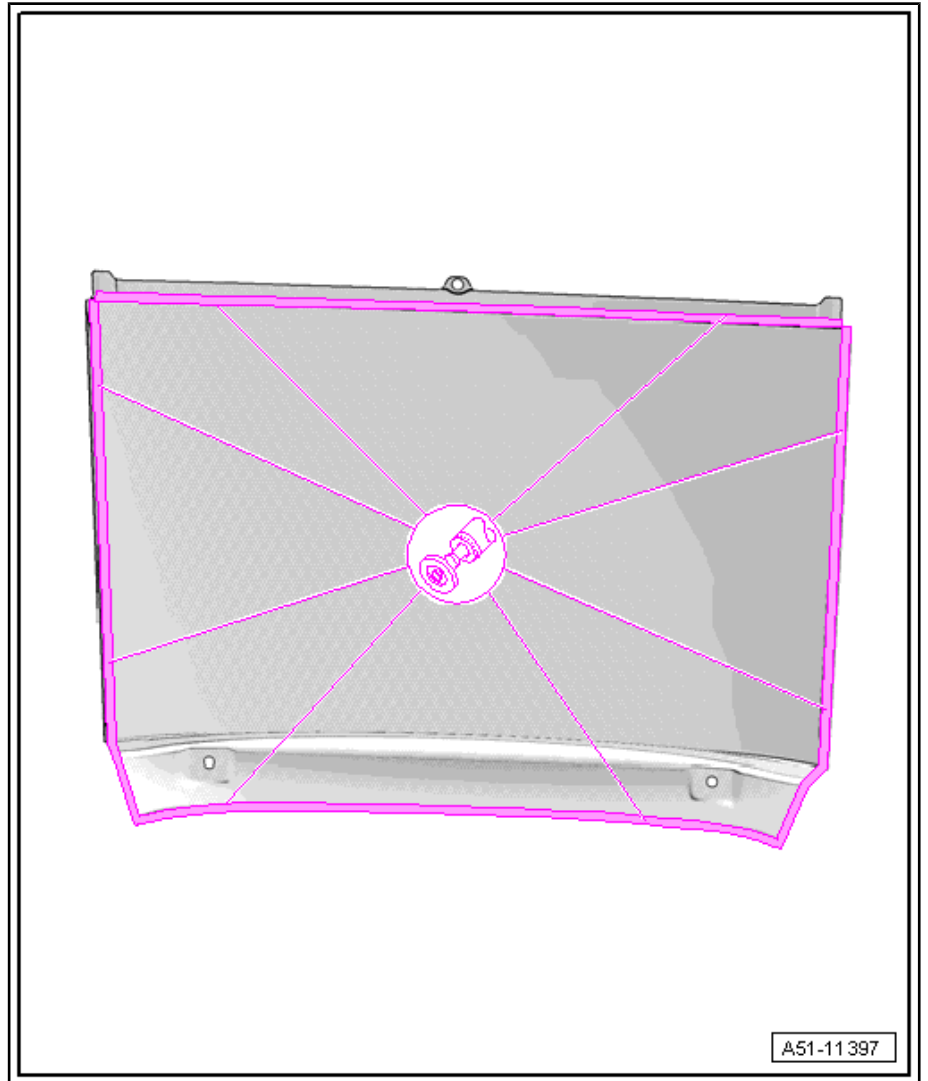
A second mechanic is required for the next steps.

- Position roof on roof frame and check alignment of roof with roof side members (visual inspection).
- Check fit of roof with rear lid and glass roof.
- Fix roof in position in glass roof flange and sealing flange of rear lid using one self-tapping screw at each end.
- Remove roof.
- Apply glass and paint primer - D 009 200 02- in area of roof frame -a-.

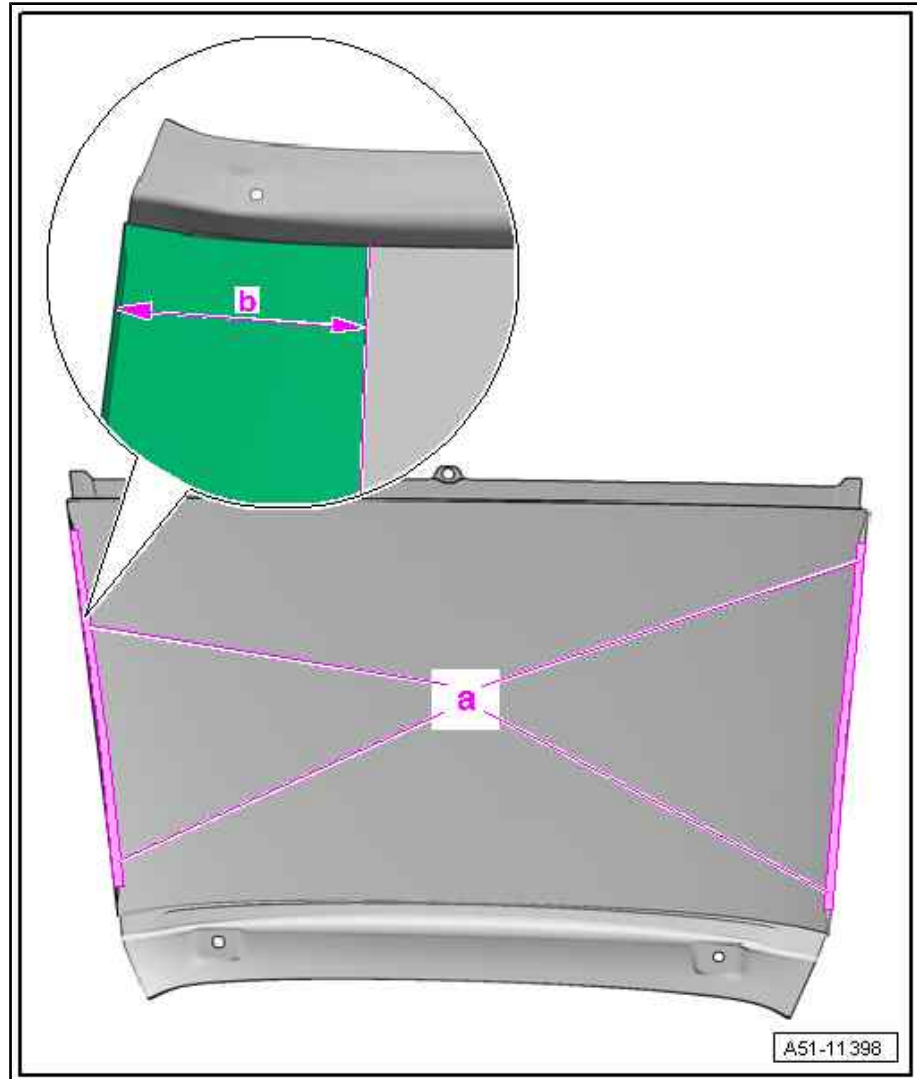


- Mask outside of roof panel parallel with side bonding area using adhesive tape.
- Attach four suction lifters - V.A.G 1344- or magnets - VAS 6739- to outside of roof panel.
- Grind welding surfaces down to bare metal.
- Roughen bonding surfaces using a clean sanding disc (grit size P 80 or P 100).
- Clean roof frame, roof reinforcement and roof with cleaning solution - D 009 401 04- .

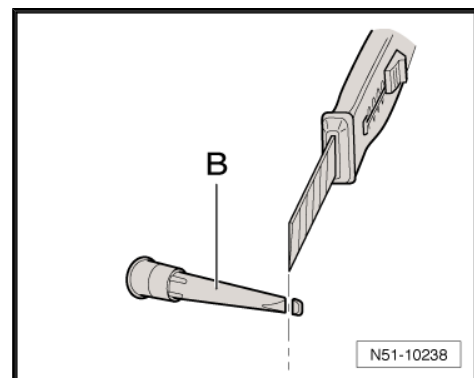
This ensures that the 2-component epoxy adhesive - DA 180 A00 A2 - forms a good joint with the bonding area.



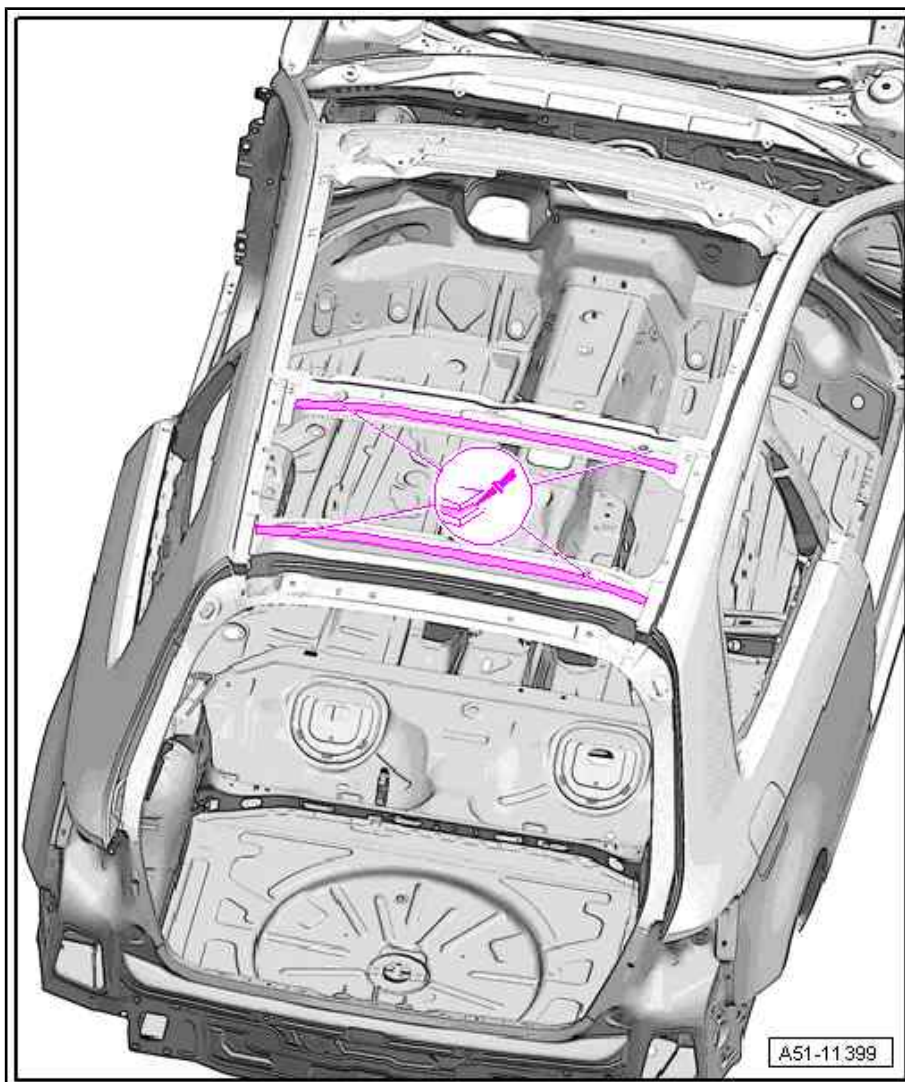
- Apply glass and paint primer - D 009 200 02- approx. 5 cm wide -b- on inner section of roof and inner side flange -a-.



- Cut off approx. 2 mm from nozzle -B- to obtain appropriate bead geometry.



- Apply single-component assembly adhesive - D 190 MKD A3- to roof cross members in the area of the factory bonding location using pneumatic cartridge gun - V.A.G 1761/1- .

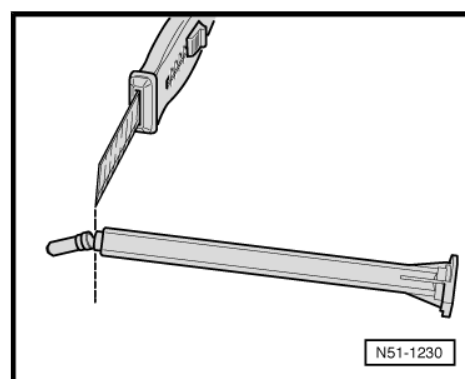


### Preparing new part

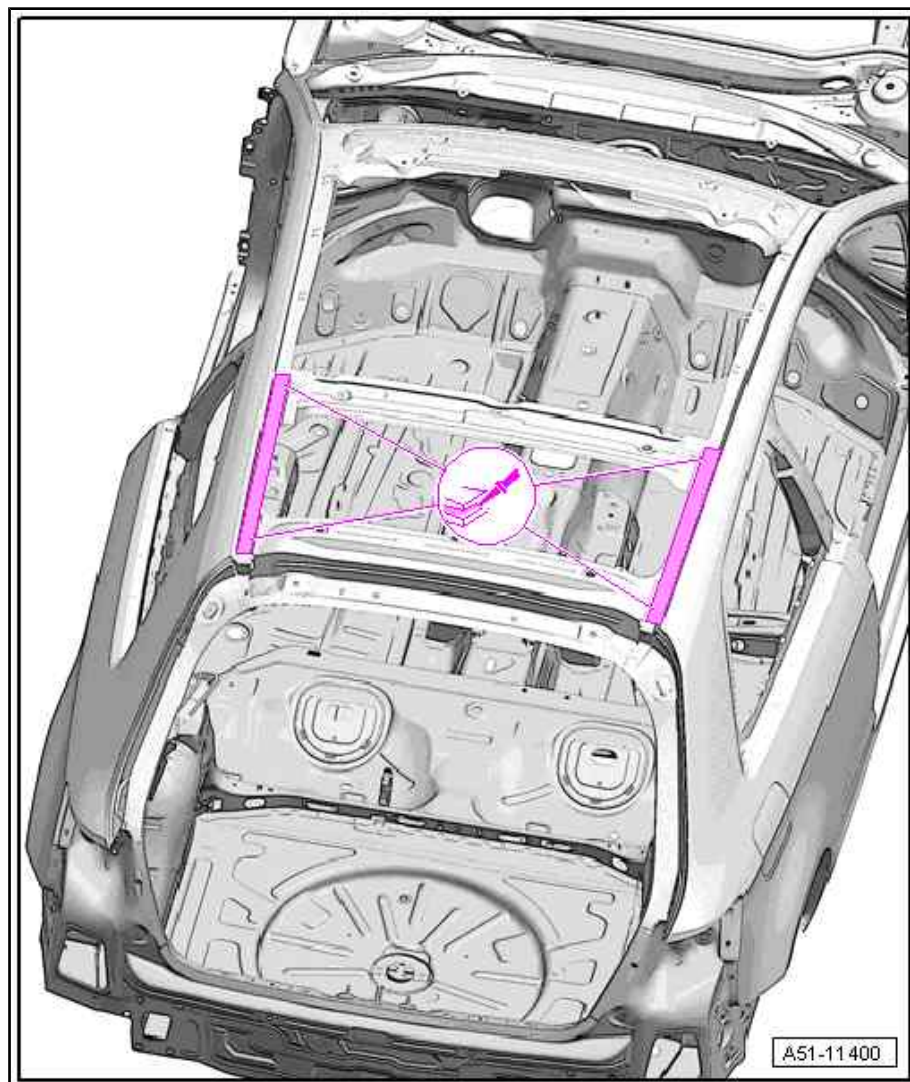
- Cut static mixer from 2-component epoxy adhesive set - DA 180 A00 A2 - down to 4th notch to obtain required bead cross section.

### Note

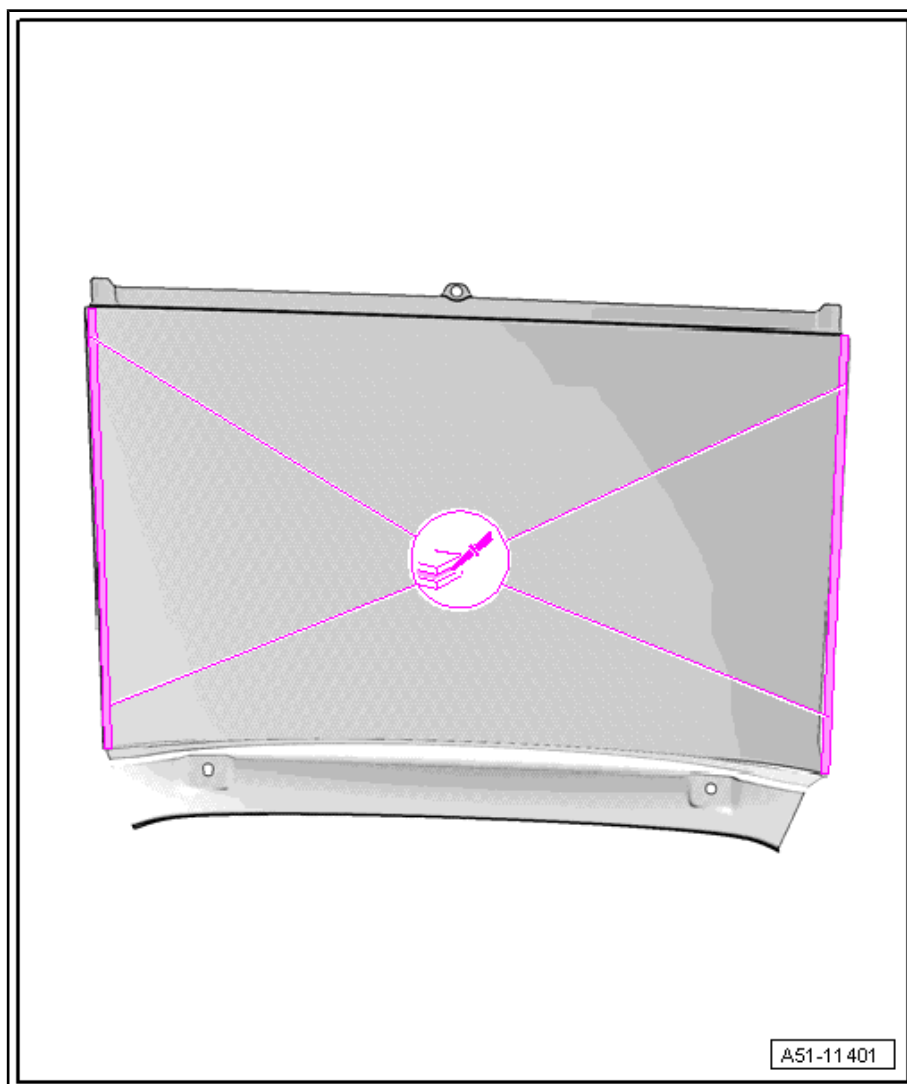
*The pot life of the 2-component epoxy adhesive - DA 180 A00 A2 - is roughly 90 minutes.*



- Apply two continuous beads of 2-component epoxy adhesive - DA 180 A00 A2 - to bevelled sections of roof side members in area of zero-gap joint using double cartridge gun - VAS 6453- .



- Apply one continuous bead of 2-component epoxy adhesive - DA 180 A00 A2 - to side flanges of roof using double cartridge gun - VAS 6453- .

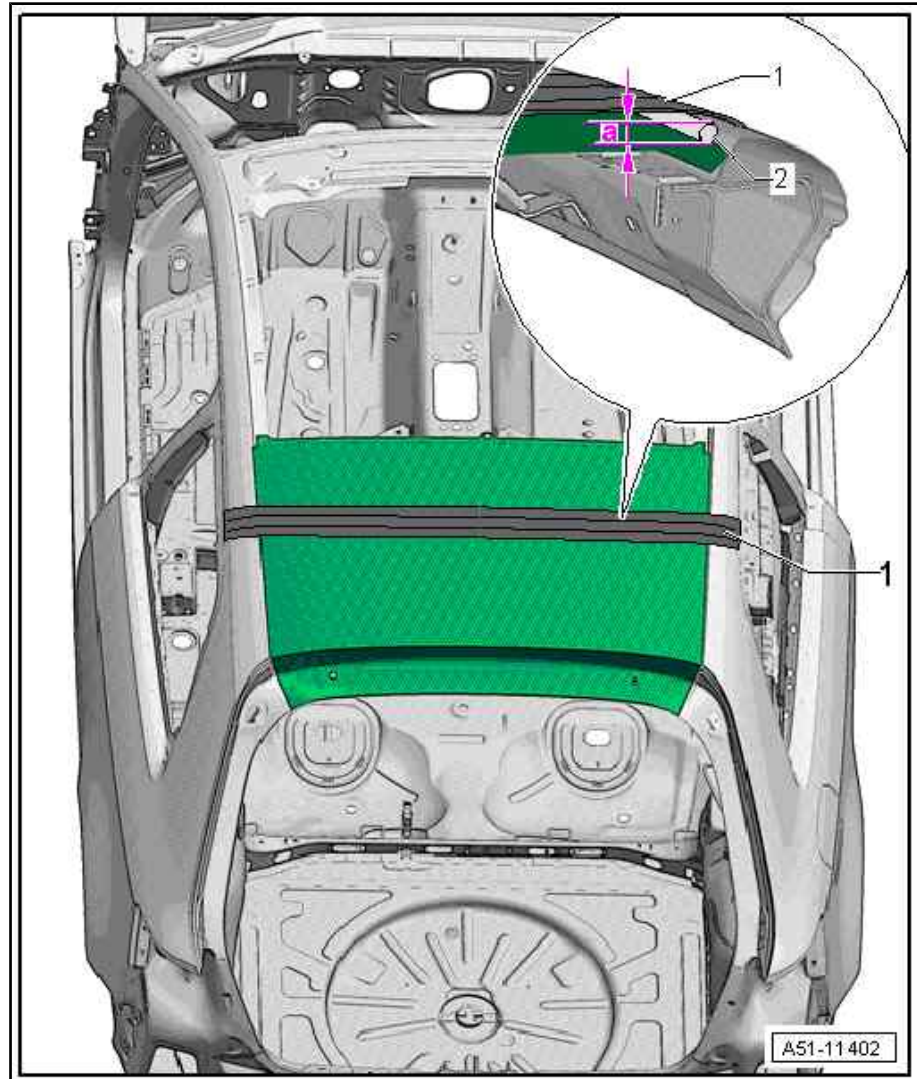


- Immediately fit and align roof.
- Use one self-tapping screw at each end to fix roof in position in centring hole in glass roof flange and sealing flange for rear lid.
- Fix roof in position with mole grips, 18-18 - VAS 5430/1- .

#### Adjusting roof depth

- Additionally fix roof in position with one tensioning strap - T 10038- -1-.
- Set required depth using e.g. drill bit or suitable wooden spacer -2-.

Depth setting for rear section -a = 2.5 mm -



- Roughly spread any 2-component epoxy adhesive - DA 180 A00 A2 - that comes out at edge of roof.

**CAUTION**

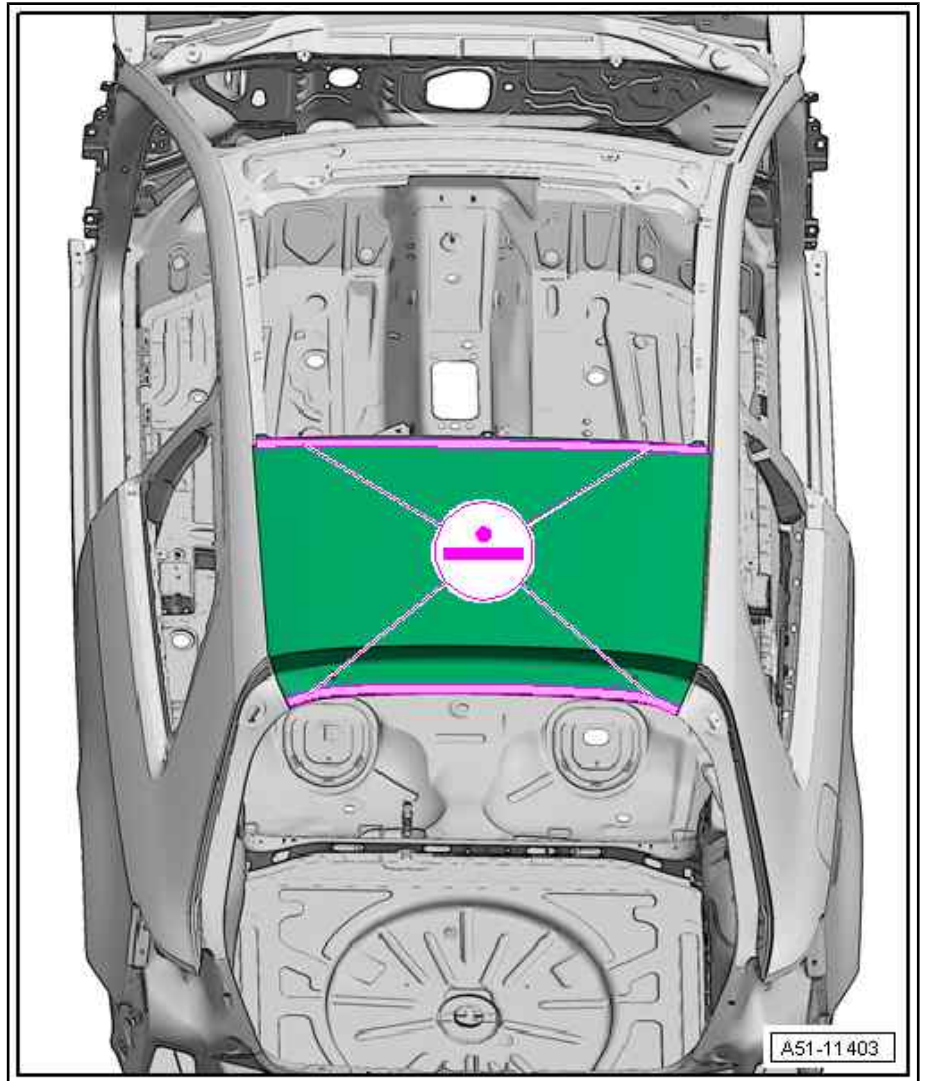
Allow bonded joint on roof to harden for 60 minutes at approx. 65° to 80° C with radiant heater. Check temperature constantly with temperature sensor.

**NOTICE**

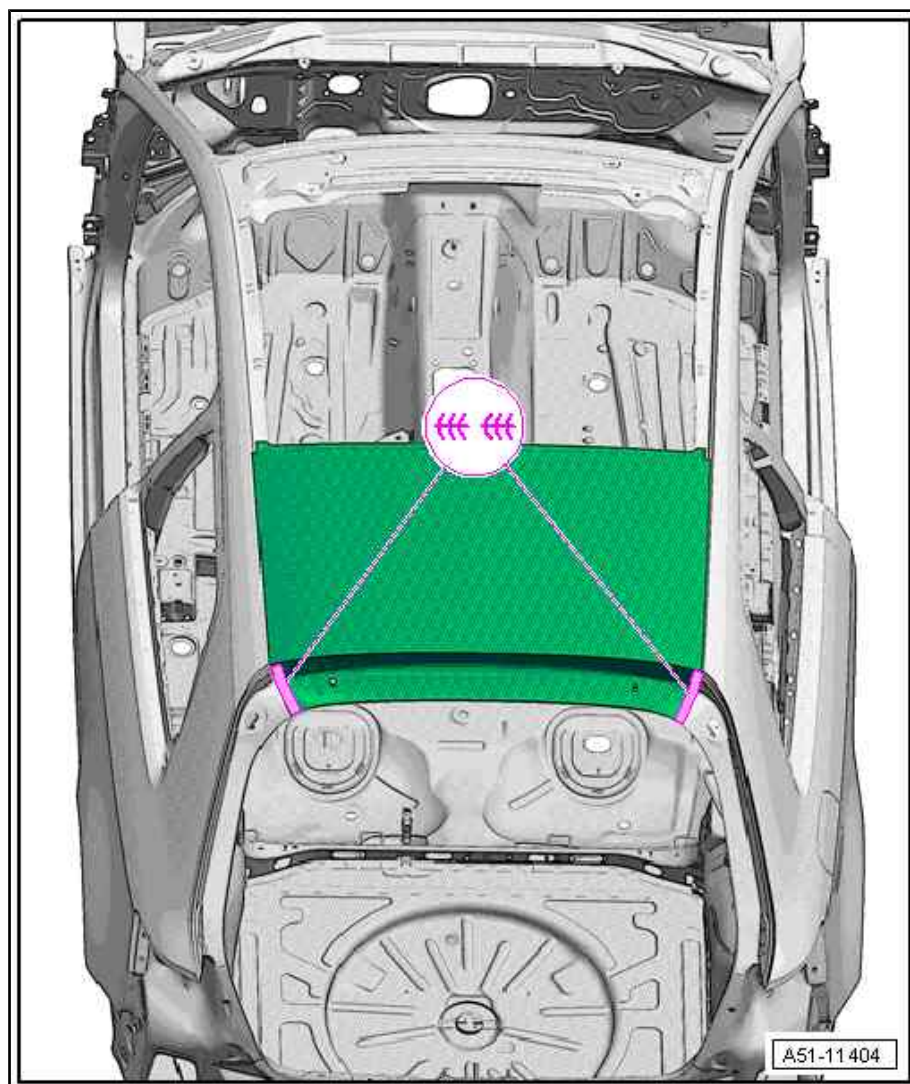
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

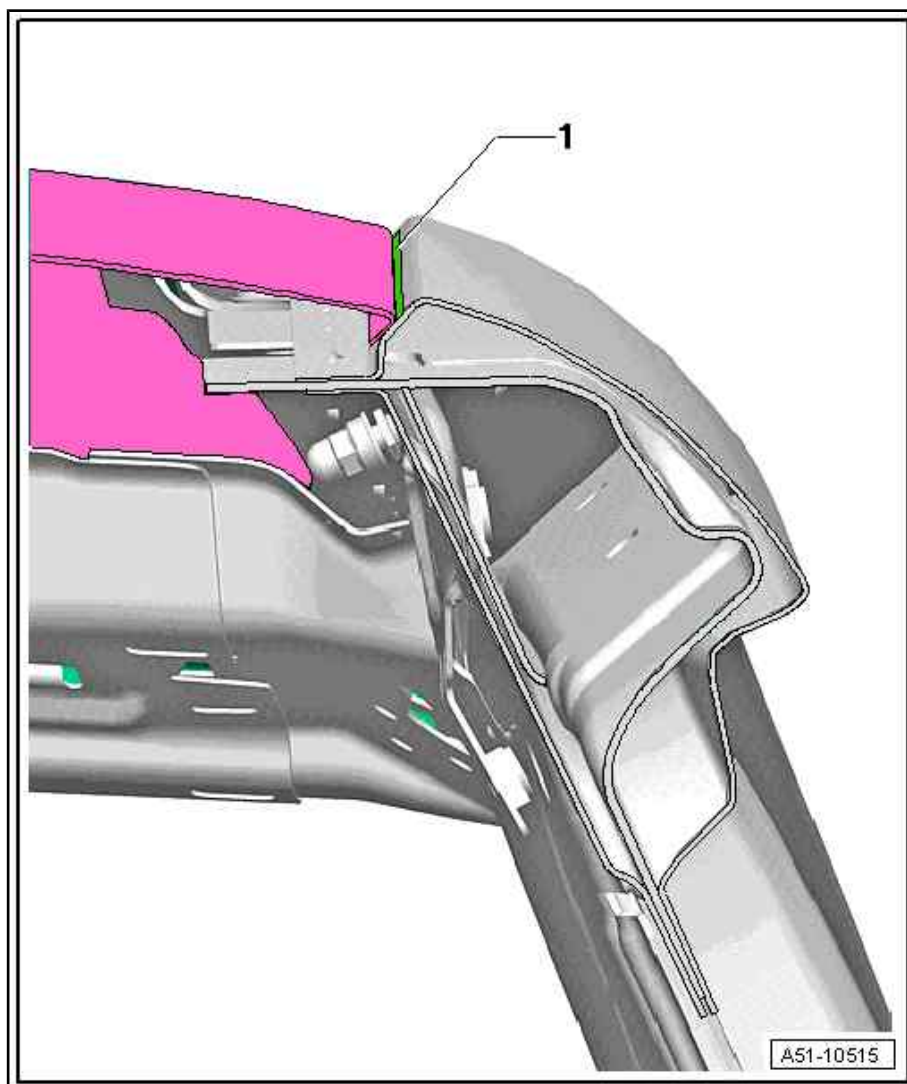
- Weld in roof using resistance spot welder : RP spot weld seam.



- Make additional weld for roof using shielded arc welding equipment : 2x SG continuous seam (staggered - with gaps).



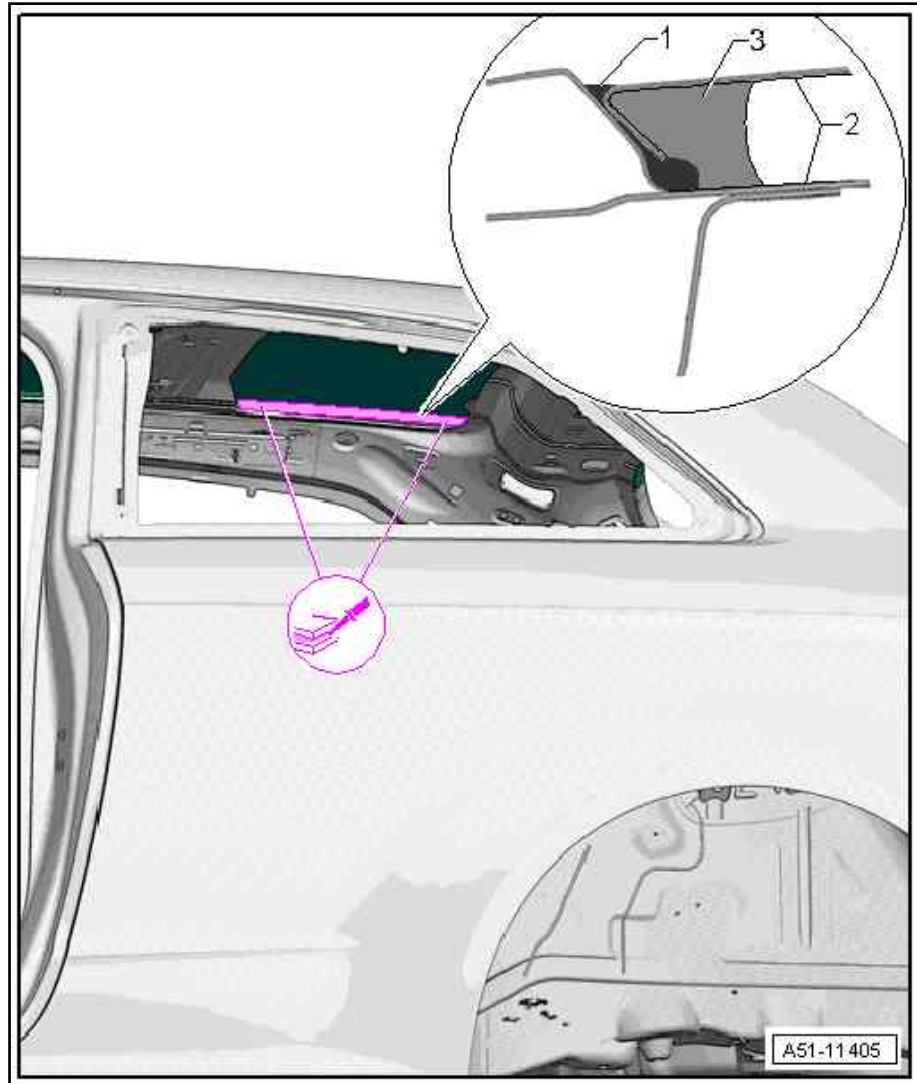
- Grind zero-gap joint -1- into shape (left and right).



**i** Note

*Please note instructions for use: window adhesive should be applied at a temperature of approx. 20°C.*

- Apply 2-component window adhesive - D 004 660 M2 - -3- in roof side member using double cartridge gun - VAS 5237- .
- ◆ 1 = 2-component epoxy adhesive - DA 180 A00 A2 -
- ◆ 2 = Glass and paint primer - D 009 200 02-
- ◆ 3 = 2-component window adhesive - D 004 660 M2 -





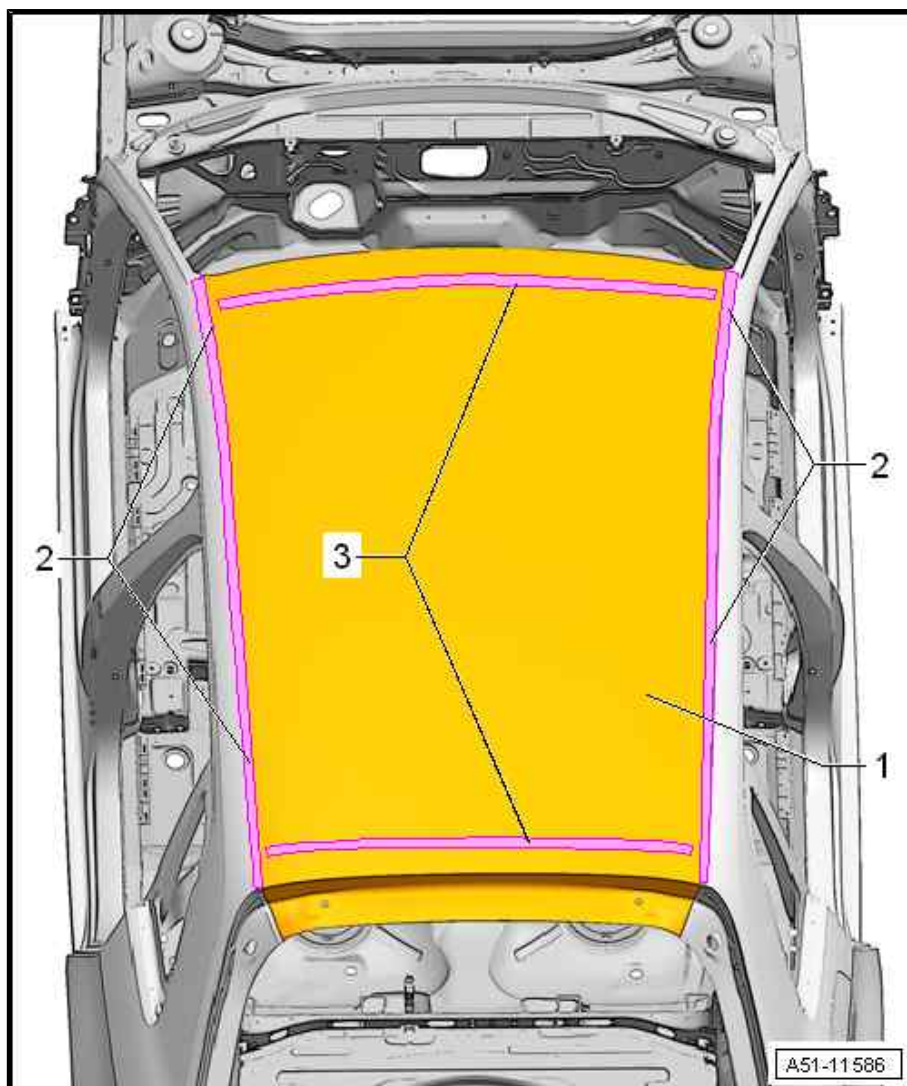
RO: 51 03 55 00

## 4 Roof - Renewal (Sportback)

1 - Roof

2 - Plasmatron weld seam

3 - Bonded area



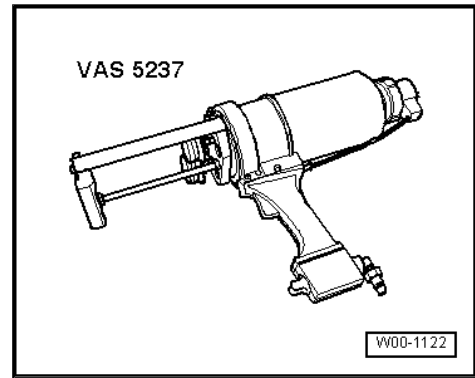
### 4.1 Tools

#### Special tools and workshop equipment required

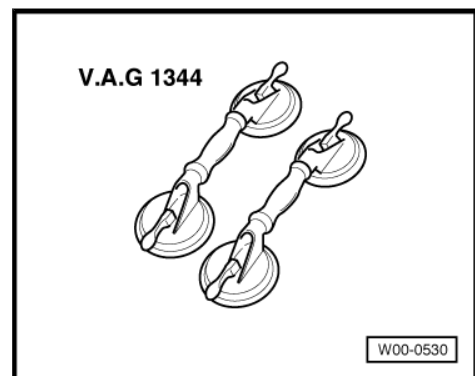
- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Drill
- ◆ Spot weld breaker
- ◆ Body saw
- ◆ Electric cutter
- ◆ Mole grips, 18-18 - VAS 5430/1-
- ◆ Double cartridge gun - VAS 6453-



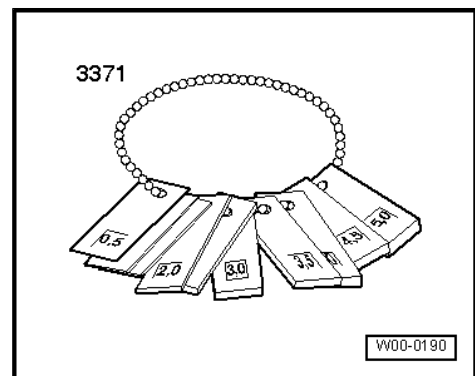
- ◆ Double cartridge gun - VAS 5237-



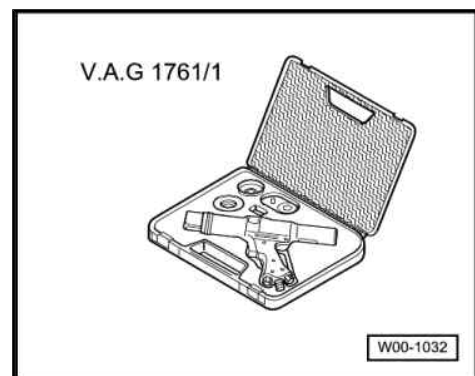
- ◆ Suction lifter - V.A.G 1344- or magnet - VAS 6739-



- ◆ Setting gauge - 3371-

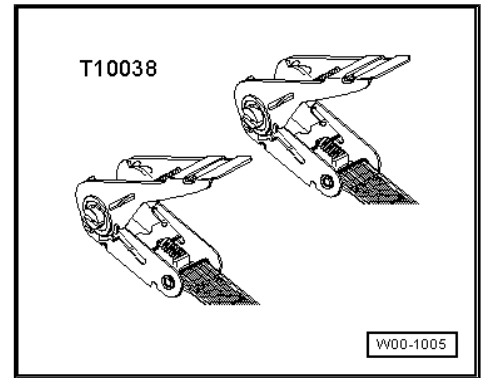


- ◆ Compressed-air gun - V.A.G 1761/1-





◆ Tensioning strap - T 10038-



**!** NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

1 - 2-component window adhesive - D 004 660 M2 -

- Open cap.

2 - Static mixer

3 - Extension hose

Part number 000 809 937

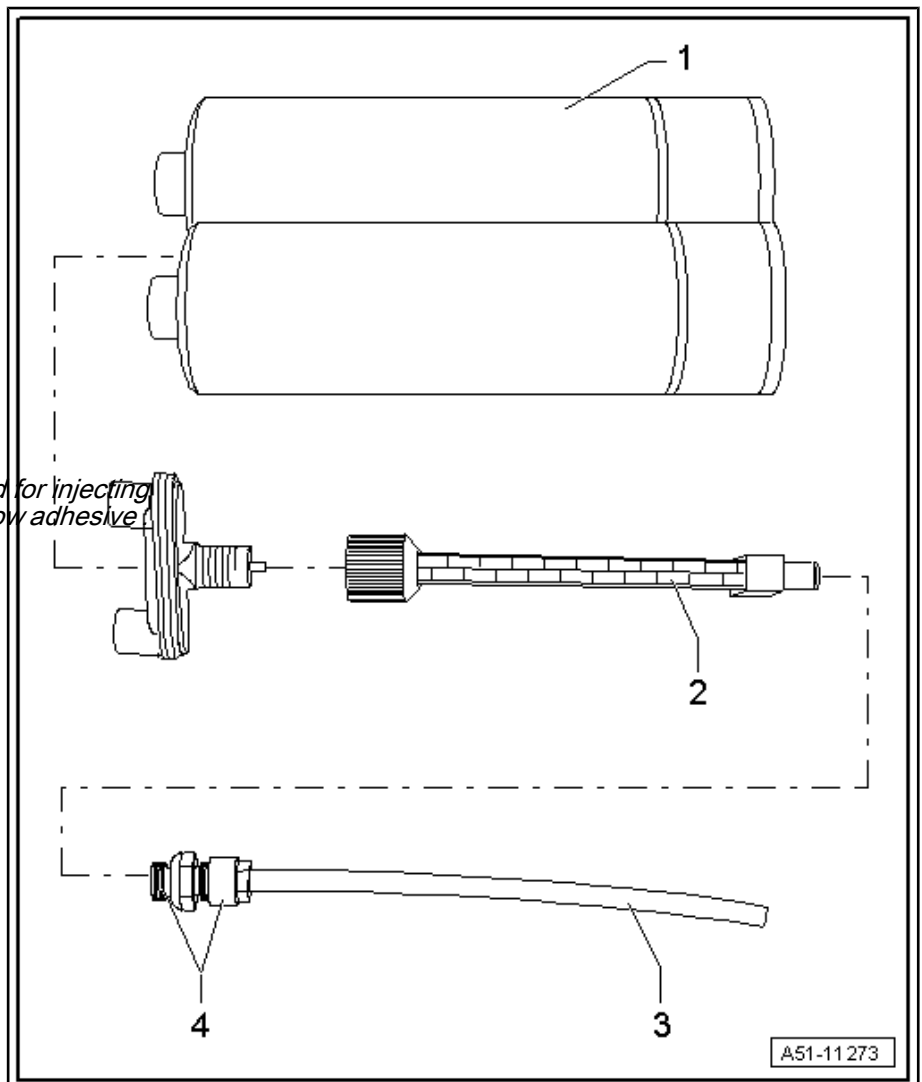
- Screw onto static mixer -2- with adapter -4-.

4 - Adapter



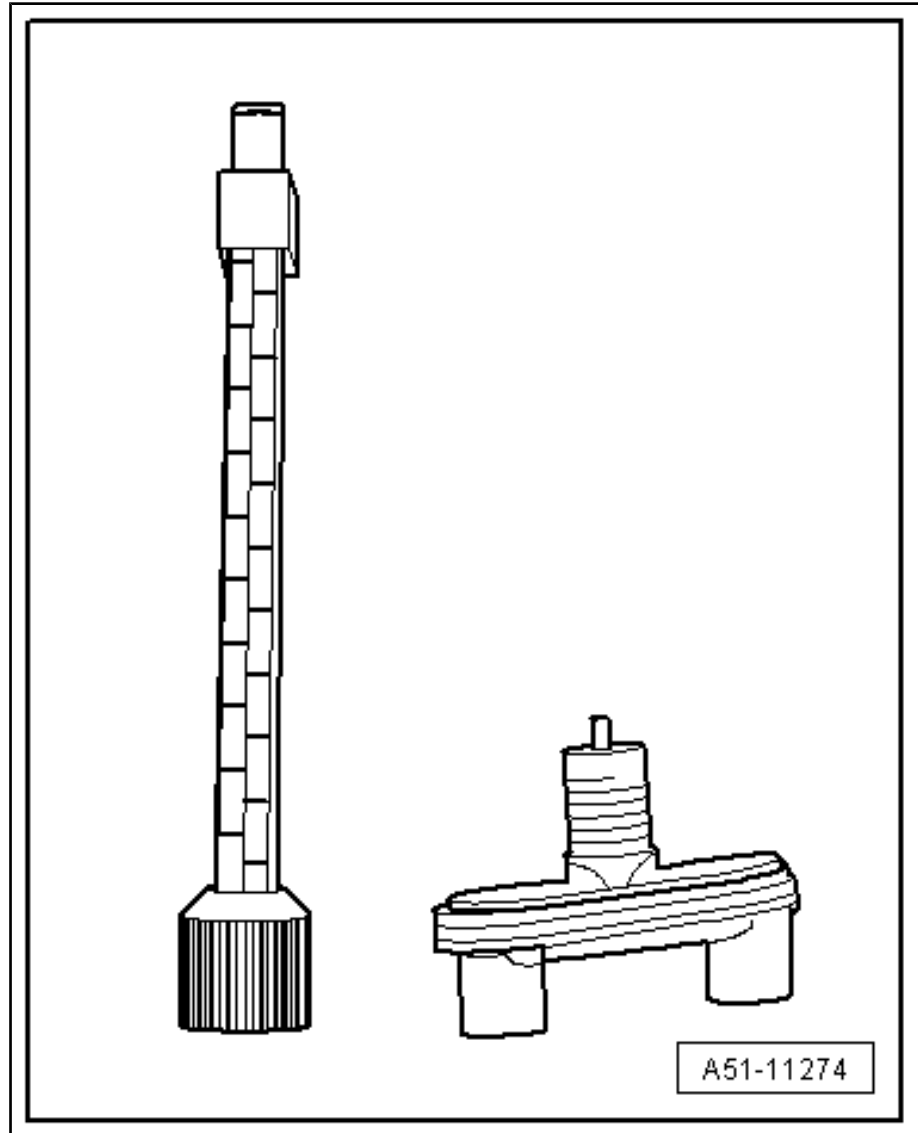
Note

*The adapter is required for injecting the 2-component window adhesive.*

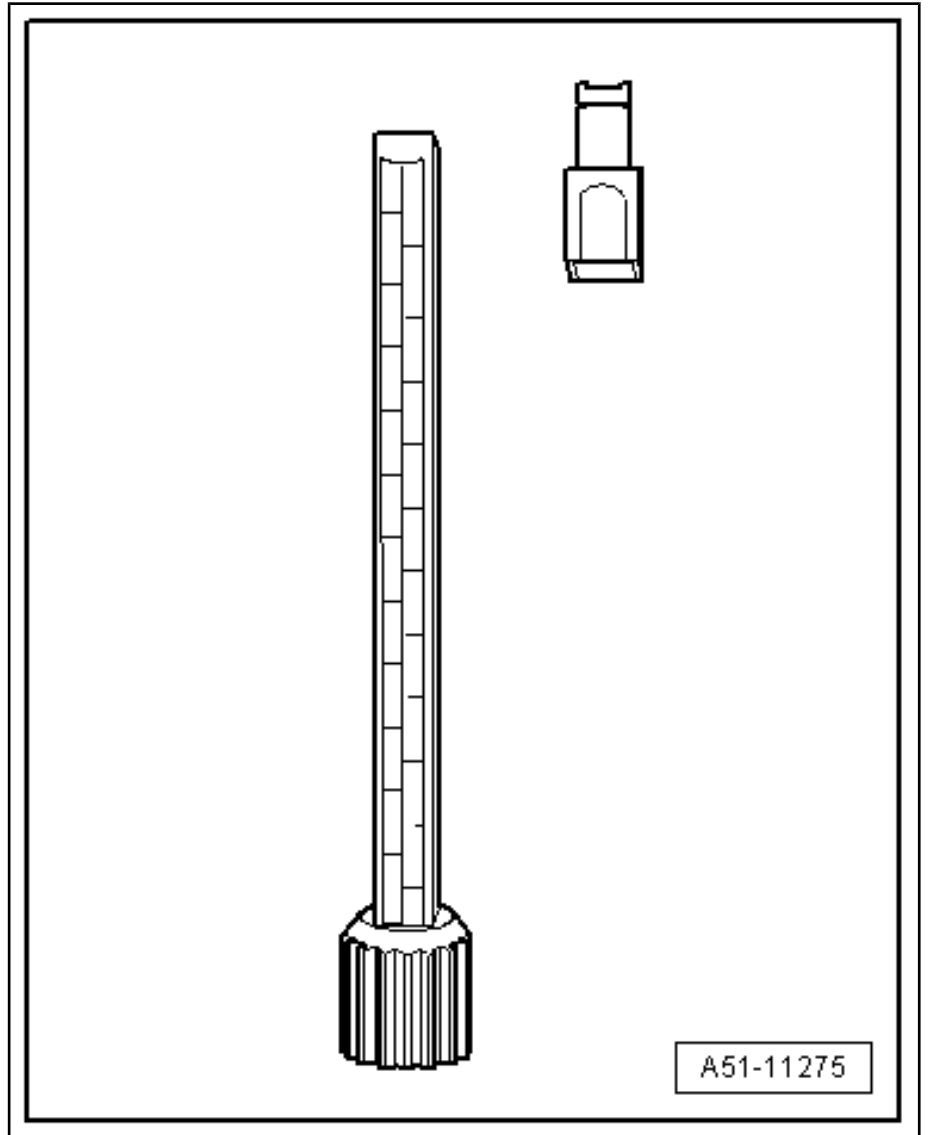


Instructions for using extension hose for window adhesive

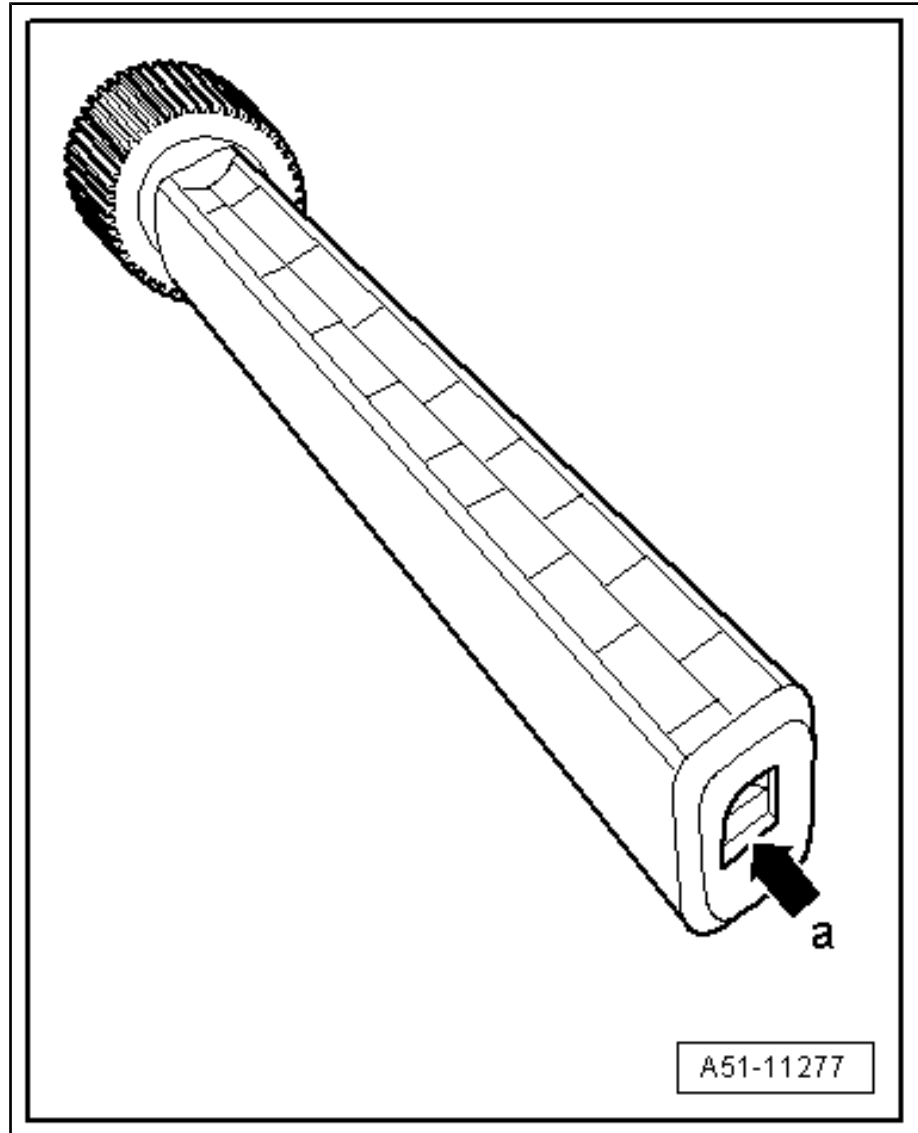
- Take static mixer out of window adhesive kit.



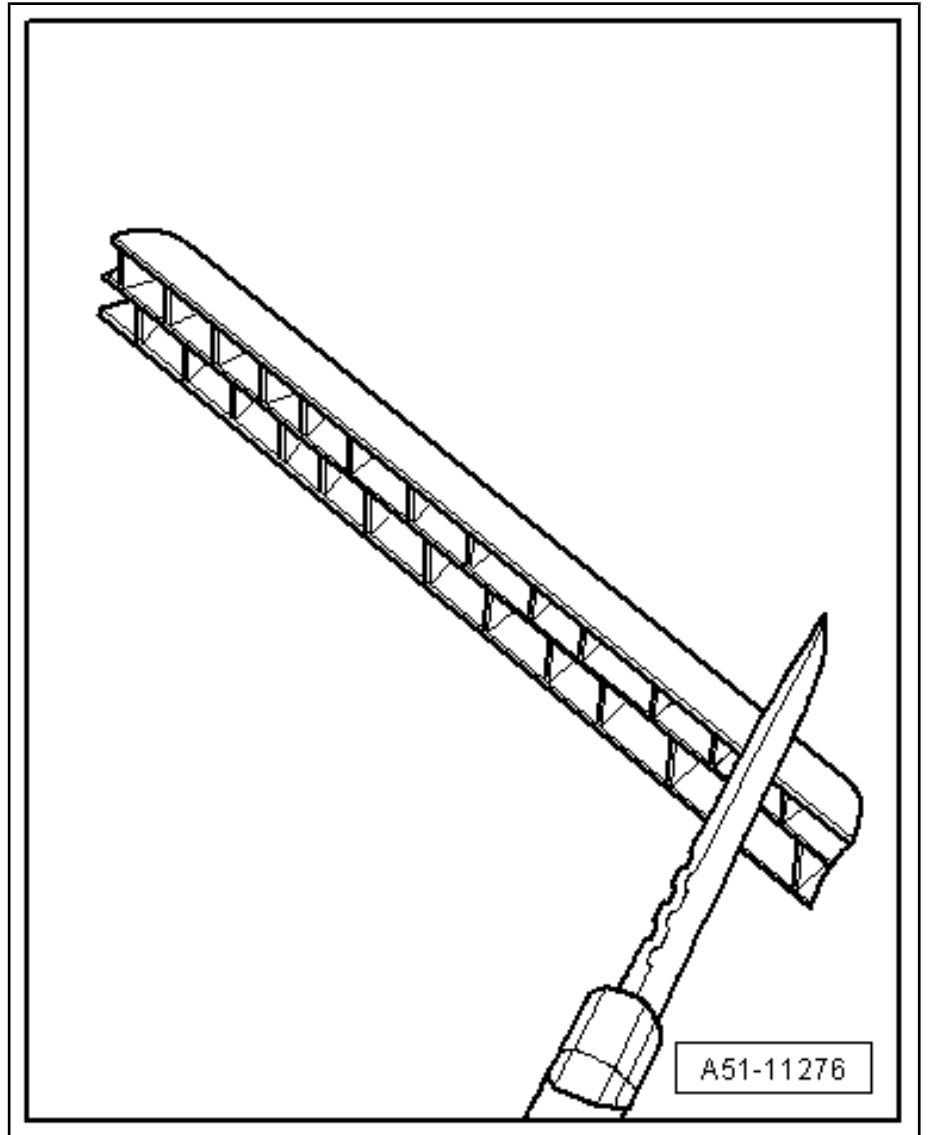
- Remove front cap from static mixer.



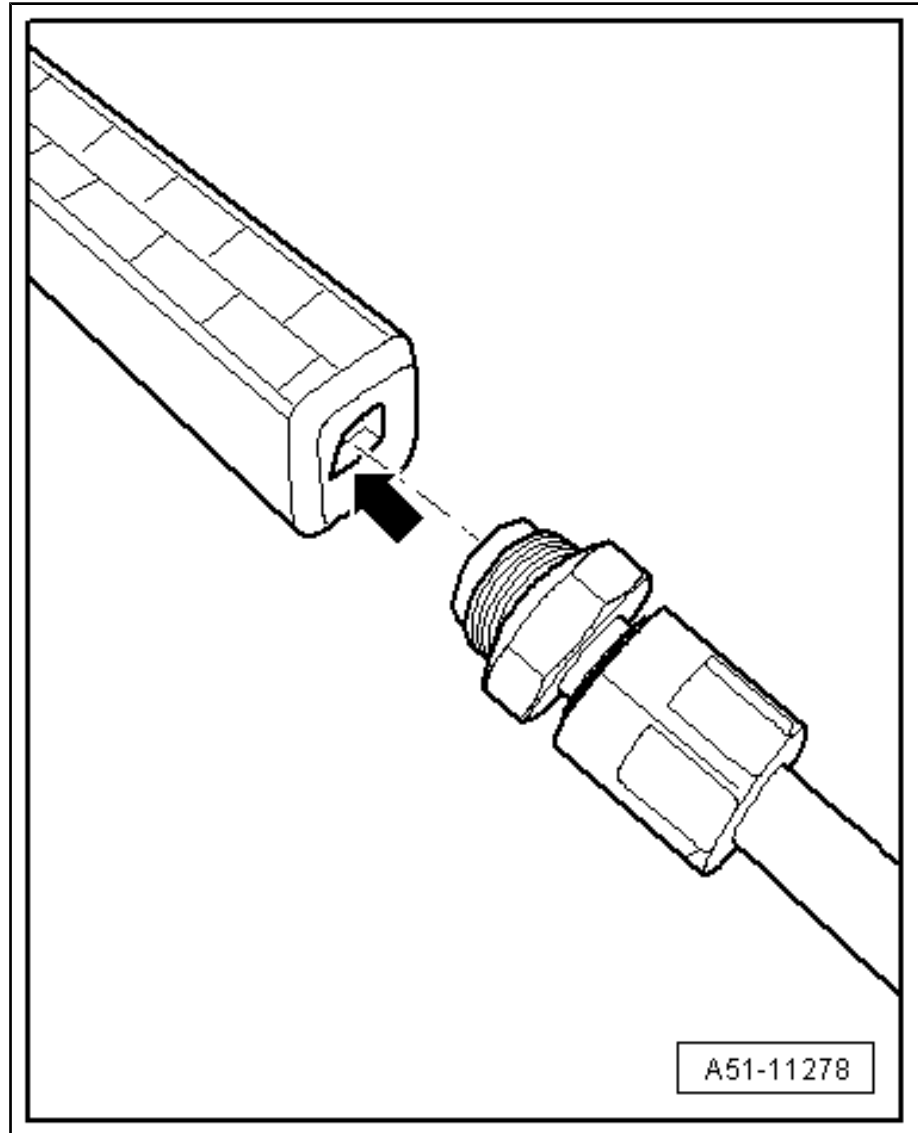
- Drill out opening in static mixer -a- to 9 mm  $\varnothing$  using drill .



- Shorten inner section of mixer so that hose can be screwed in fully.



- Screw extension hose onto mixer.



## 4.2 Procedure

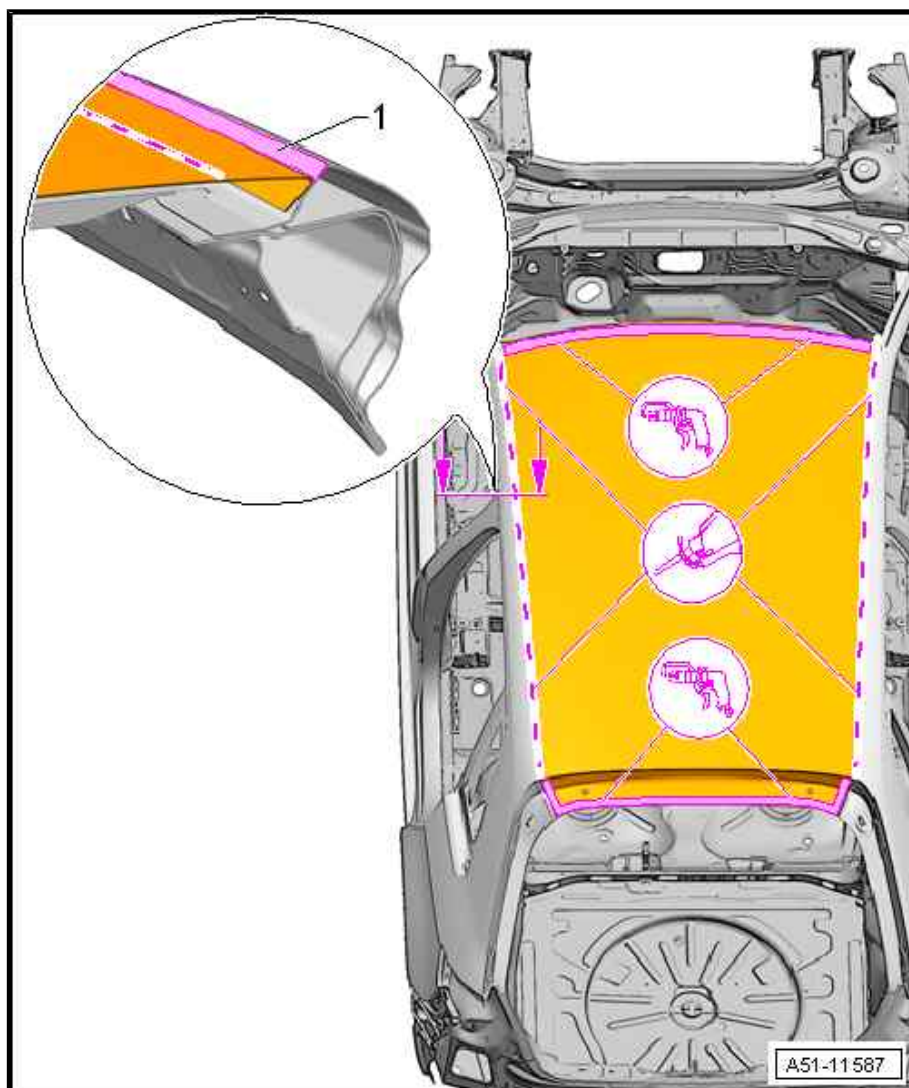
### Cutting locations



#### NOTICE

**Do not damage roof cross member (front and rear) when separating.**

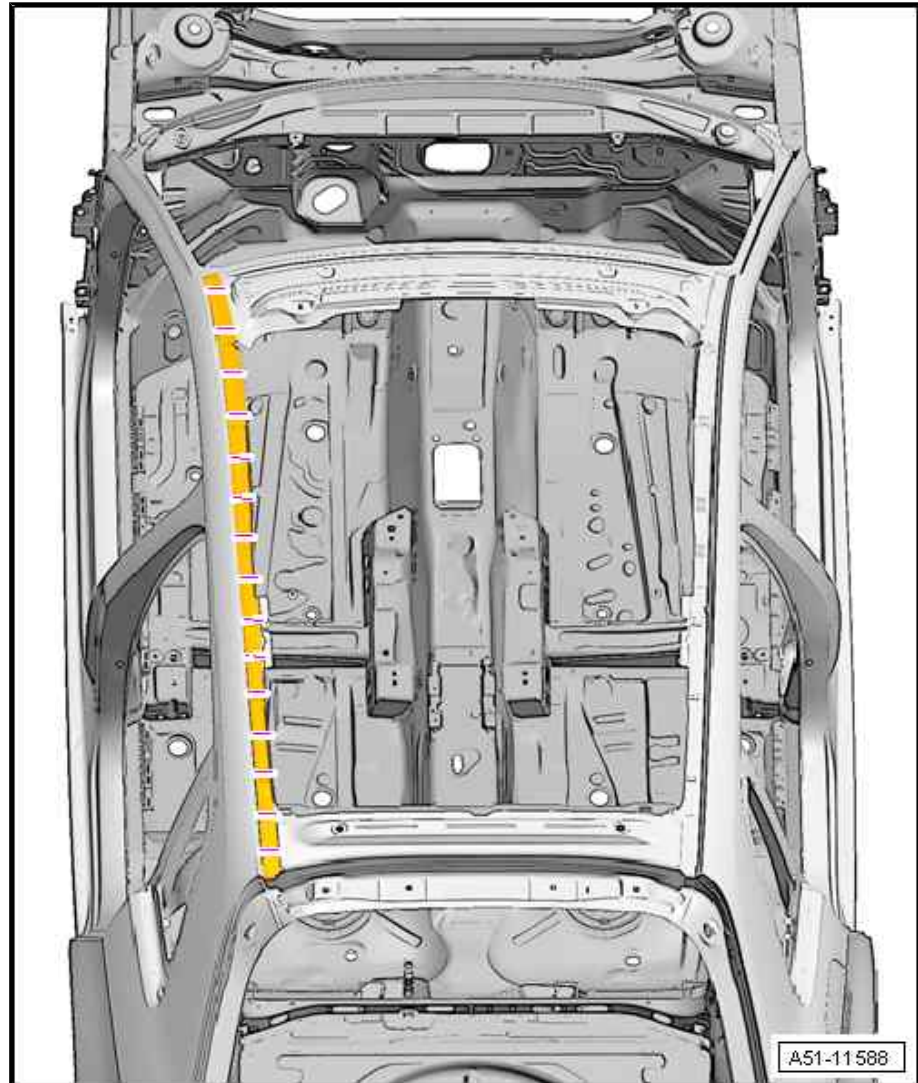
- Roughly cut out roof parallel with plasmatron weld seam -1- at a distance of approx. 30 mm using body saw .
- Drill off original joint to windscreen opening and rear lid opening using spot weld breaker .
- Working from passenger compartment, separate bonded joints between roof and roof cross members using electric cutter - V.A.G 1561 A- .



**i** Note

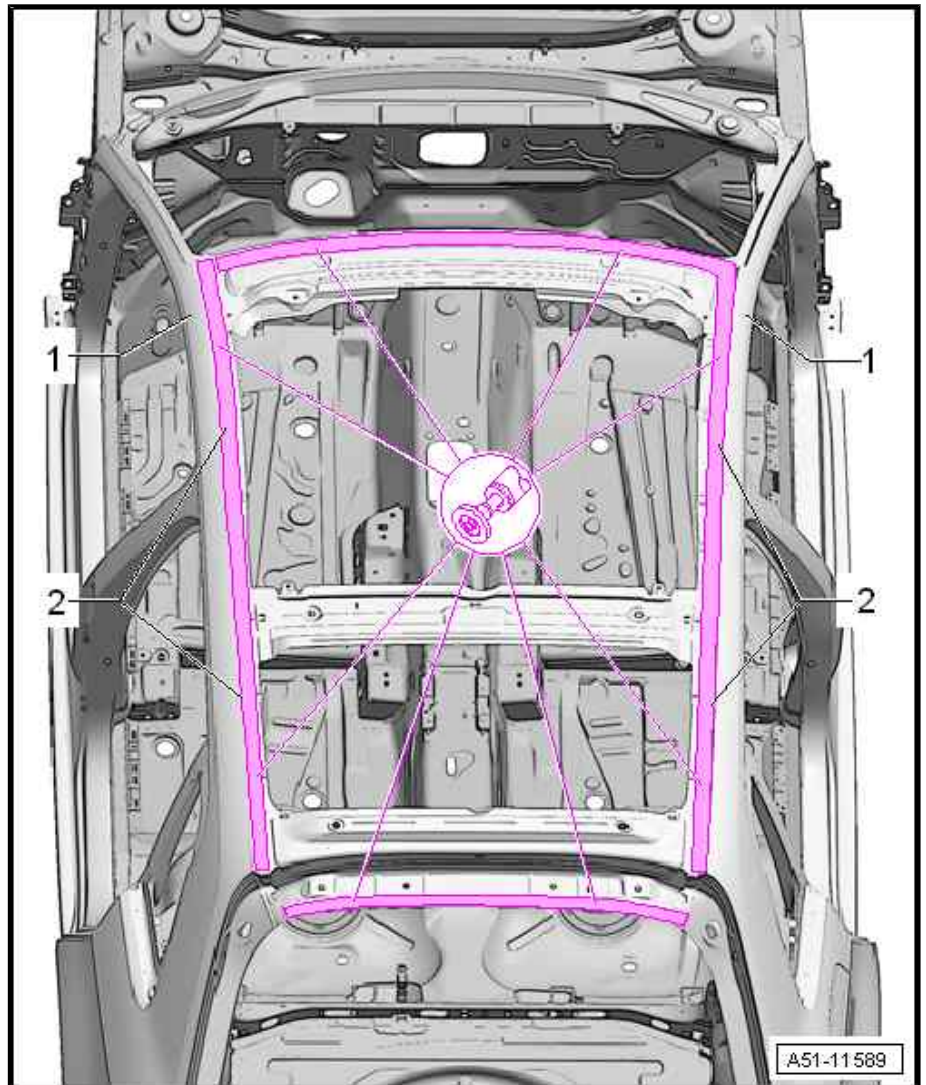
*Take care not to damage the roof side members when making cuts and when moving the remaining sections of the roof up and down.*

- Make cuts in remaining sections of roof using tin snips - VAS 5357- .
- Grip remaining sections with pliers and break open plasmatron weld seam by moving up and down.



#### Note

- ◆ *Take care not to damage the roof side members -1- when removing the remaining sections of the roof -2-.*
- ◆ *Use a suitable flap disc; do not use a cutting disc or rough-filing disc.*
- Remove remaining material using compact angle grinder .
- Remove all residual adhesive and sealing compound from roof cross members at front and rear using scraper - VAS 5448- .



#### Replacement parts

- ◆ Roof
- ◆ Single-component assembly adhesive - D 190 MKD A3 - , 1 cartridge
- ◆ 2-component epoxy adhesive - DA 180 A00 A2 - , 2 sets of cartridges
- ◆ Cleaning solution - D 009 401 04-
- ◆ 2-component window adhesive - D 004 660 M2 - , 5 sets of cartridges
- ◆ Glass and paint primer - D 009 200 02-



## Preparing new part

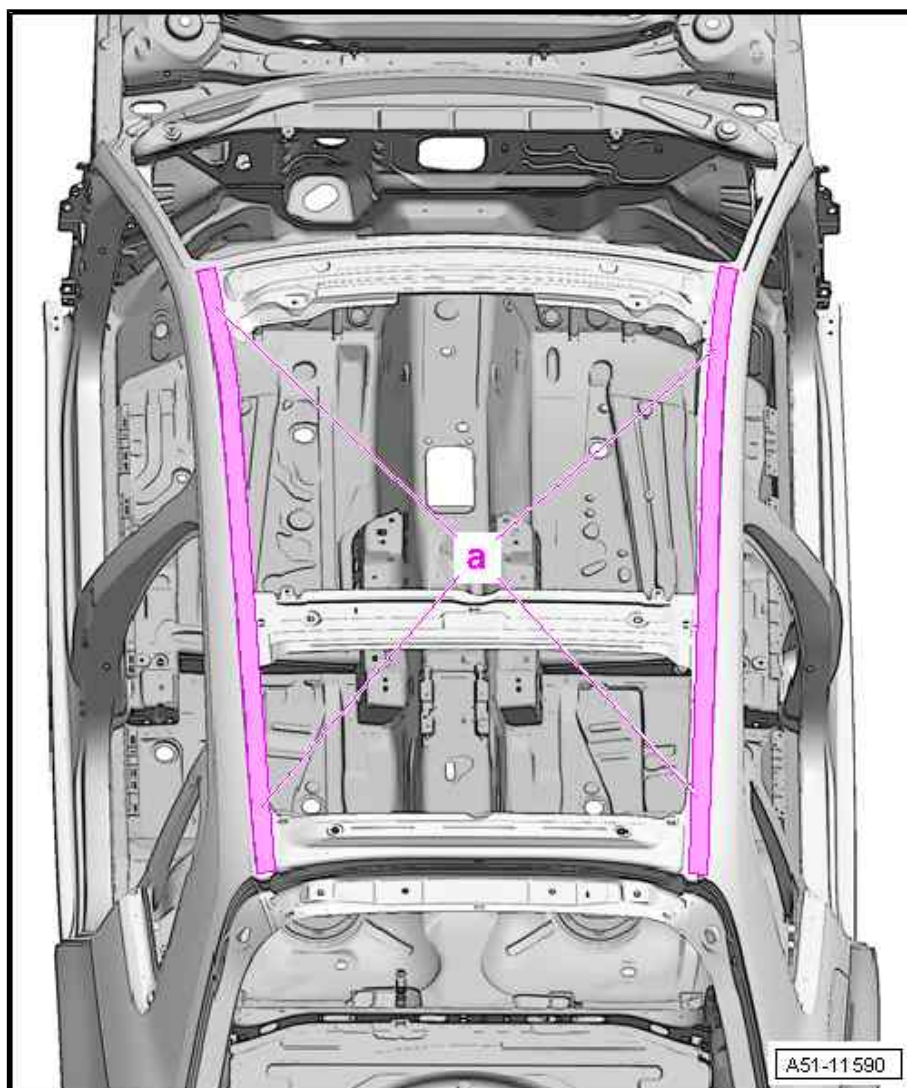


### Note

- ◆ *It is important to keep to the following procedure to ensure a satisfactory and effective roof repair.*
- ◆ *Bonded areas must not be treated with filler coat (surfacers) and painted before bonding in the roof.*
- ◆ *The adhesive materials must be applied very quickly.*
- ◆ *Make sure adhesive is applied before pot life is exceeded.*
- ◆ *Use a pneumatic cartridge gun to apply the bonding materials.*
- ◆ *Affixing adhesive tape to the roof parallel with the bonded seam on the side prevents soiling when bonding.*

## Bonding in

- Position roof on roof frame and check alignment of roof with roof side members (visual inspection).
- Check fit of roof with rear lid and windscreen.
- Fix roof in position in windscreen flange and sealing flange of rear lid using one self-tapping screw at each end.
- Remove roof.
- Apply glass and paint primer - D 009 200 02- in area of roof frame -a-.

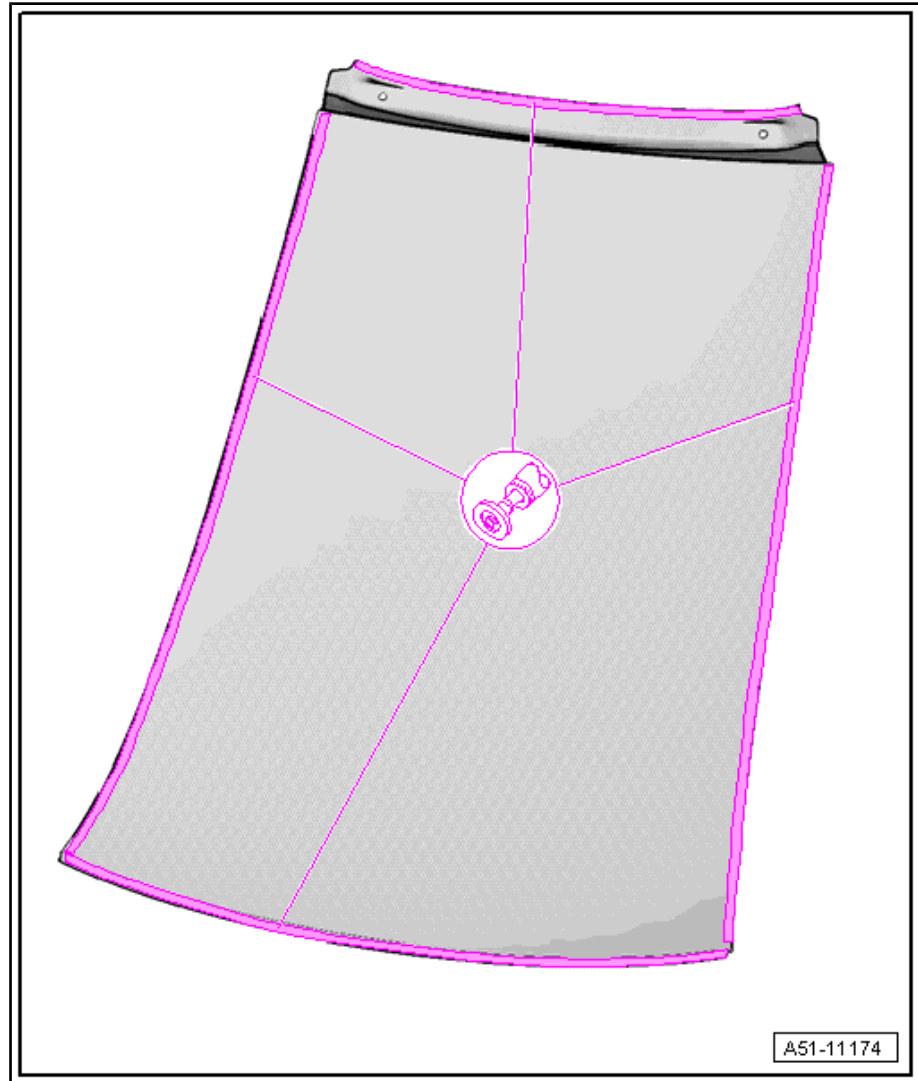


- Mask outside of roof panel parallel with side bonding area using adhesive tape.
- Attach four suction lifters - V.A.G 1344- or magnets - VAS 6739- to outside of roof panel.

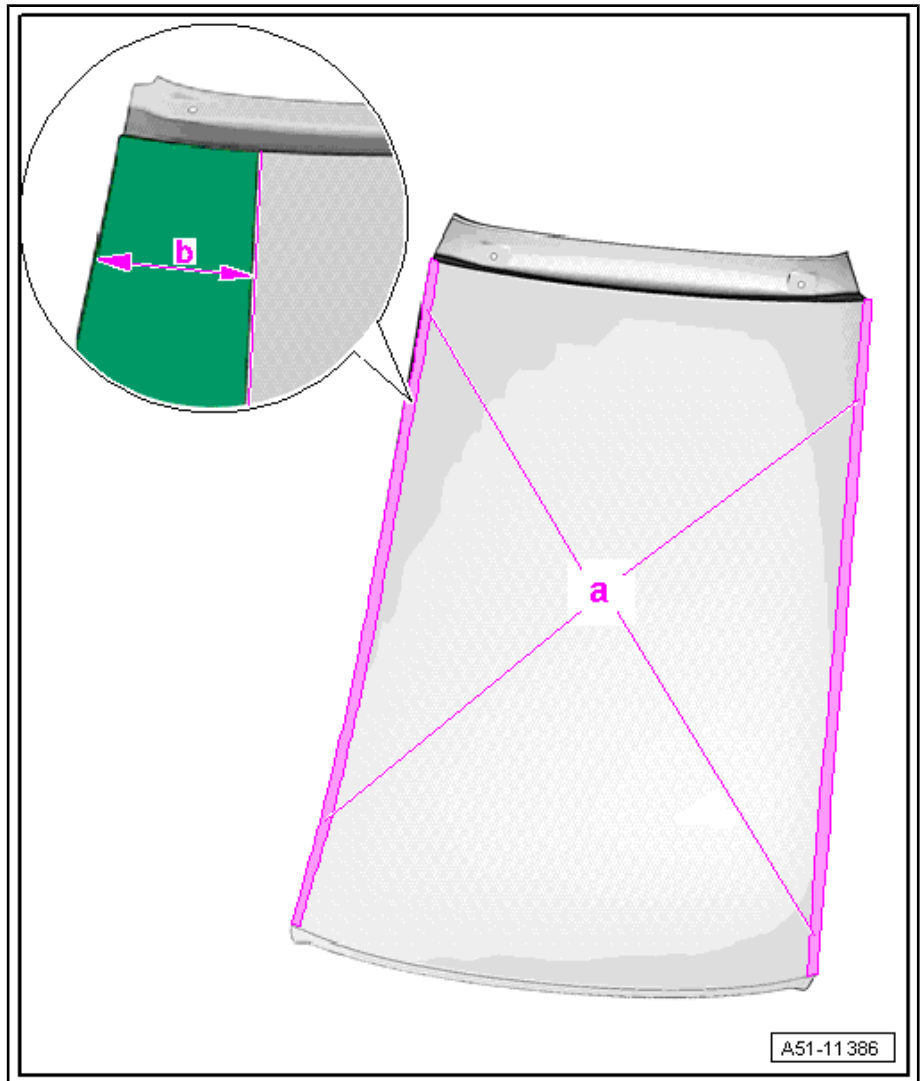
**Pre-treatment - applies to replacement part only**

- Grind welding surfaces down to bare metal.
- Roughen bonding surfaces using a clean sanding disc (grit size P 80 or P 100).
- Clean roof frame, roof reinforcement and roof with cleaning solution - D 009 401 04- .

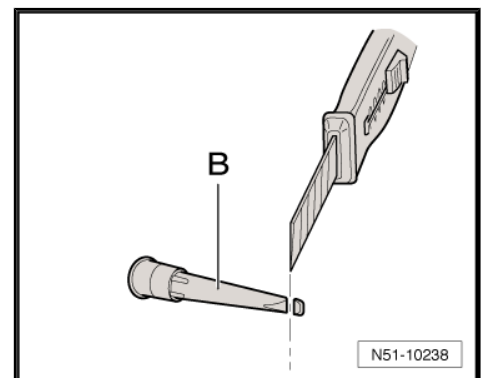
This ensures that the 2-component epoxy adhesive - DA 180 A00 A2 - forms a good joint with the bonding area.



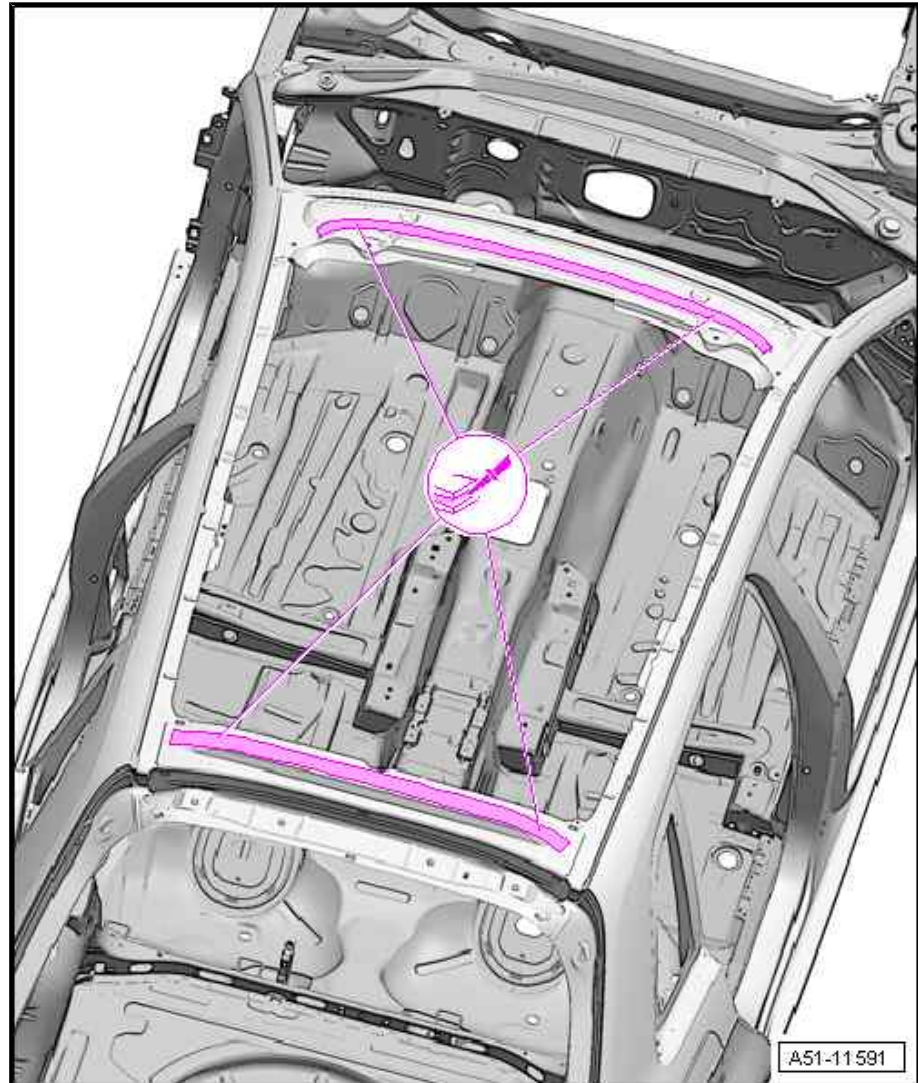
- Apply glass and paint primer - D 009 200 02- approx. 5 cm wide -b- on inner section of roof and inner side flange -a-.



- Cut off approx. 2 mm from nozzle -B- to obtain appropriate bead geometry.



- Apply single-component assembly adhesive - D 190 MKD A3- to roof cross members in the area of the factory bonding location using pneumatic cartridge gun - V.A.G 1761/1- .



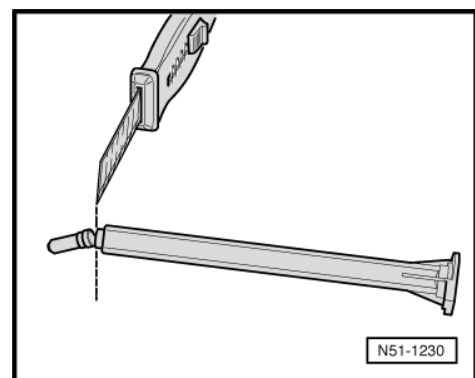
### Preparing new part

- Cut static mixer from 2-component epoxy adhesive set - DA 180 A00 A2 - down to 4th notch to obtain required bead cross section.

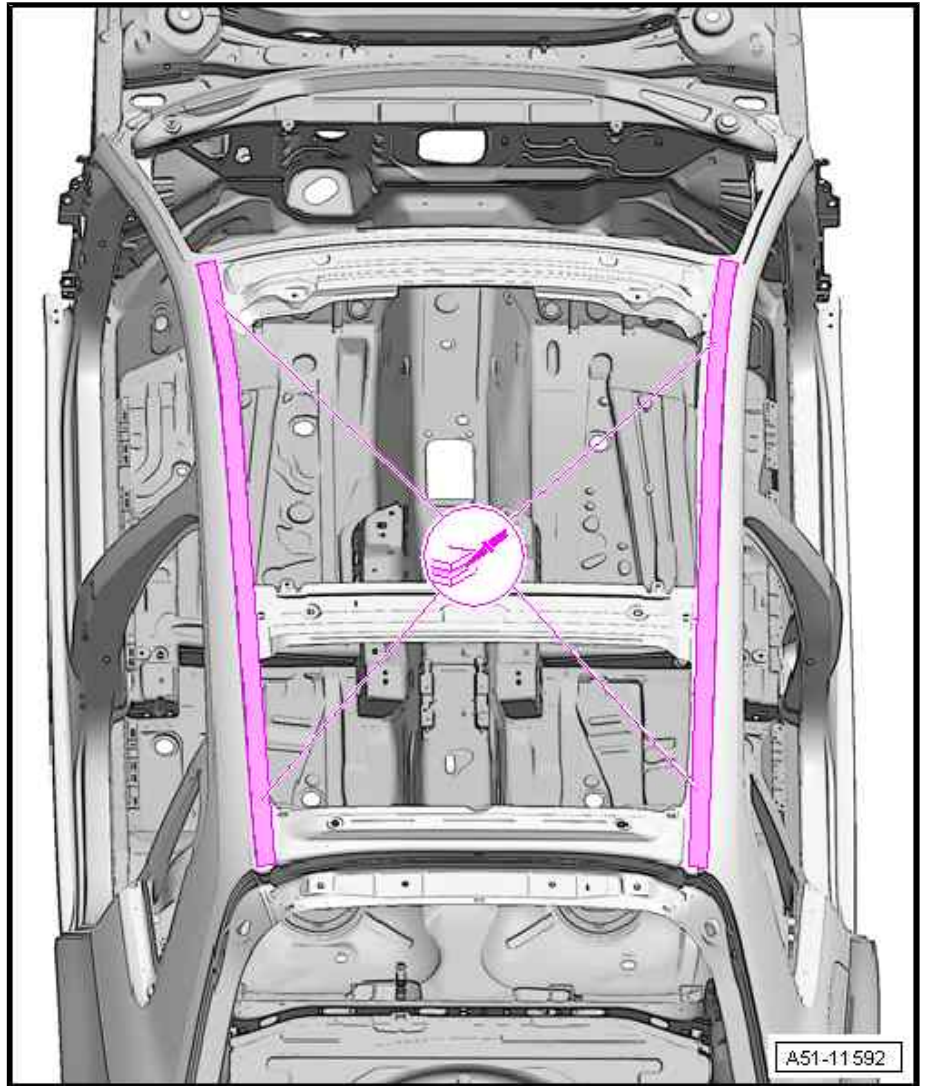


#### Note

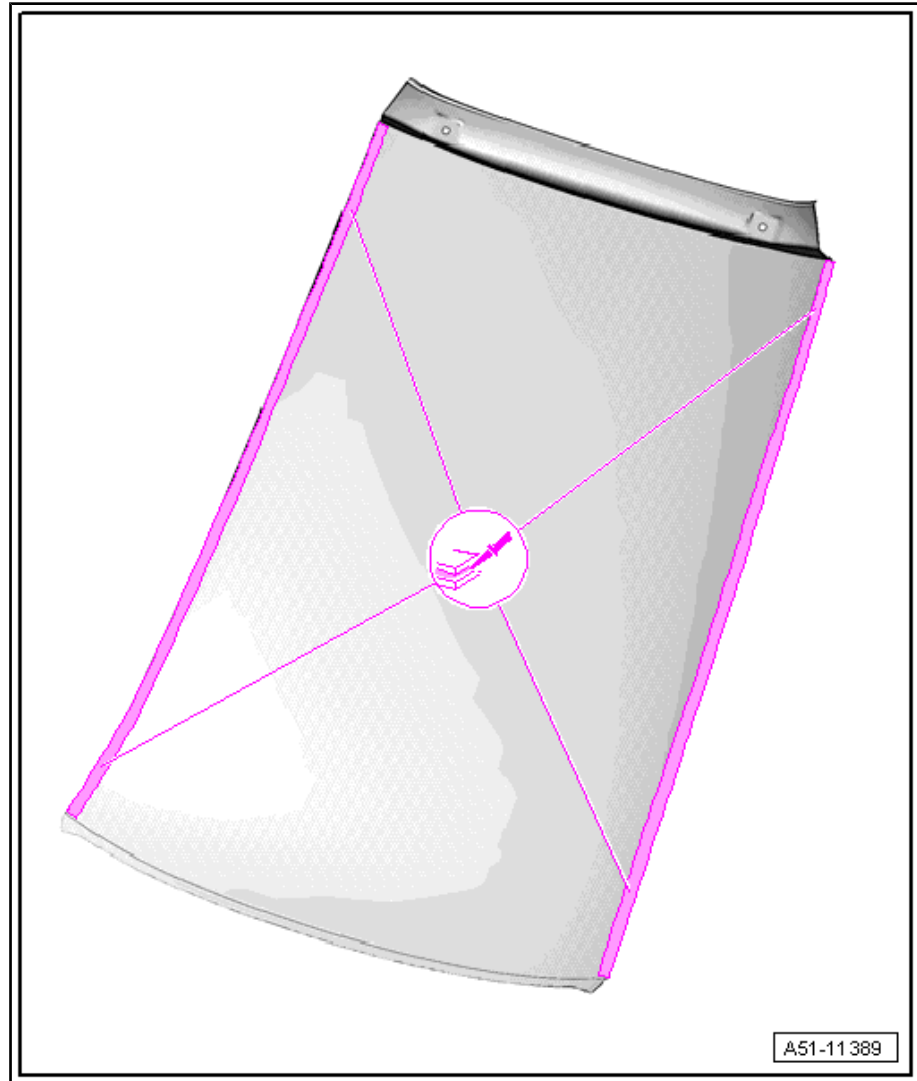
- ◆ *The pot life of the 2-component epoxy adhesive - DA 180 A00 A2 - is roughly 90 minutes.*
- ◆ *A second mechanic is required for the next steps.*



- Apply two continuous beads of 2-component epoxy adhesive - DA 180 A00 A2 - to bevelled sections of roof side members in area of zero-gap joint using double cartridge gun - VAS 6453- .



- Apply one continuous bead of 2-component epoxy adhesive - DA 180 A00 A2 - to side flanges of roof using double cartridge gun - VAS 6453- .



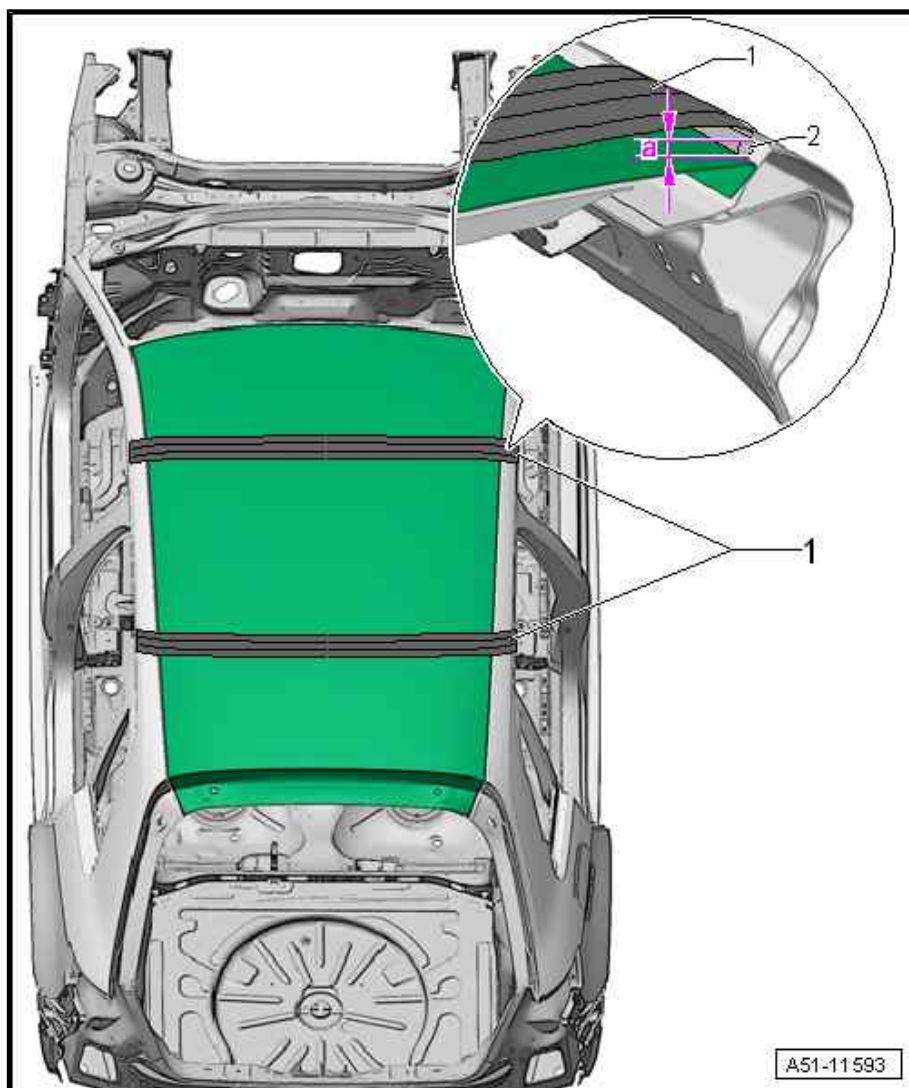
- Immediately fit and align roof.
- Use one self-tapping screw at each end to fix roof in position in centring hole in windscreen flange and sealing flange for rear lid.
- Fix roof in position at windscreen opening and rear window opening using mole grips, 18-18 - VAS 5430/1- .

#### Adjusting roof depth

- Additionally fix roof in position with two tensioning straps - T 10038- -1-.
- Set required depth using e.g. drill bit or suitable wooden spacer -2-.

Depth setting in centre part of front door -a = 3.0 mm -

Depth setting for rear section -a = 2.5 mm -



- Roughly spread any 2-component epoxy adhesive - DA 180 A00 A2 - that comes out at edge of roof.

**!** NOTICE

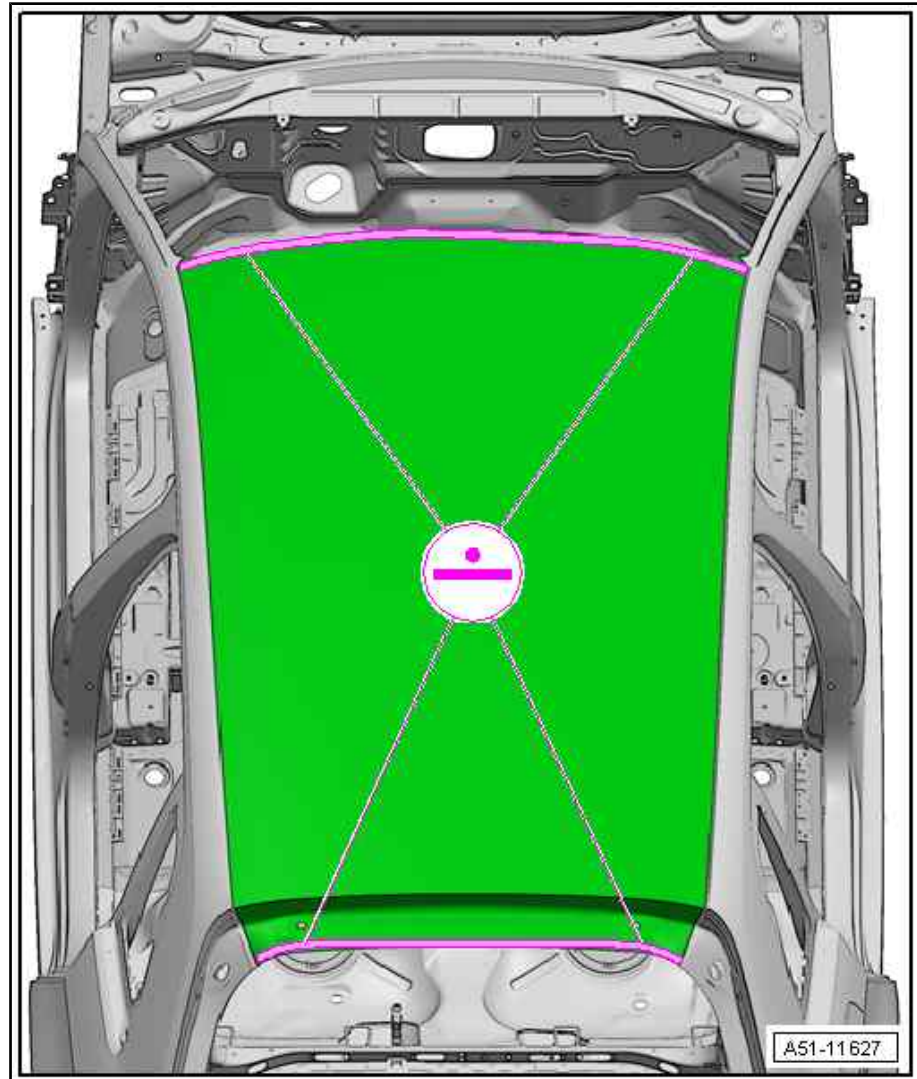
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**!** CAUTION

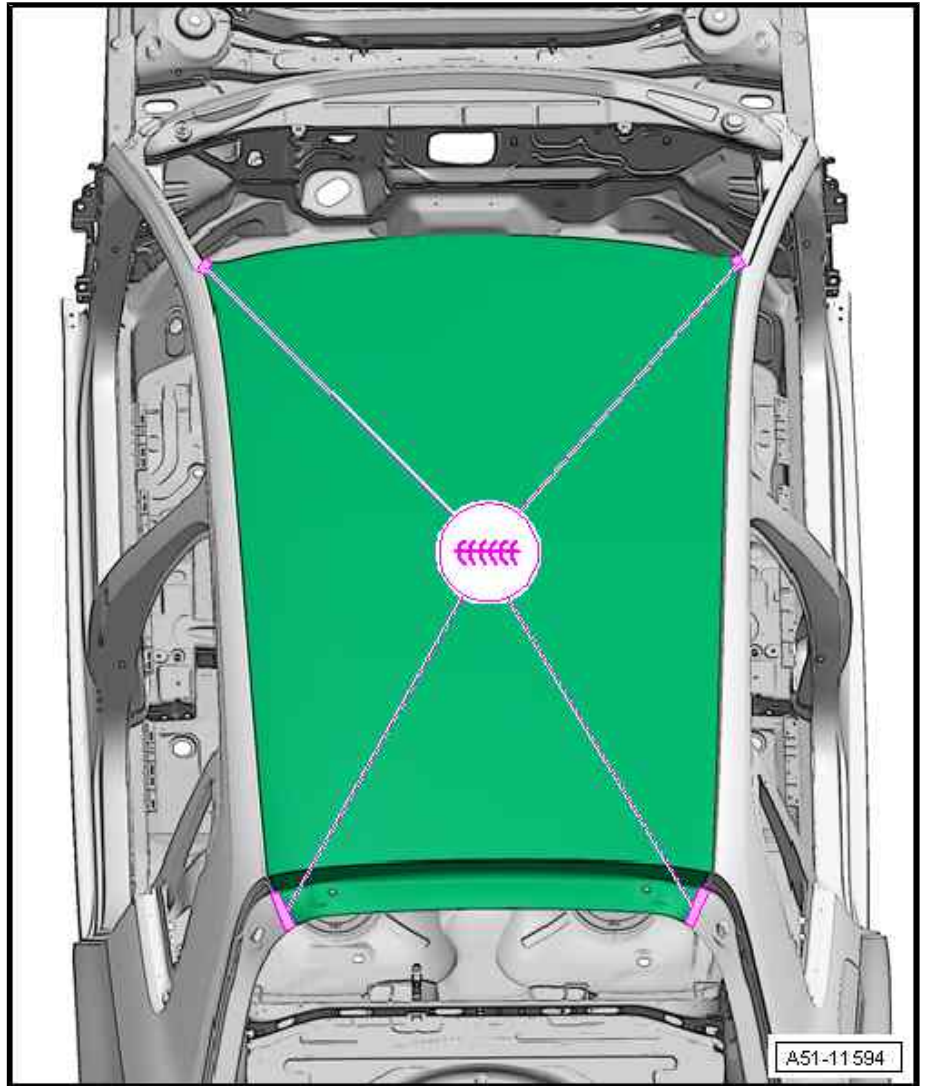
Allow bonded joint on roof to harden for 60 minutes at approx. 65° to 80° C with radiant heater. Check temperature constantly with temperature sensor.

**Welding in**

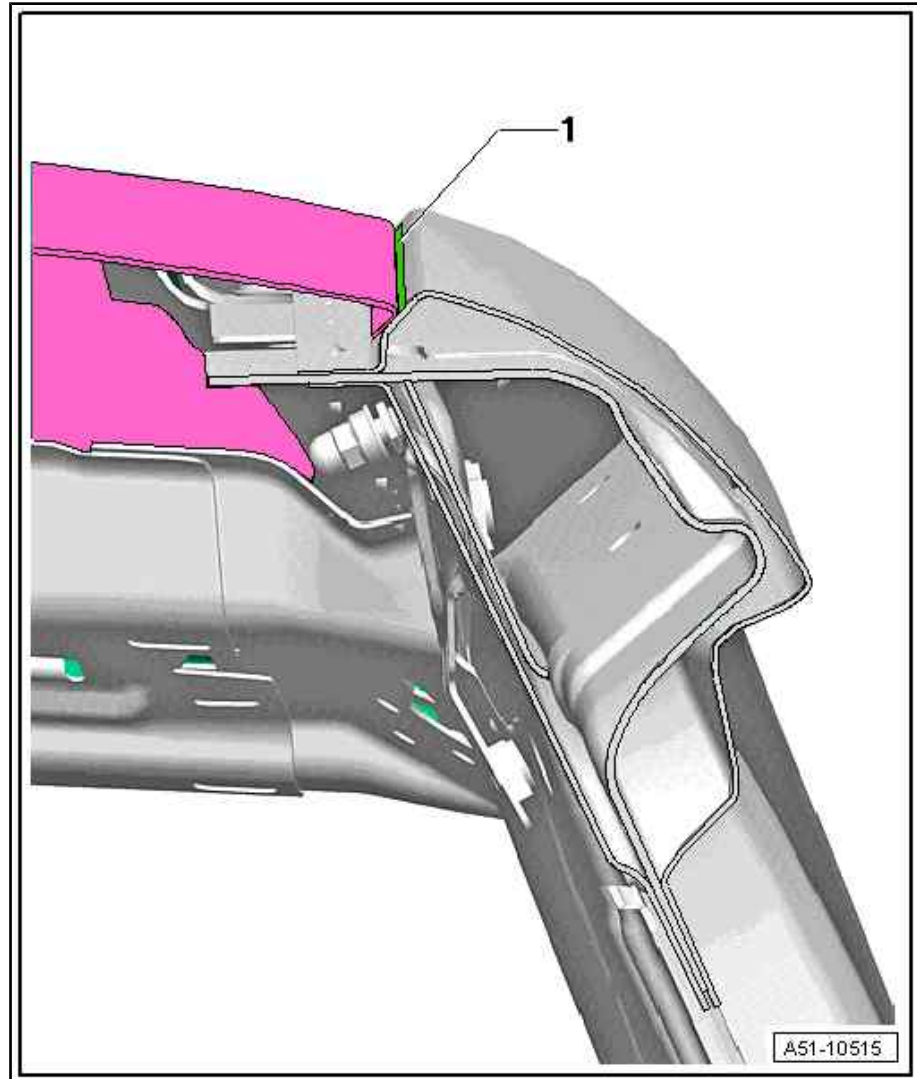
- Weld in roof using resistance spot welder : RP spot weld seam.



- Make additional welds for roof using shielded arc welding equipment : SG continuous seam.
- Grind down SG continuous weld seams using compact angle grinder .



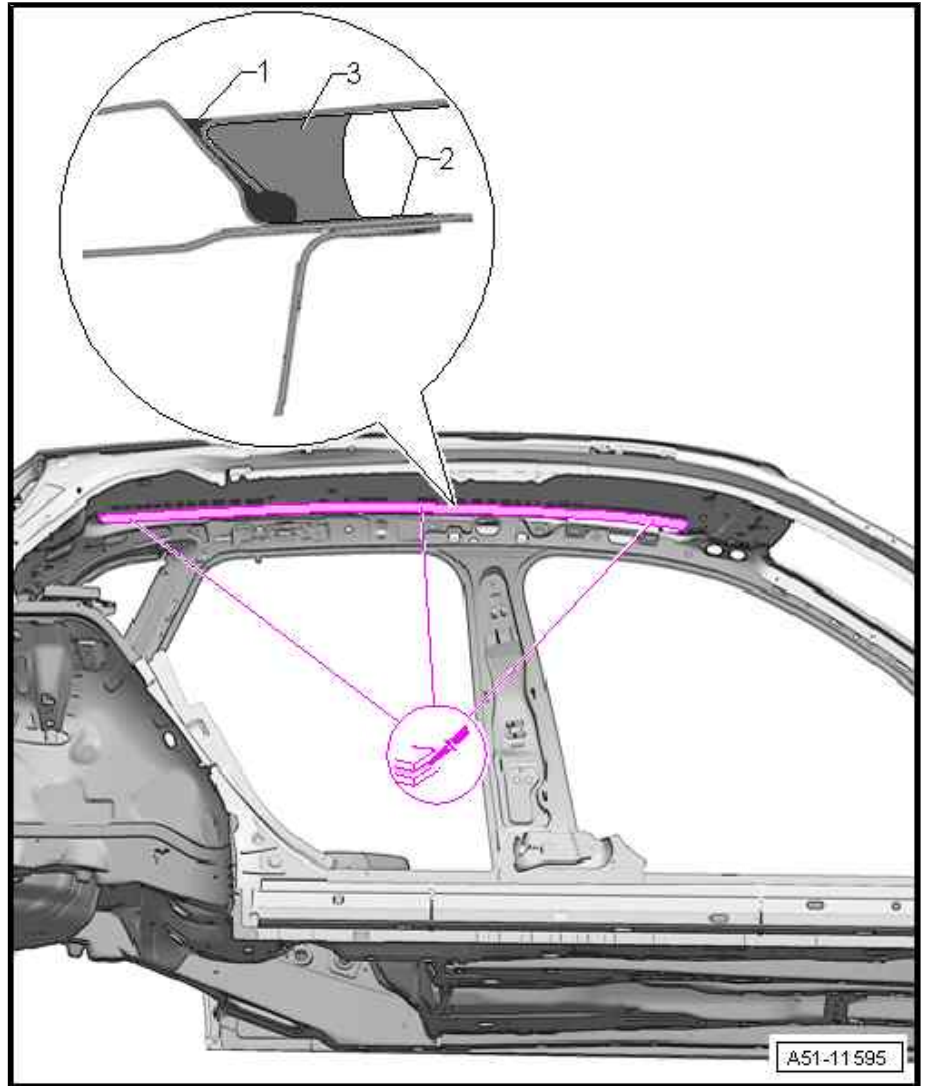
- Grind zero-gap joint -1- into shape (left and right).



#### Note

*Please note instructions for use: window adhesive should be applied at a temperature of approx. 20°C.*

- Apply 2-component window adhesive - D 004 660 M2 - -3- in roof side member using double cartridge gun - VAS 5237- .
- ◆ 1 = 2-component epoxy adhesive - DA 180 A00 A2 -
- ◆ 2 = Glass and paint primer - D 009 200 02-
- ◆ 3 = 2-component window adhesive - D 004 660 M2 -

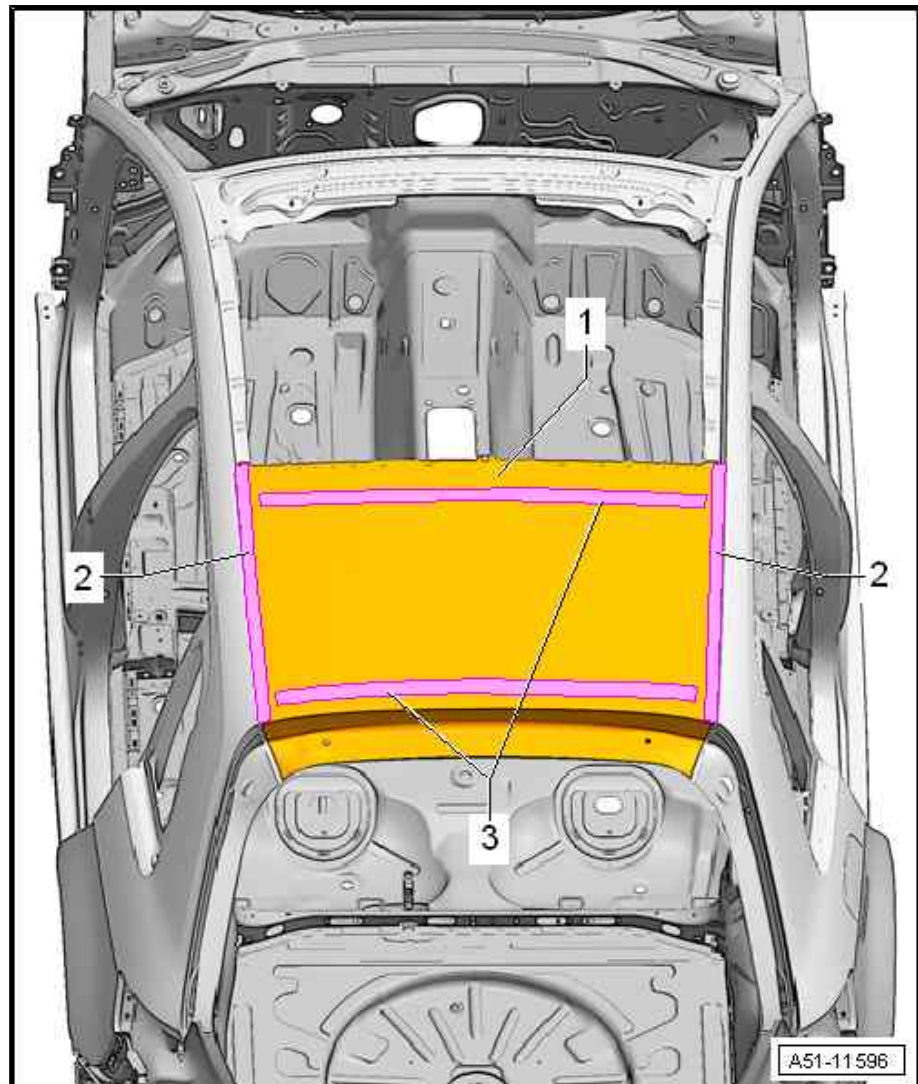




RO: 51 23 55 00

## 5 Roof - Renewal (vehicles with panoramic tilting sunroof - Sportback)

- 1 - Roof rear section
- 2 - Plasmatron weld seam
- 3 - Bonded area



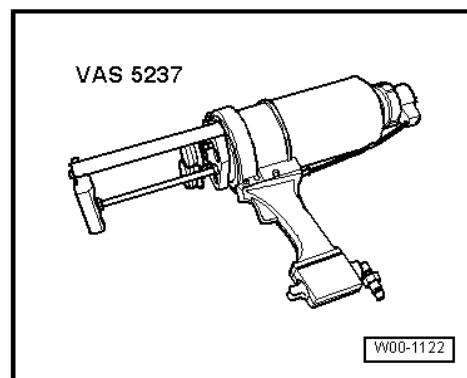
### 5.1 Tools

#### Special tools and workshop equipment required

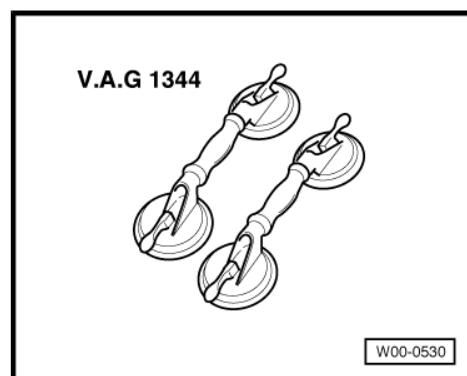
- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Drill
- ◆ Spot weld breaker
- ◆ Body saw
- ◆ Electric cutter
- ◆ Mole grips, 18-18 - VAS 5430/1-
- ◆ Double cartridge gun - VAS 6453-



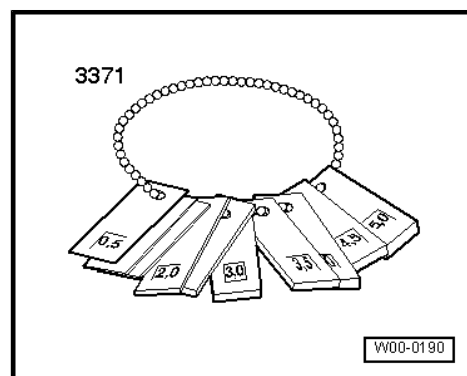
- ◆ Double cartridge gun - VAS 5237-



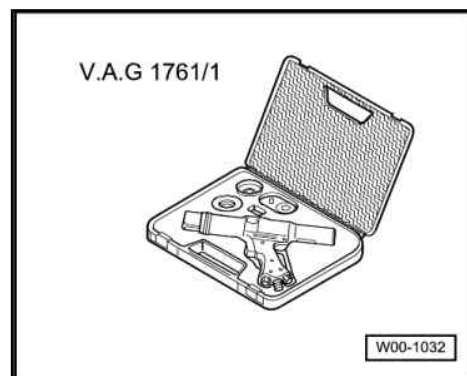
- ◆ Suction lifter - V.A.G 1344- or magnet - VAS 6739-



- ◆ Setting gauge - 3371-

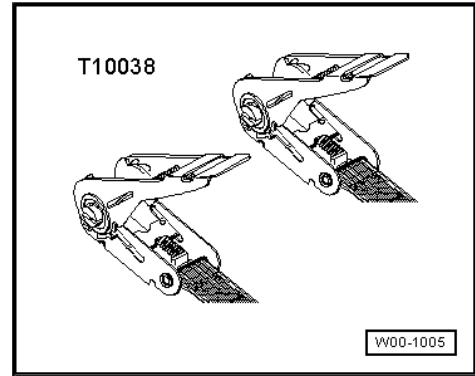


- ◆ Compressed-air gun - V.A.G 1761/1-





◆ Tensioning strap - T 10038-



**!** NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

1 - 2-component window adhesive - D 004 660 M2 -

- Open cap.

2 - Static mixer

3 - Extension hose

Part number 000 809 937

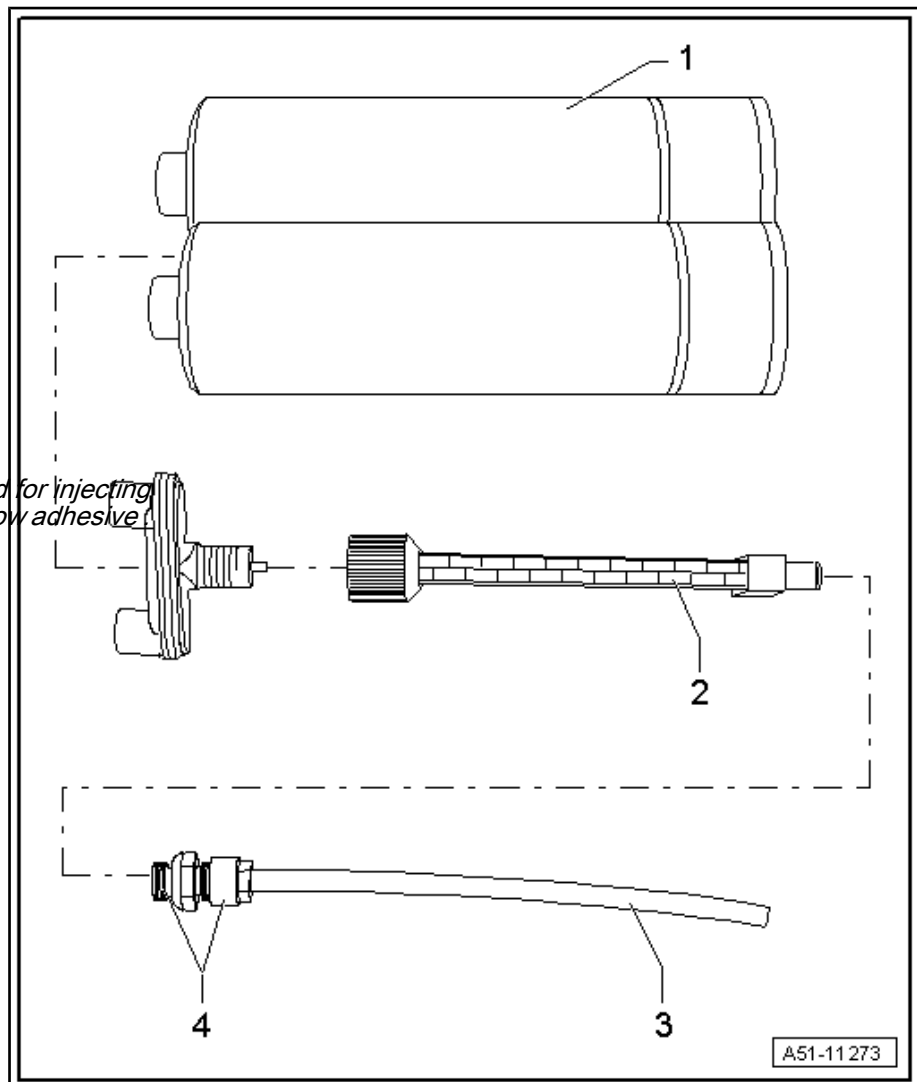
- Screw onto static mixer -2- with adapter -4-.

4 - Adapter



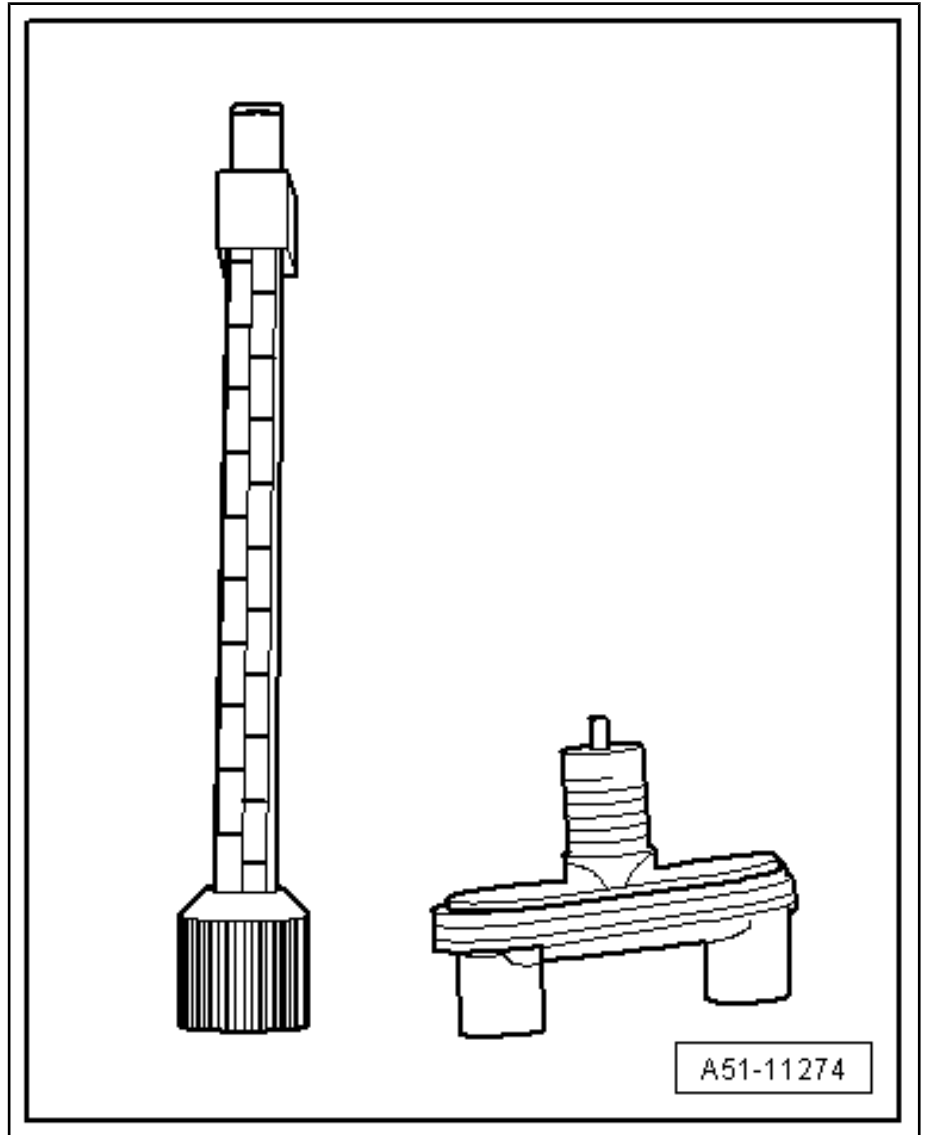
Note

*The adapter is required for injecting the 2-component window adhesive!*

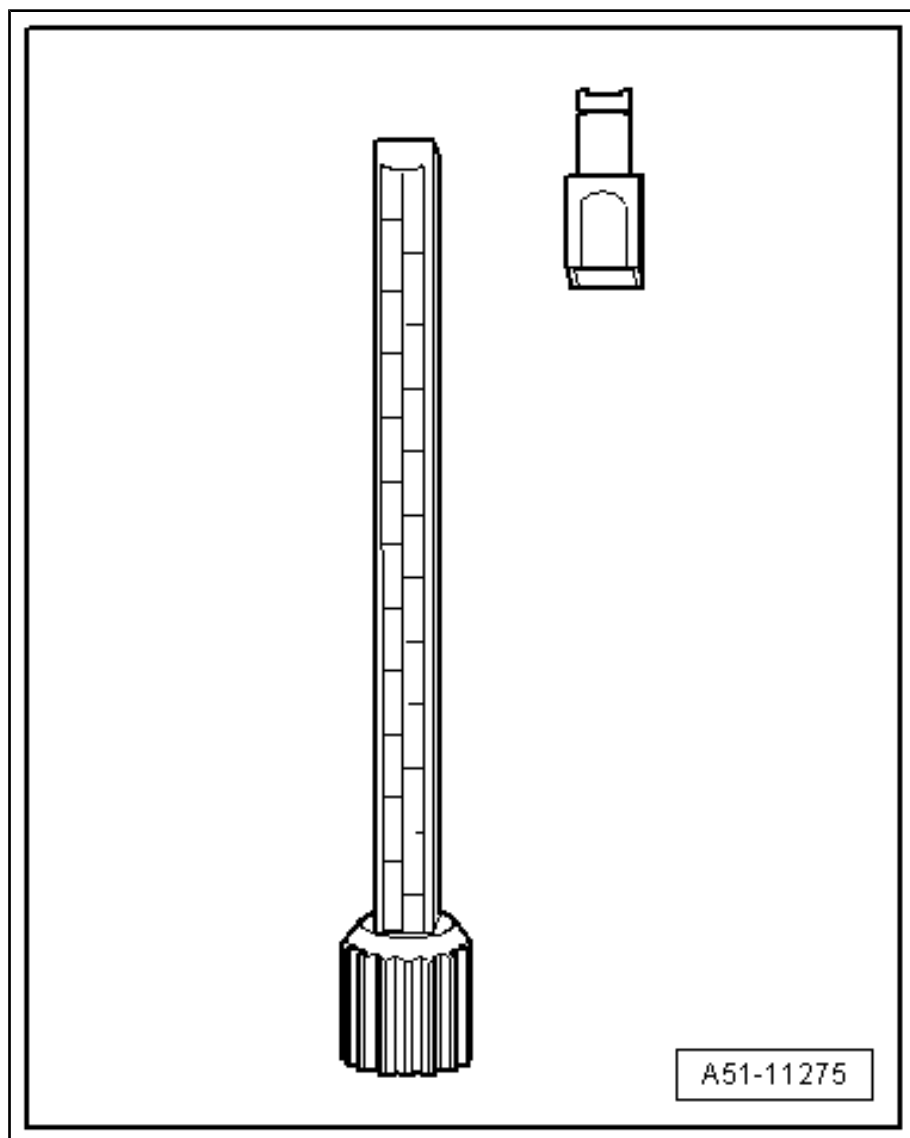


Instructions for using extension hose for window adhesive

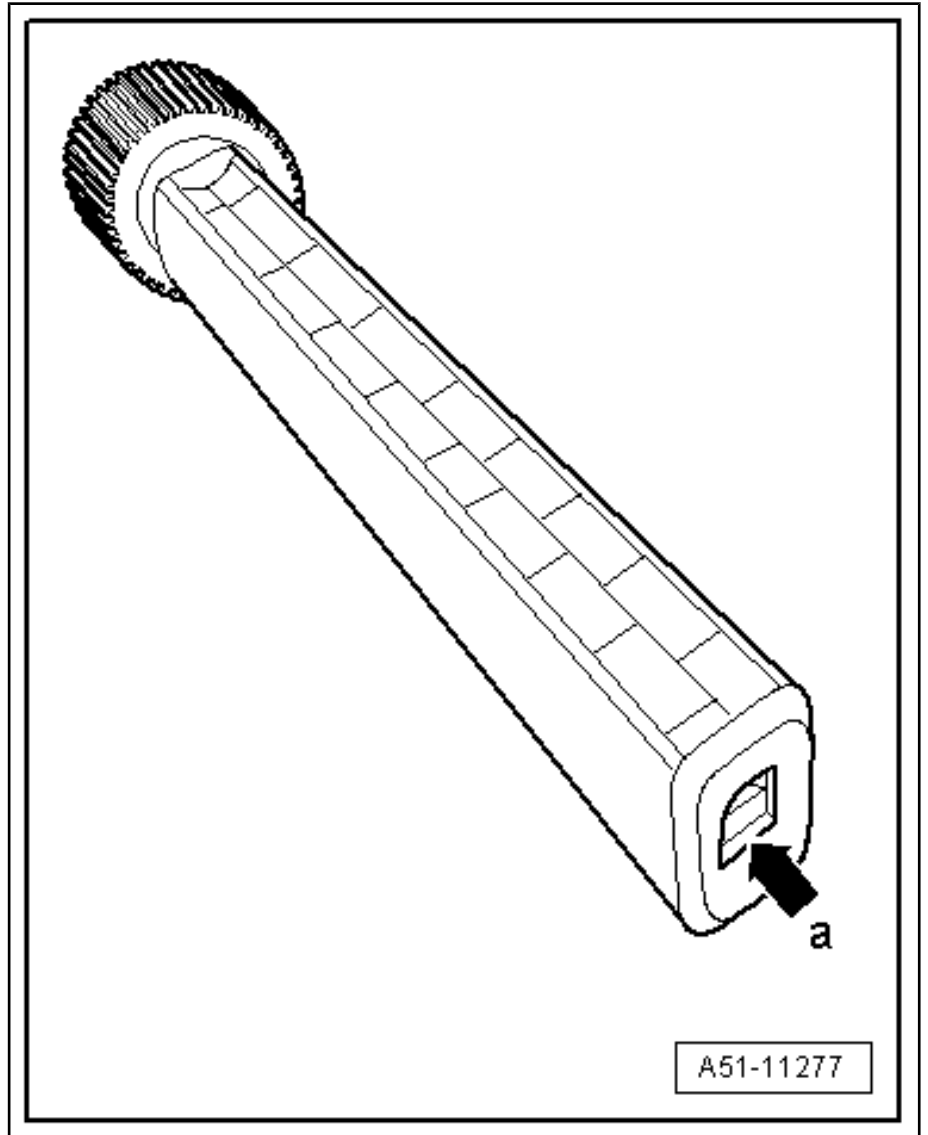
- Take static mixer out of window adhesive kit.



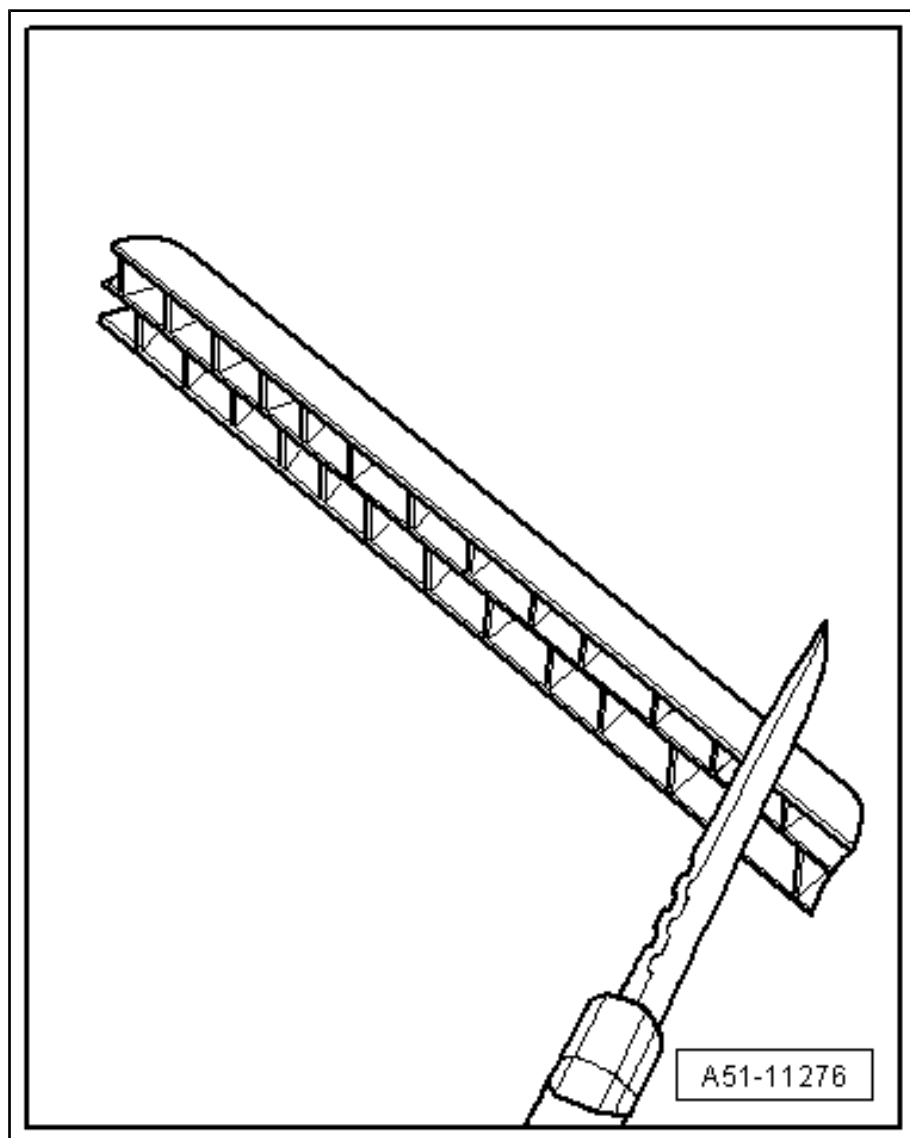
- Remove front cap from static mixer.



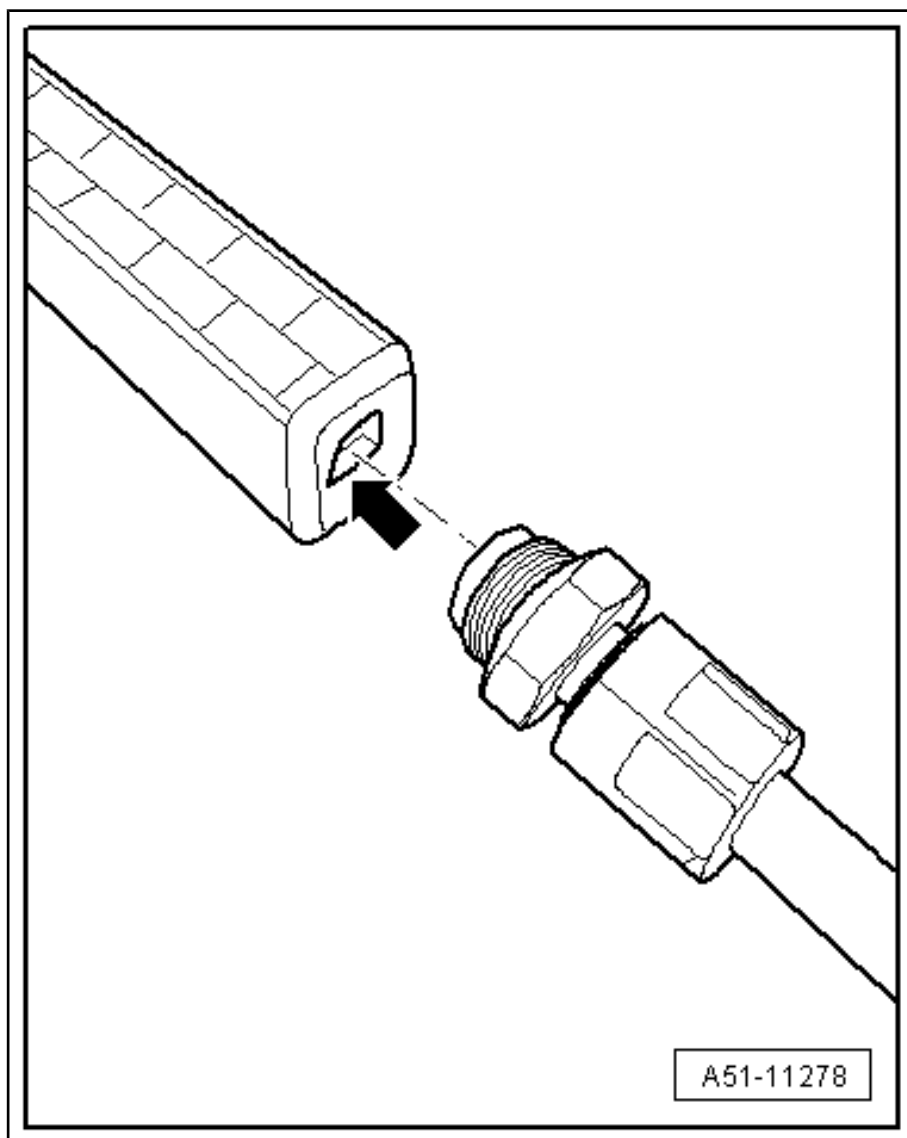
- Drill out opening in static mixer -a- to 9 mm  $\varnothing$  using drill .



- Shorten inner section of mixer so that hose can be screwed in fully.



- Screw extension hose onto mixer.



## 5.2 Procedure

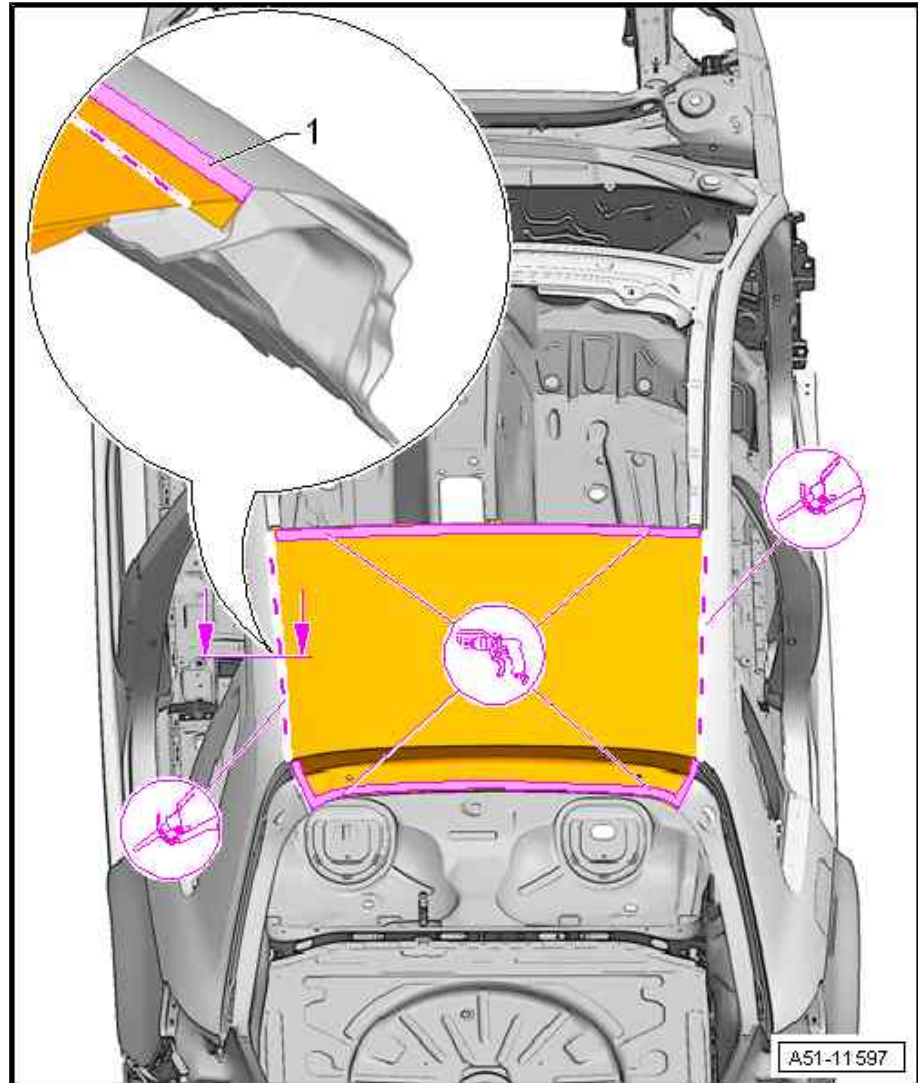
### Cutting locations



**NOTICE**

Take care not to damage roof cross member when cutting.

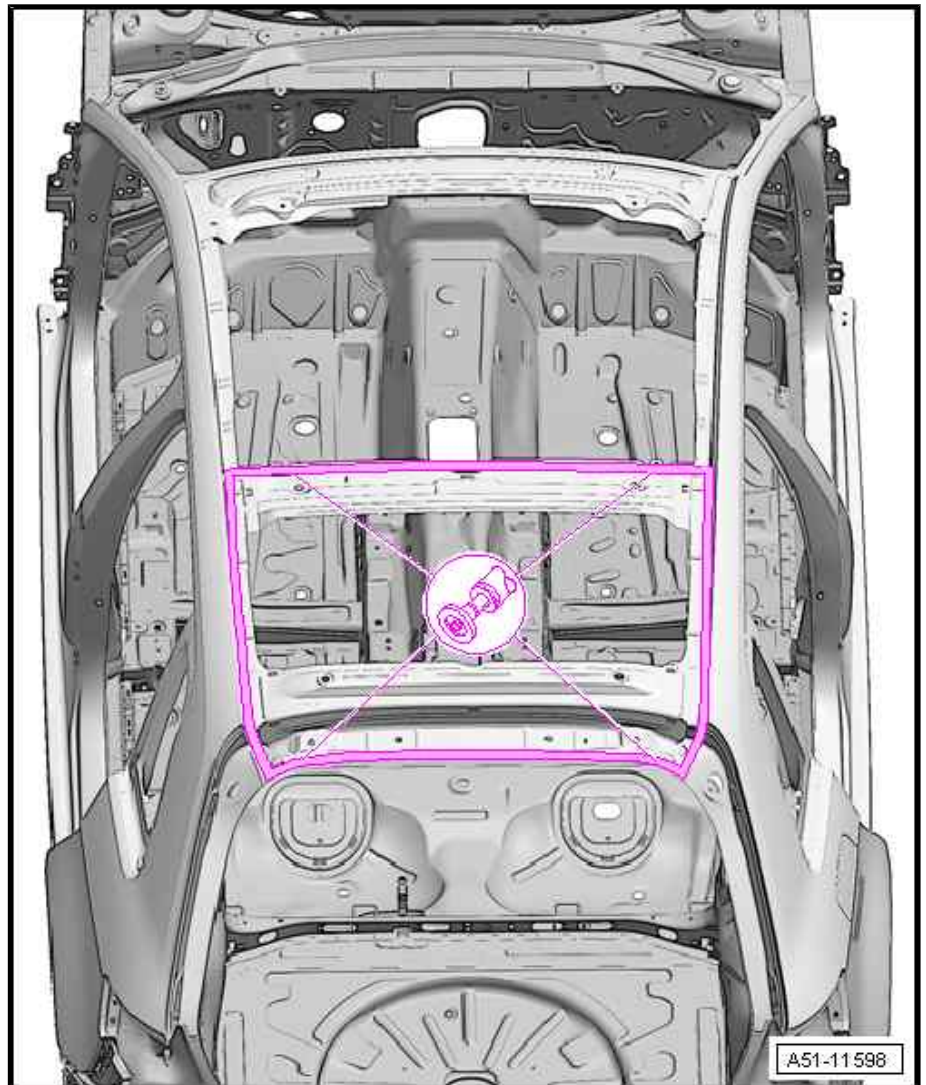
- Roughly cut out roof parallel with plasmatron weld seam -1- at a distance of approx. 30 mm using body saw .
- Working from passenger compartment, separate bonded joints between roof and roof cross members using electric cutter - V.A.G 1561 A- .
- Separate original joint using spot weld breaker .



– Remove remaining material using compact angle grinder .

Take care not to damage roof frame when removing remaining material from roof frame.

Do not use cutting discs or rough-filing discs.



### Replacement parts

- ◆ Roof rear section
- ◆ Single-component assembly adhesive - D 190 MKD A3 - , 1 cartridge
- ◆ 2-component epoxy adhesive - DA 180 A00 A2 - , 1 cartridge
- ◆ Cleaning solution - D 009 401 04-
- ◆ 2-component window adhesive - D 004 660 M2 - , 2 cartridges
- ◆ Glass and paint primer - D 009 200 02-



## Bonding in

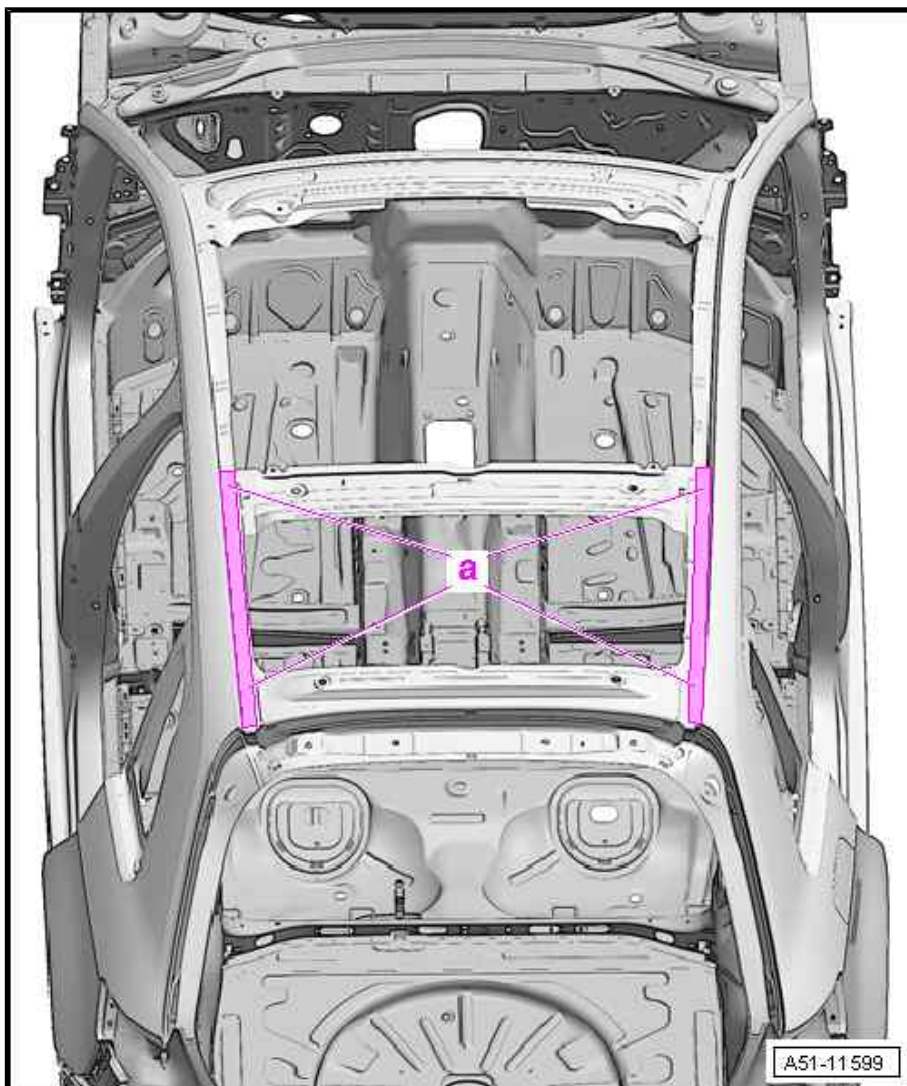


### Note

- ◆ *It is important to keep to the following procedure to ensure a satisfactory and effective roof repair.*
- ◆ *Bonded areas must not be treated with filler coat (surfacers) and painted before bonding in the roof.*
- ◆ *The adhesive materials must be applied very quickly.*
- ◆ *Make sure adhesive is applied before pot life is exceeded.*
- ◆ *Use a pneumatic cartridge gun to apply the bonding materials.*
- ◆ *Affixing adhesive tape to the roof parallel with the bonded seam on the side prevents soiling when bonding.*

A second mechanic is required for the next steps.

- Position roof on roof frame and check alignment of roof with roof side members (visual inspection).
- Check fit of roof with rear lid and glass roof.
- Fix roof in position in glass roof flange and sealing flange of rear lid using one self-tapping screw at each end.
- Remove roof.
- Apply glass and paint primer - D 009 200 02- in area of roof frame -a-.

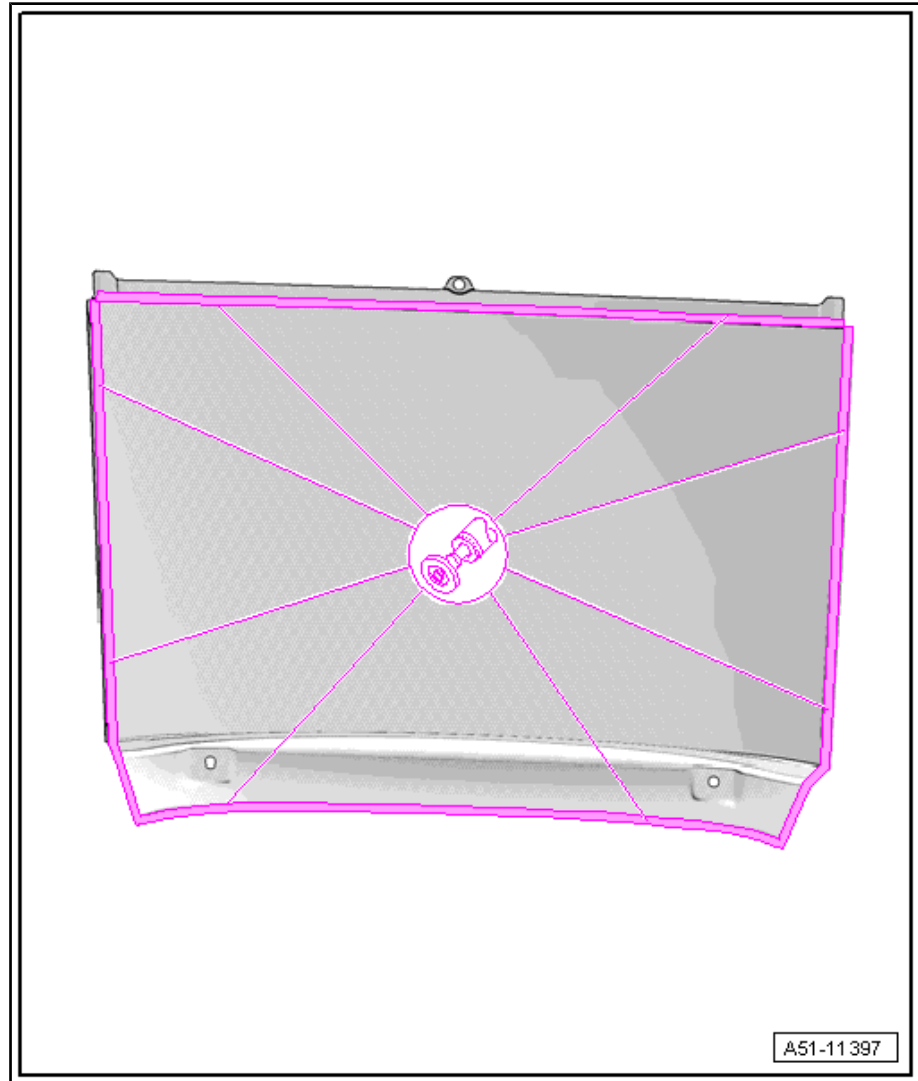


- Mask outside of roof panel parallel with side bonding area using adhesive tape.
- Attach four suction lifters - V.A.G 1344- or magnets - VAS 6739- to outside of roof panel.

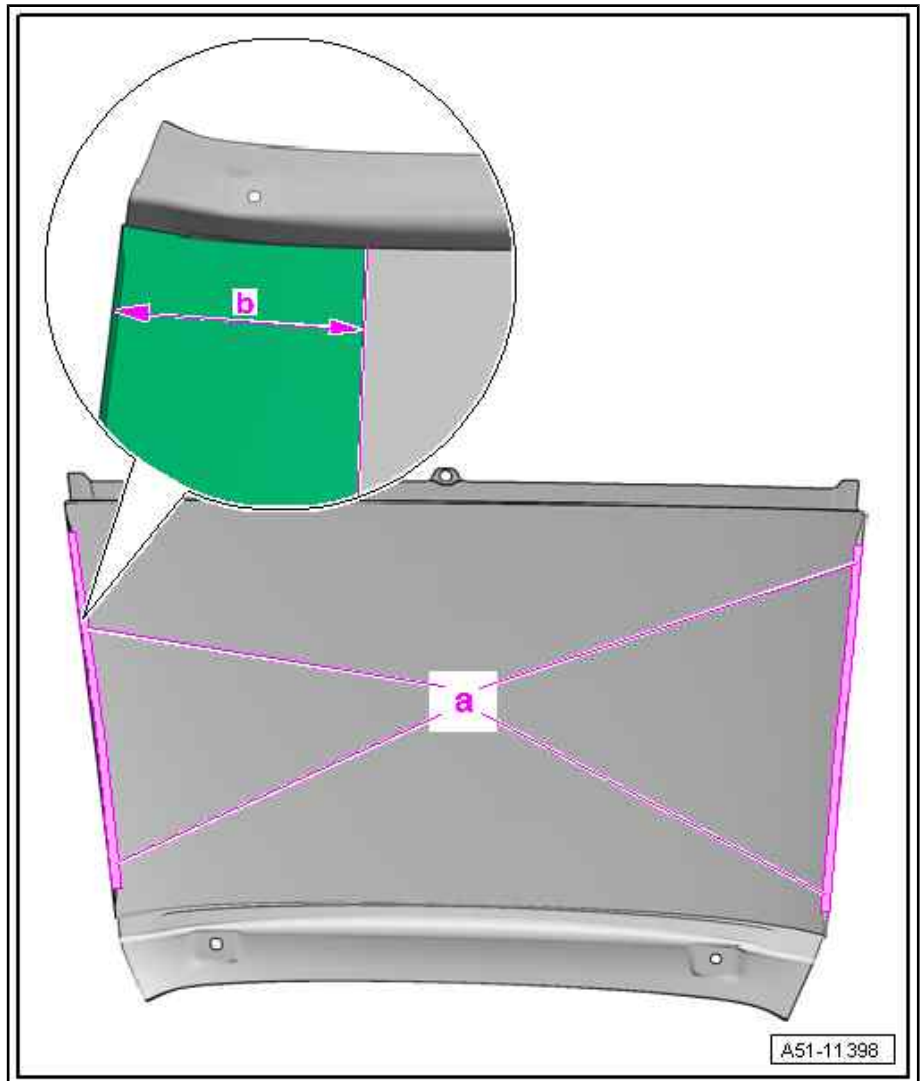
**Pre-treatment - applies to replacement part only**

- Grind welding surfaces down to bare metal.
- Roughen bonding surfaces using a clean sanding disc (grit size P 80 or P 100).
- Clean roof frame, roof reinforcement and roof with cleaning solution - D 009 401 04- .

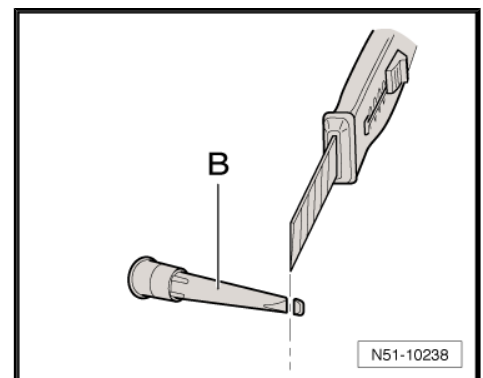
This ensures that the 2-component epoxy adhesive - DA 180 A00 A2 - forms a good joint with the bonding area.



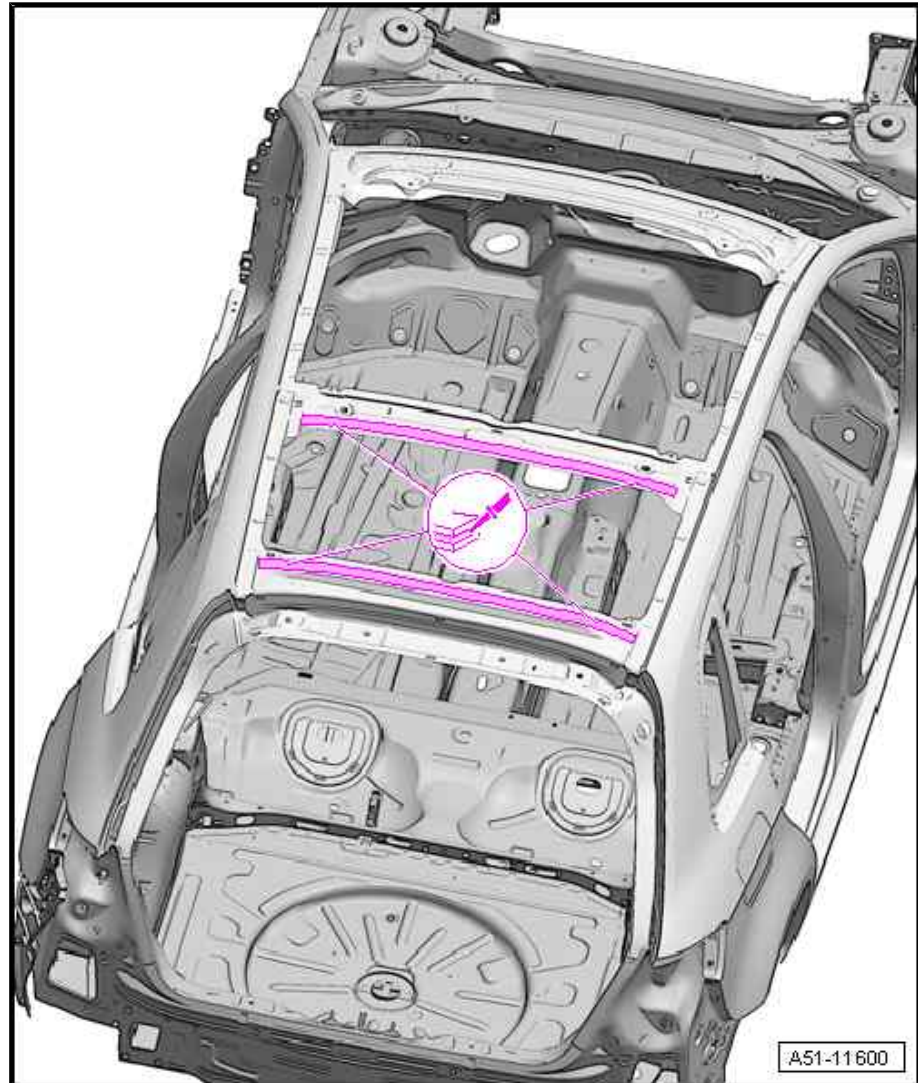
- Apply glass and paint primer - D 009 200 02- approx. 5 cm wide -b- on inner section of roof and inner side flange -a-.



- Cut off approx. 2 mm from nozzle -B- to obtain appropriate bead geometry.



- Apply single-component assembly adhesive - D 190 MKD A3- to roof cross members in the area of the factory bonding location using pneumatic cartridge gun - V.A.G 1761/1- .



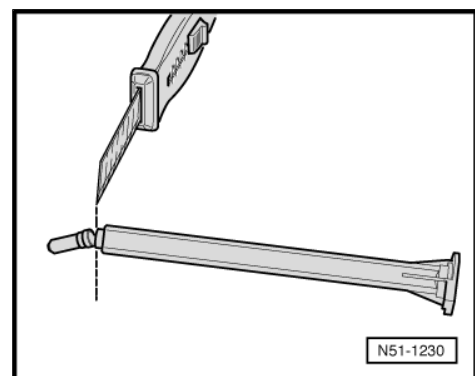
### Preparing new part

- Cut static mixer from 2-component epoxy adhesive set - DA 180 A00 A2 - down to 4th notch to obtain required bead cross section.

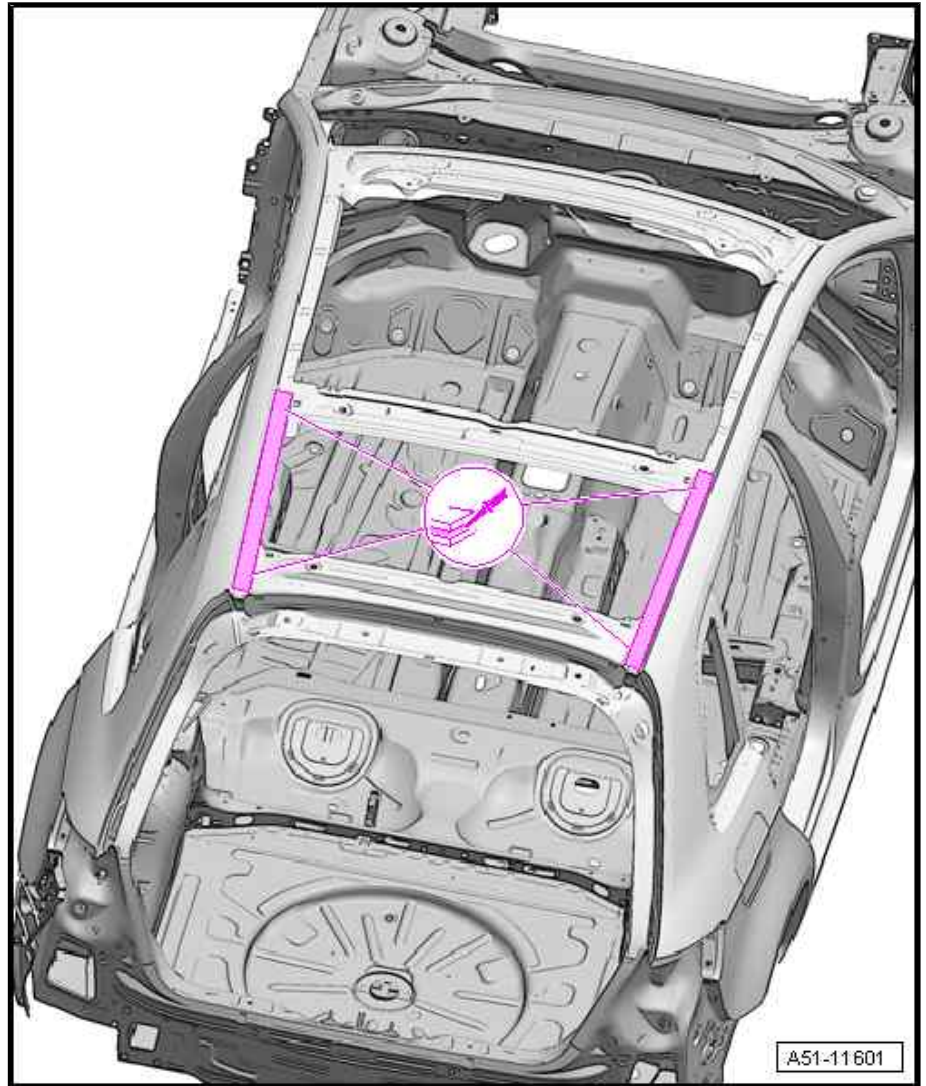


### Note

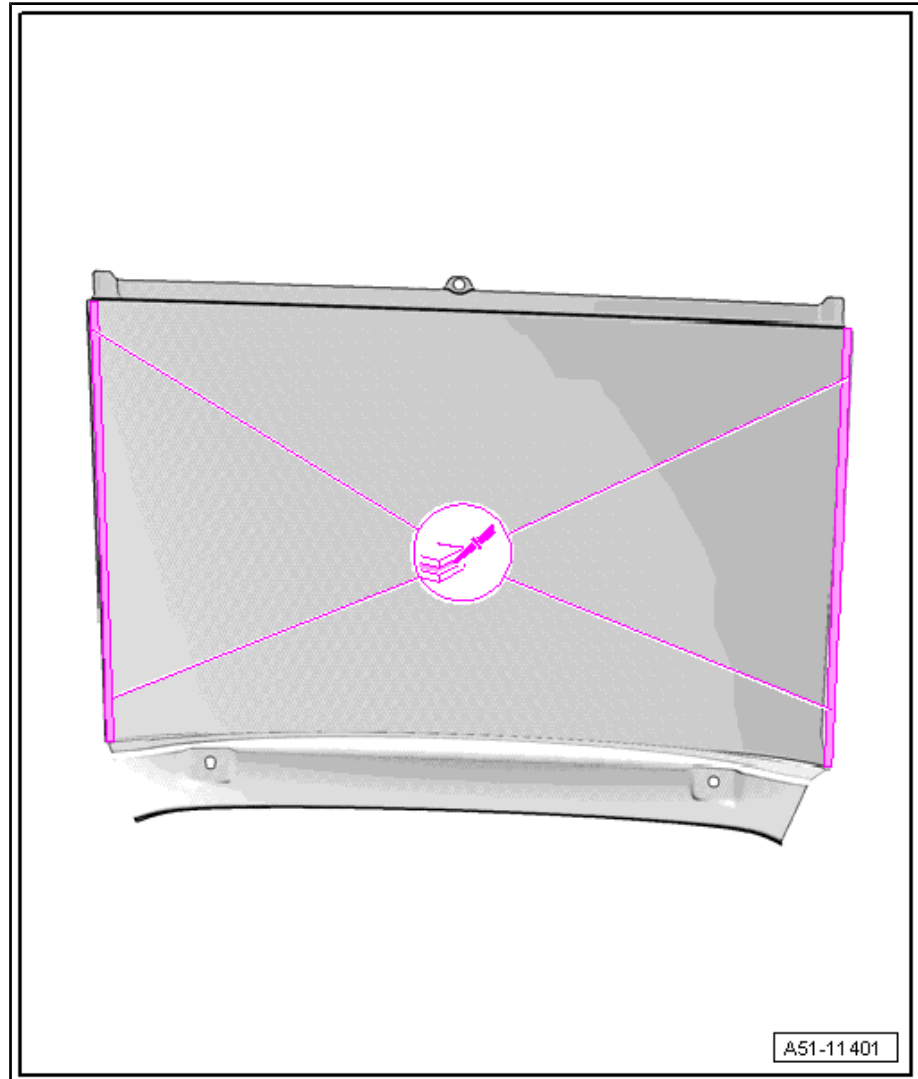
*The pot life of the 2-component epoxy adhesive - DA 180 A00 A2 - is roughly 90 minutes.*



- Apply two continuous beads of 2-component epoxy adhesive - DA 180 A00 A2 - to bevelled sections of roof side members in area of zero-gap joint using double cartridge gun - VAS 6453- .



- Apply one continuous bead of 2-component epoxy adhesive - DA 180 A00 A2 - to side flanges of roof using double cartridge gun - VAS 6453- .

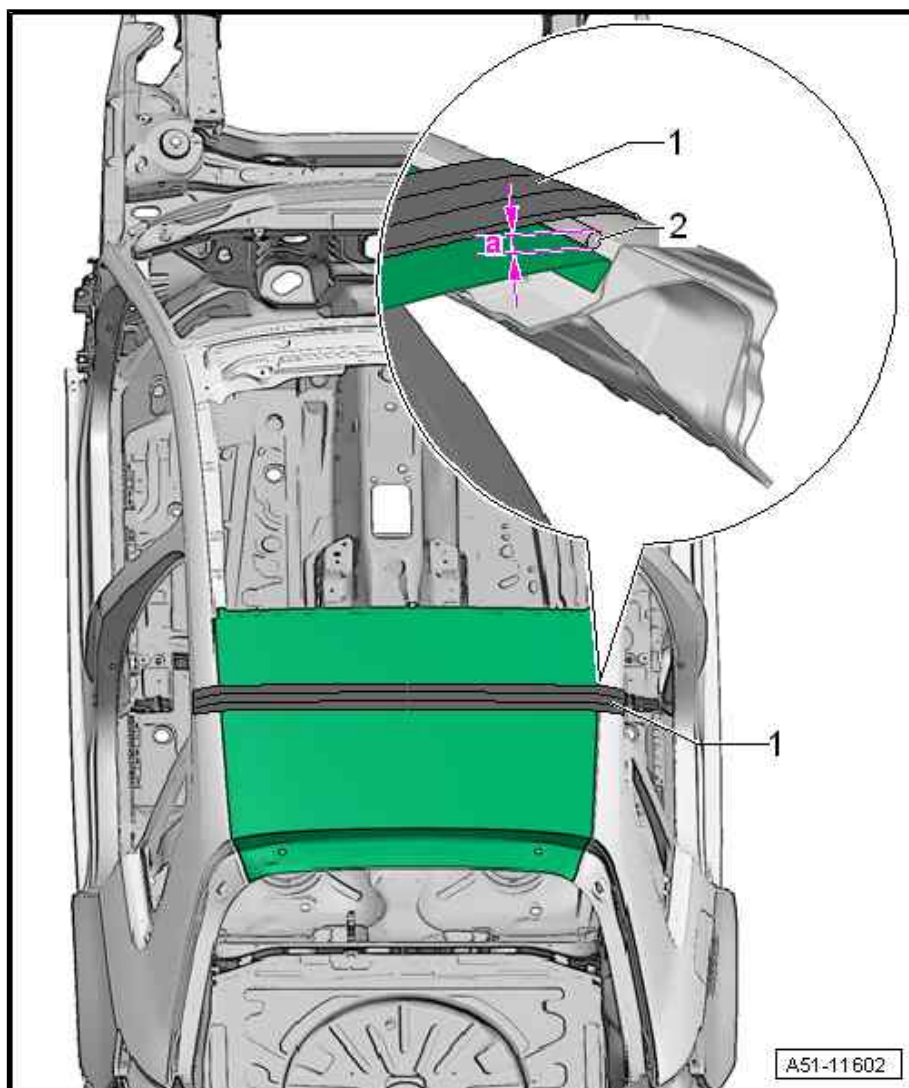


- Immediately fit and align roof.
- Use one self-tapping screw at each end to fix roof in position in centring hole in glass roof flange and sealing flange for rear lid.
- Fix roof in position with mole grips, 18-18 - VAS 5430/1- .

#### Adjusting roof depth

- Additionally fix roof in position with one tensioning strap - T 10038- -1-.
- Set required depth using e.g. drill bit or suitable wooden spacer -2-.

Depth setting for rear section -a = 2.5 mm -



- Roughly spread any 2-component epoxy adhesive - DA 180 A00 A2 - that comes out at edge of roof.

**⚠ CAUTION**

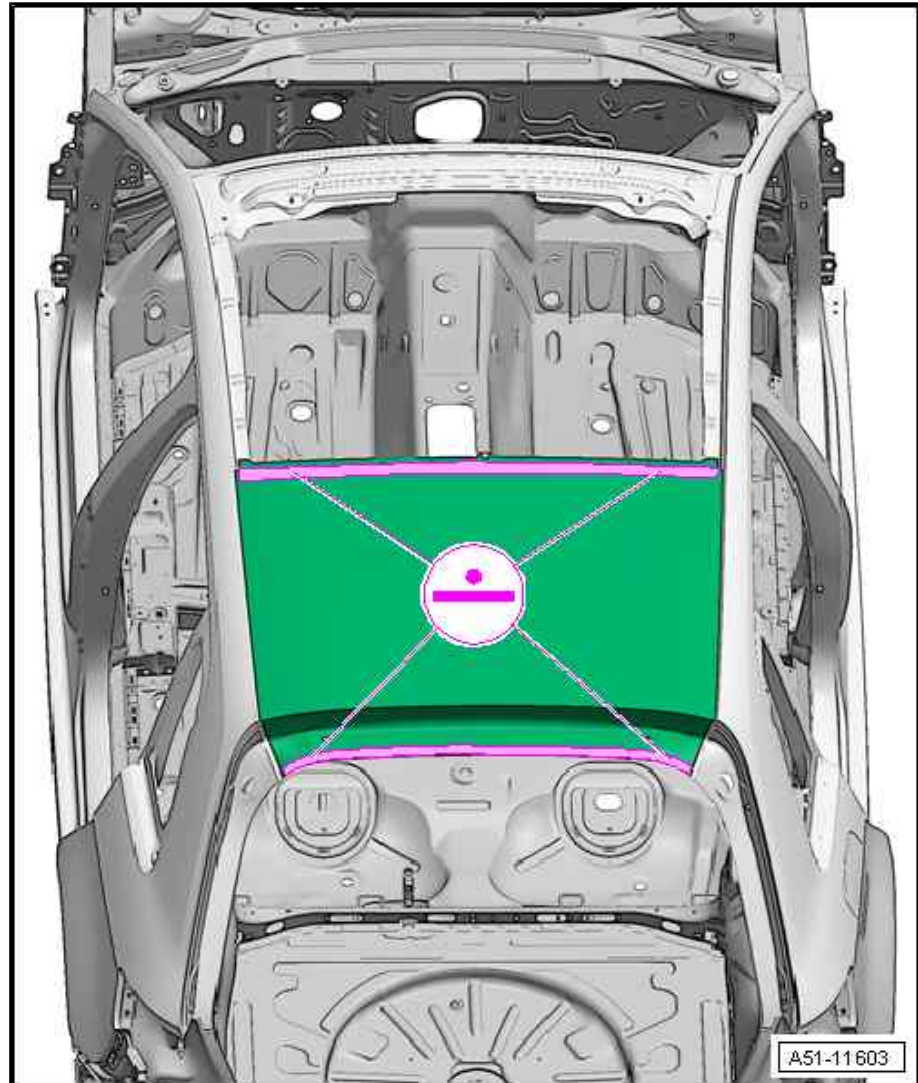
Allow bonded joint on roof to harden for 60 minutes at approx. 65° to 80° C with radiant heater. Check temperature constantly with temperature sensor.

**ⓘ NOTICE**

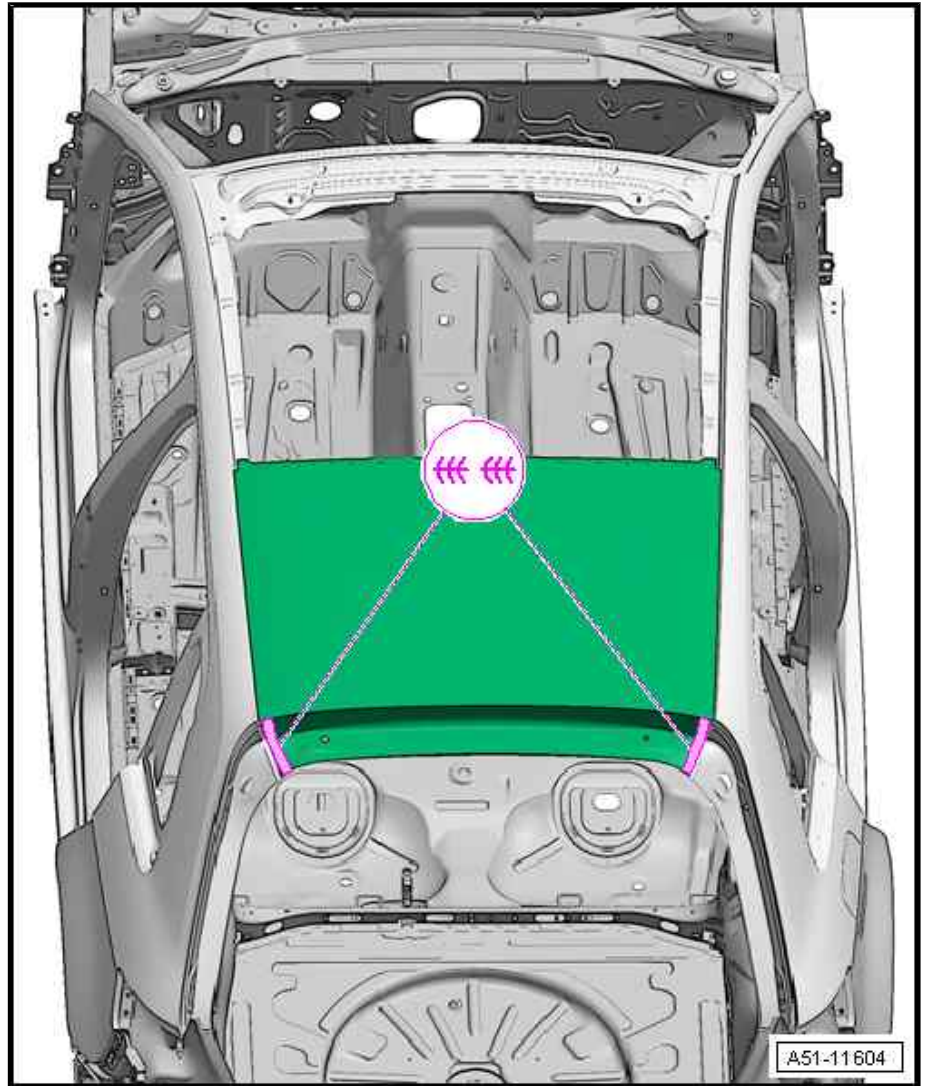
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

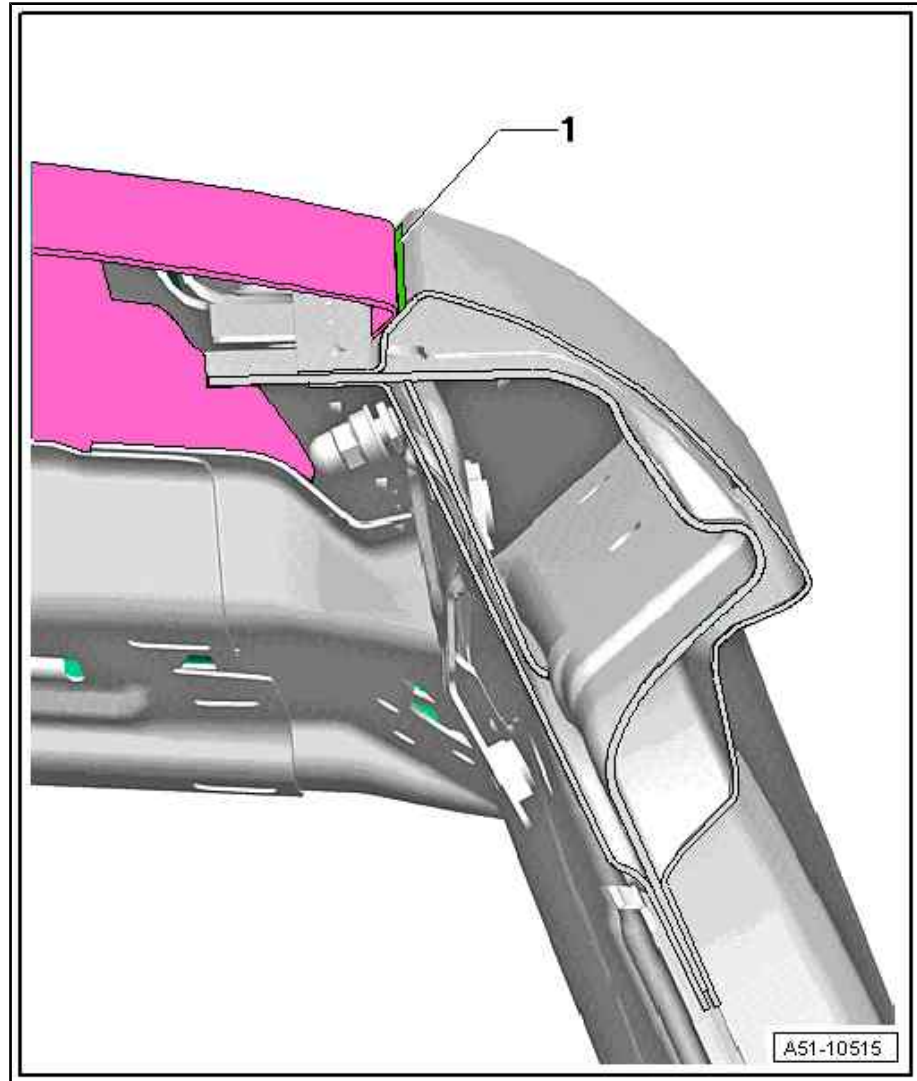
- Weld in roof using resistance spot welder : RP spot weld seam.



- Make additional weld for roof using shielded arc welding equipment : 2x SG continuous seam (staggered - with gaps).



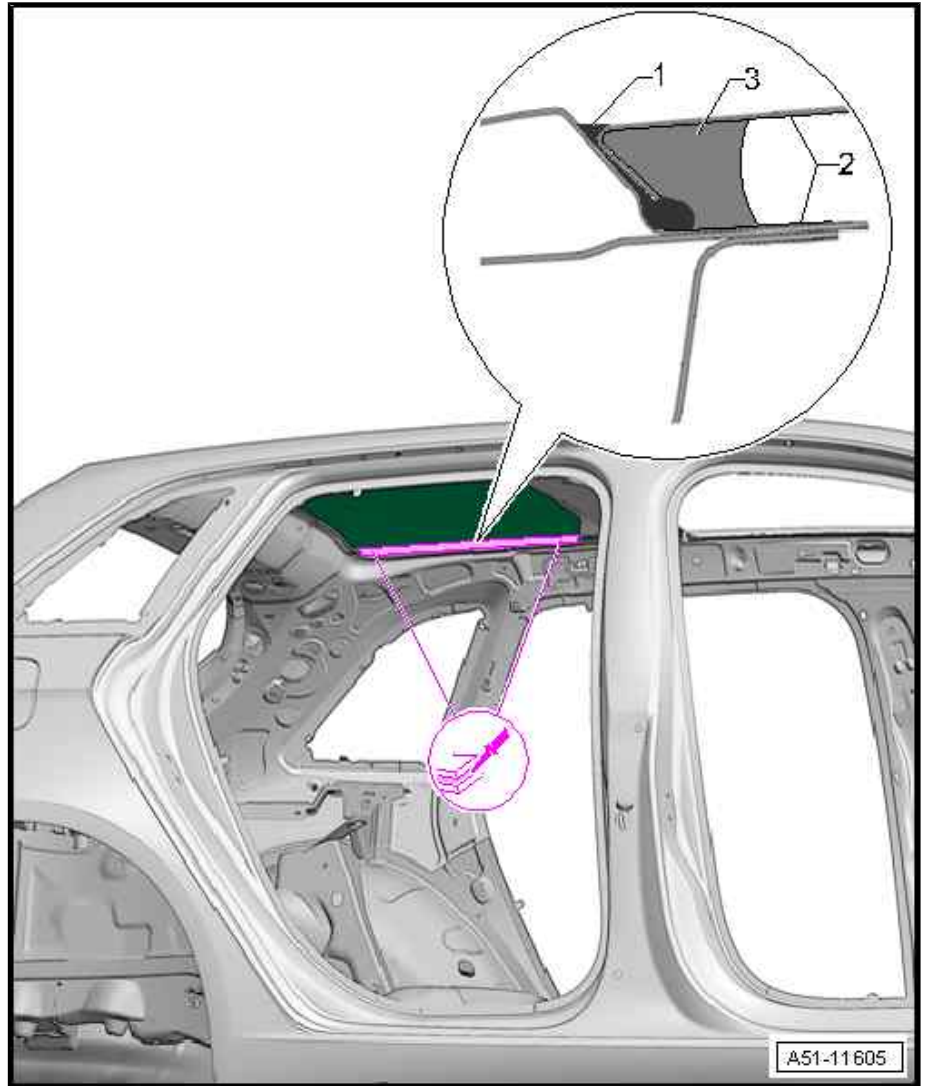
- Grind zero-gap joint -1- into shape (left and right).



#### Note

*Please note instructions for use: window adhesive should be applied at a temperature of approx. 20°C.*

- Apply 2-component window adhesive - D 004 660 M2 - -3- in roof side member using double cartridge gun - VAS 5237- .
- ◆ 1 = 2-component epoxy adhesive - DA 180 A00 A2 -
- ◆ 2 = Glass and paint primer - D 009 200 02-
- ◆ 3 = 2-component window adhesive - D 004 660 M2 -

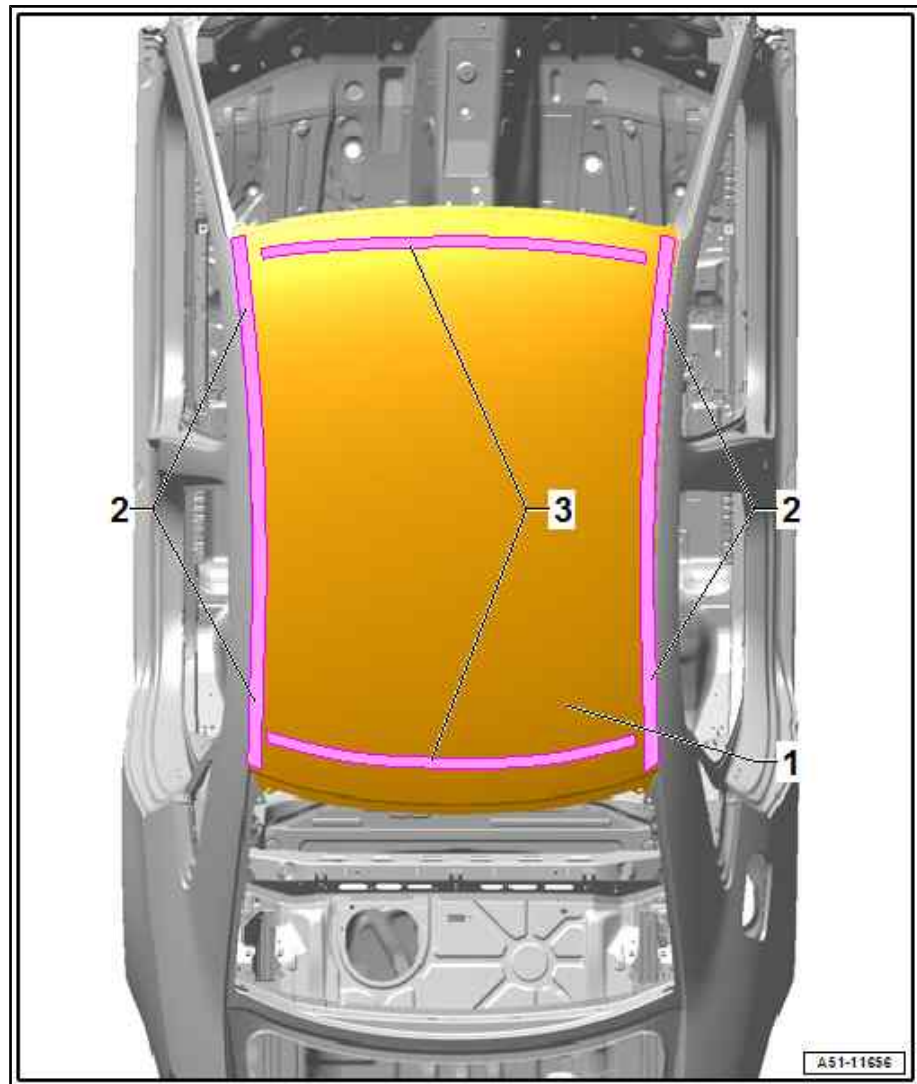




RO: 51 03 55 00

## 6 Roof - Renewal (Saloon)

- 1 - Roof
- 2 - Plasmatron weld seam
- 3 - Bonded area



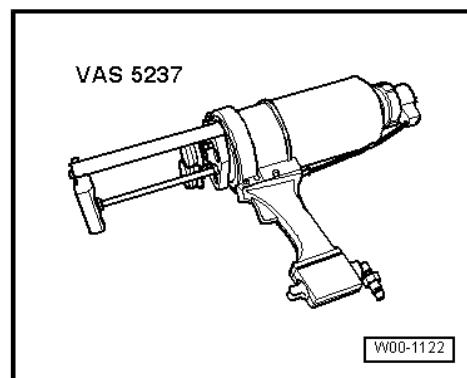
### 6.1 Tools

#### Special tools and workshop equipment required

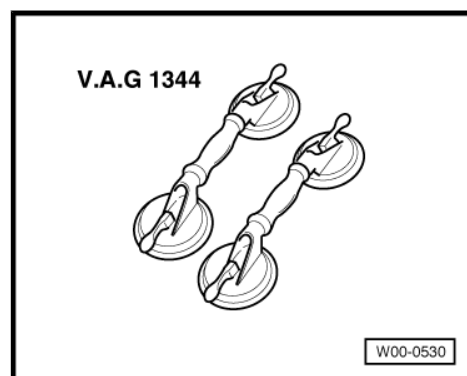
- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Drill
- ◆ Spot weld breaker
- ◆ Body saw
- ◆ Electric cutter
- ◆ Mole grips, 18-18 - VAS 5430/1-
- ◆ Double cartridge gun - VAS 6453-



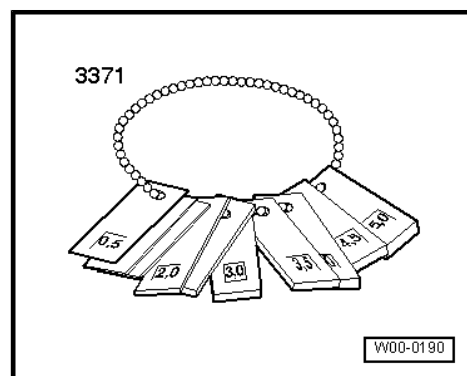
- ◆ Double cartridge gun - VAS 5237-



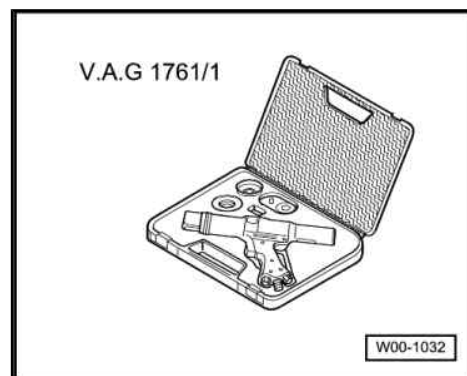
- ◆ Suction lifter - V.A.G 1344- or magnet - VAS 6739-



- ◆ Setting gauge - 3371-

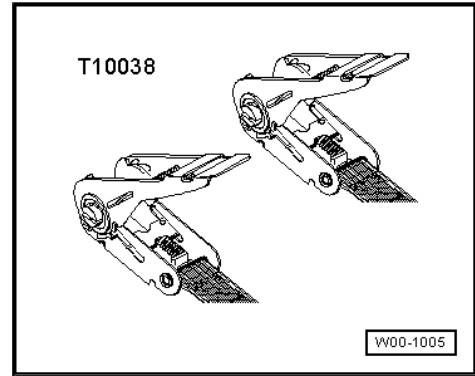


- ◆ Compressed-air gun - V.A.G 1761/1-





◆ Tensioning strap - T 10038-



**!** NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

1 - 2-component window adhesive - D 004 660 M2 -

- Open cap.

2 - Static mixer

3 - Extension hose

Part number 000 809 937

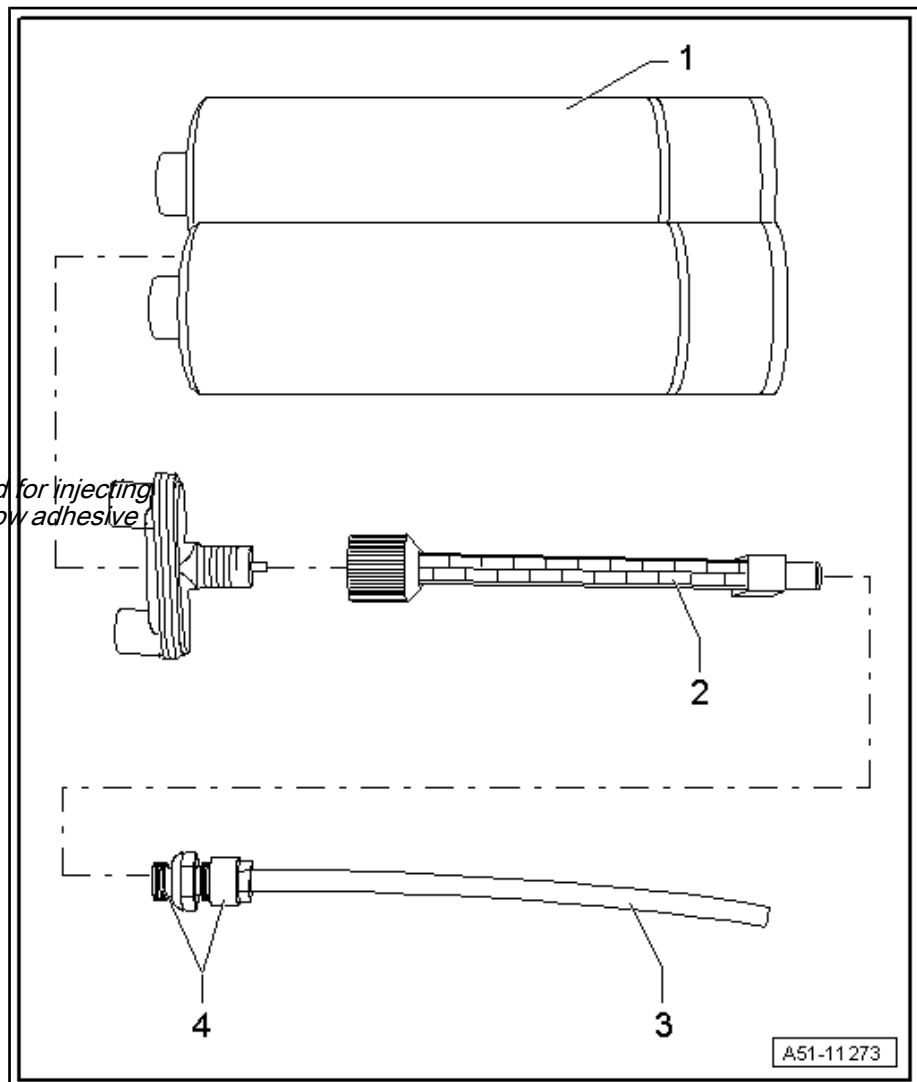
- Screw onto static mixer -2- with adapter -4-.

4 - Adapter



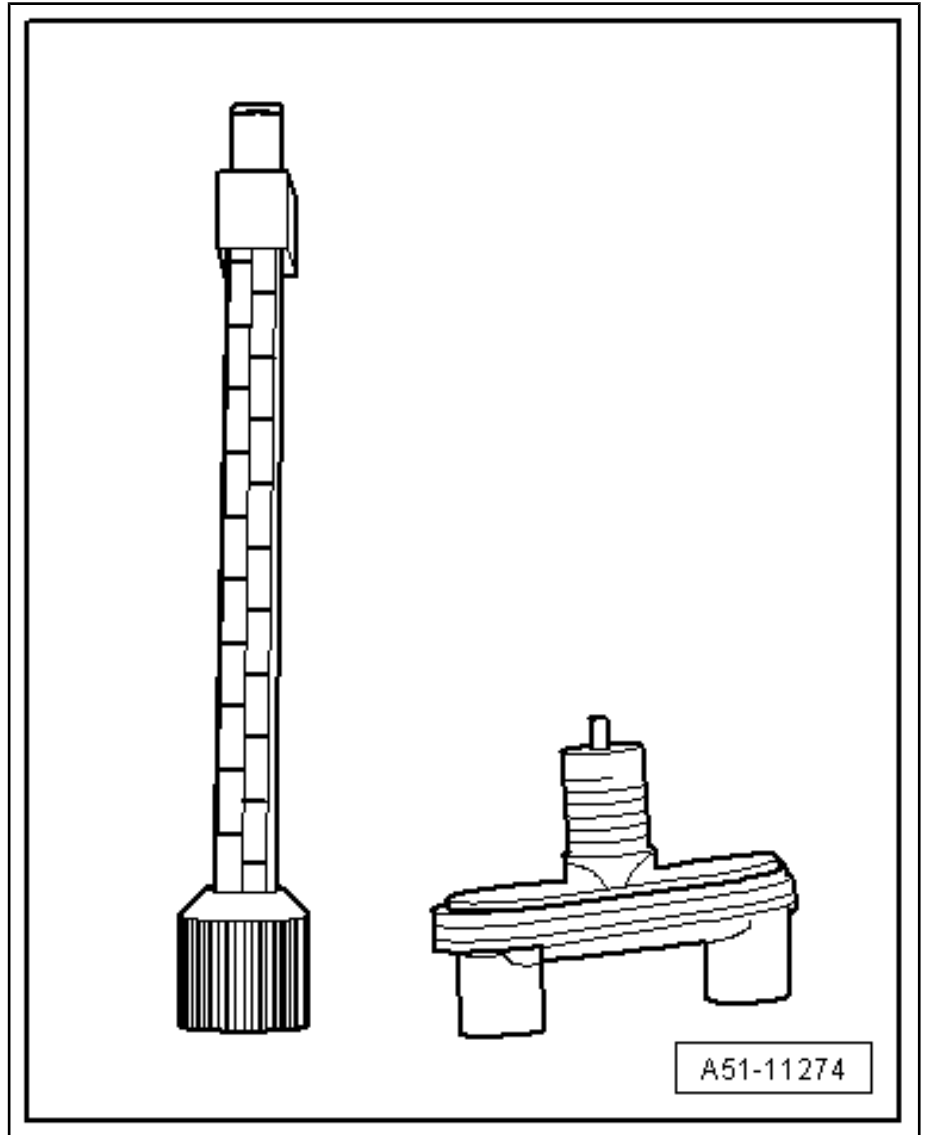
Note

*The adapter is required for injecting the 2-component window adhesive!*

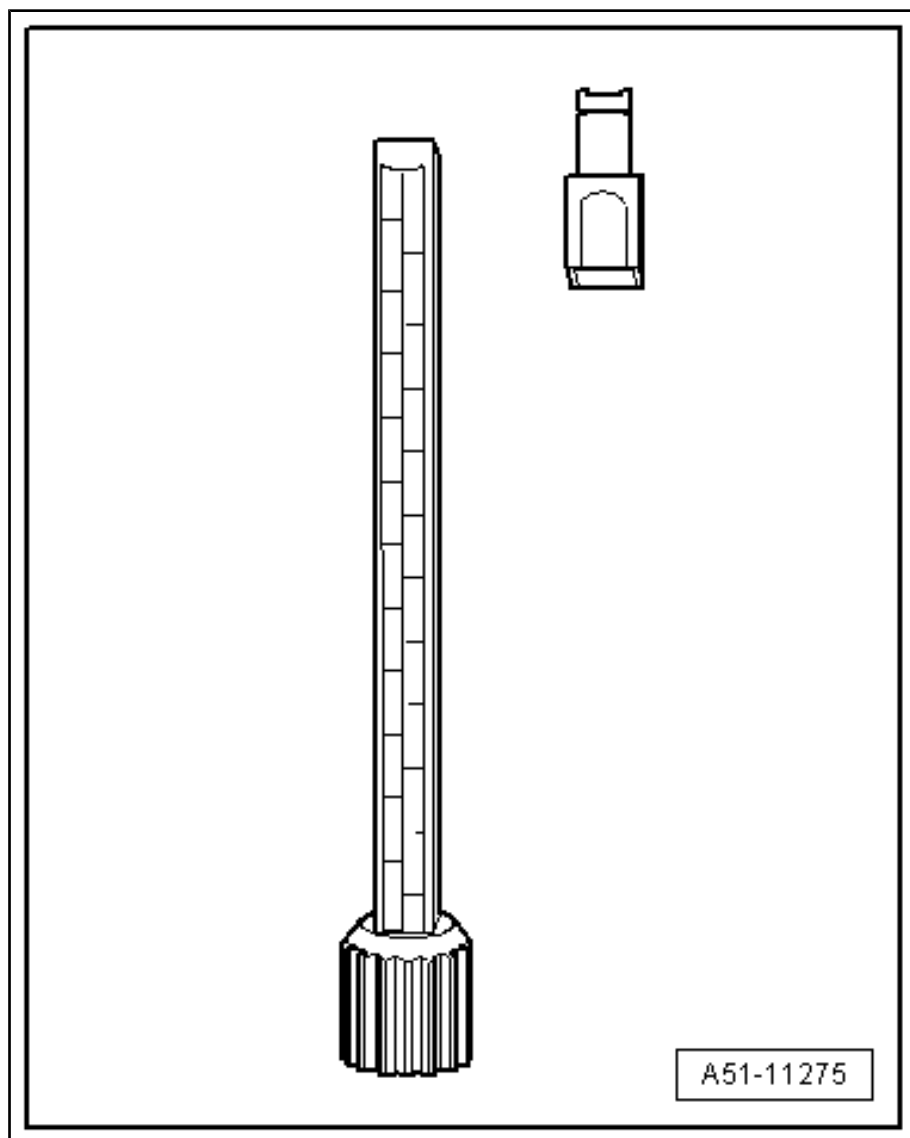


Instructions for using extension hose for window adhesive

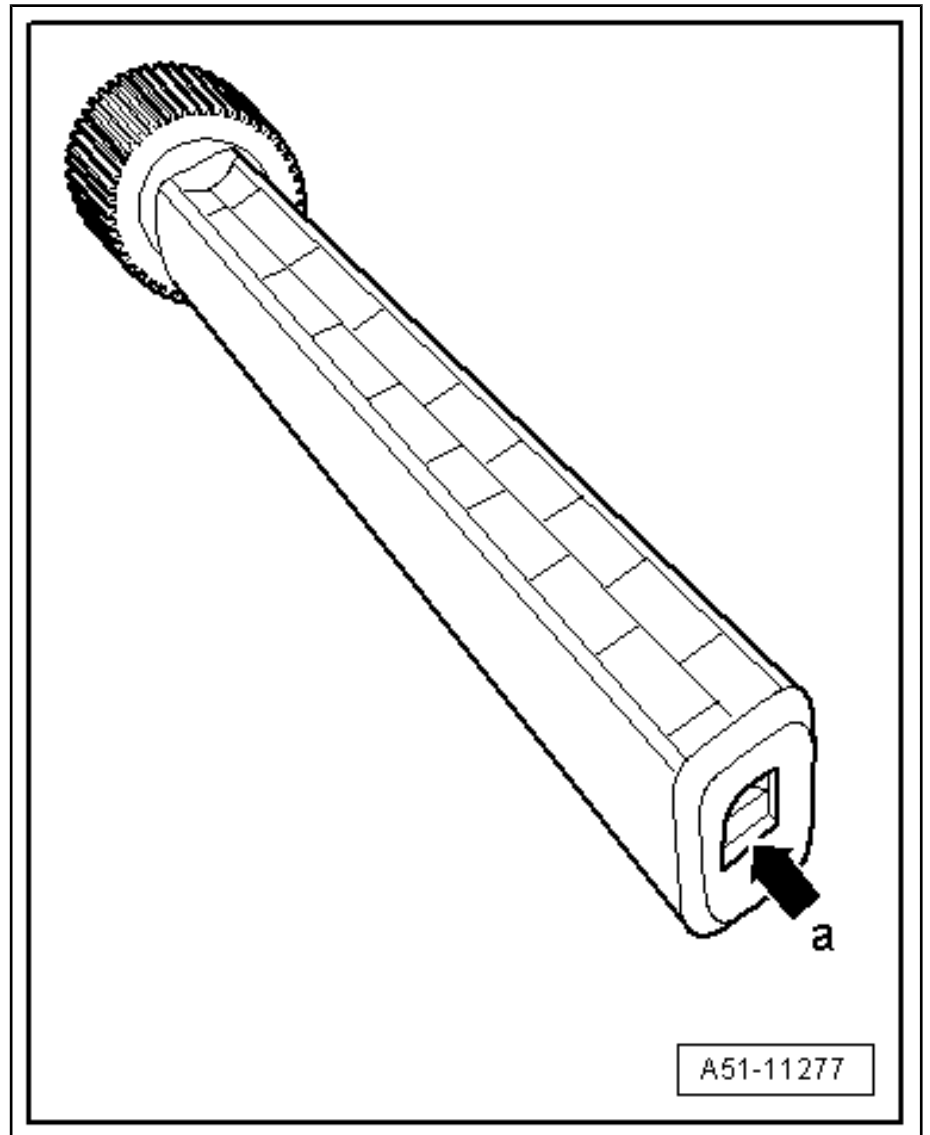
- Take static mixer out of window adhesive kit.



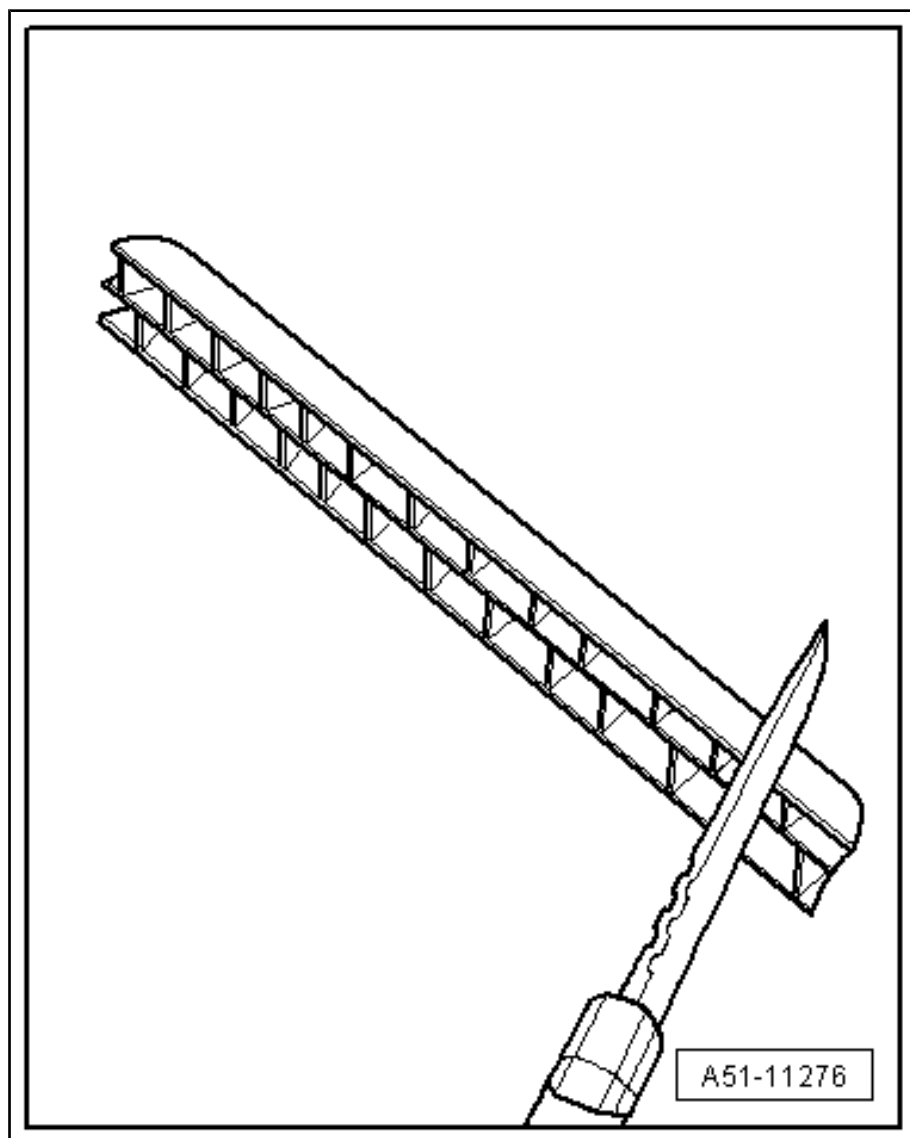
- Remove front cap from static mixer.



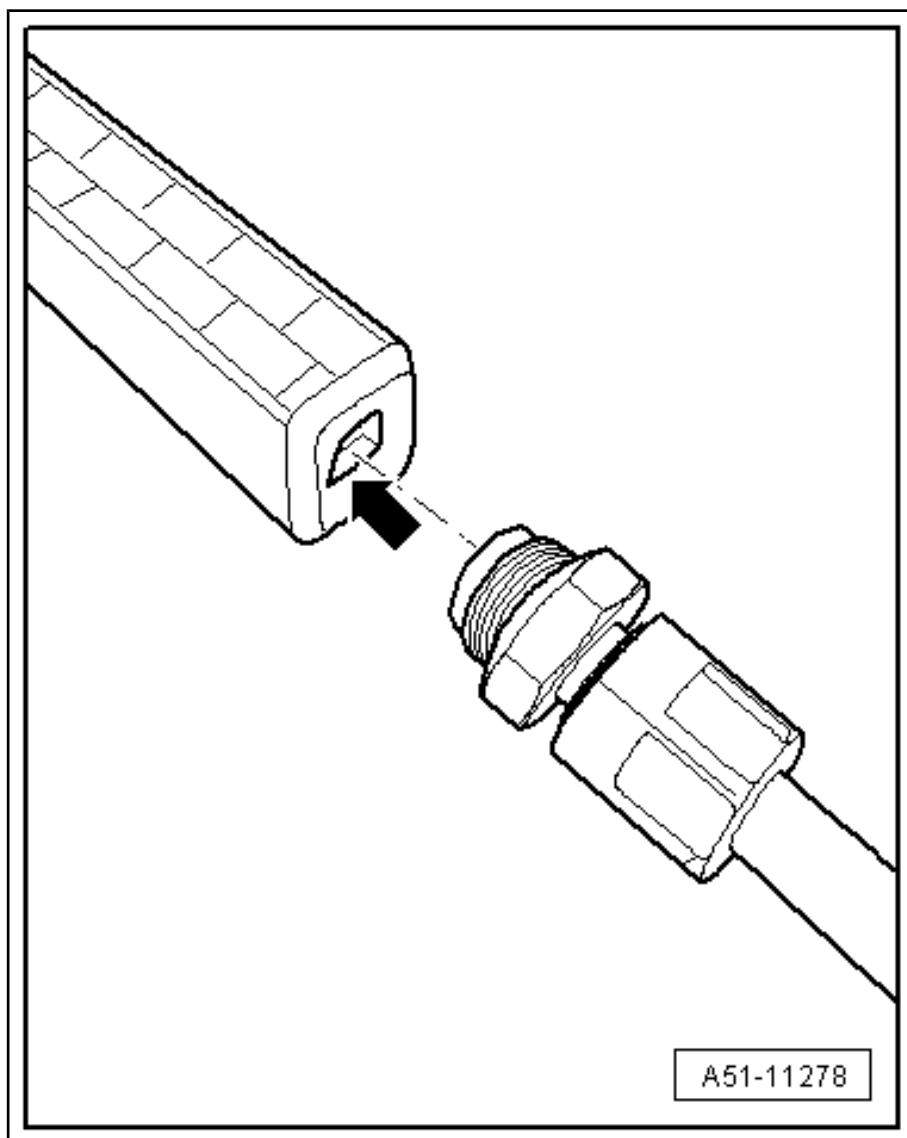
- Drill out opening in static mixer -a- to 9 mm  $\varnothing$  using drill .



- Shorten inner section of mixer so that hose can be screwed in fully.



- Screw extension hose onto mixer.



## 6.2 Procedure

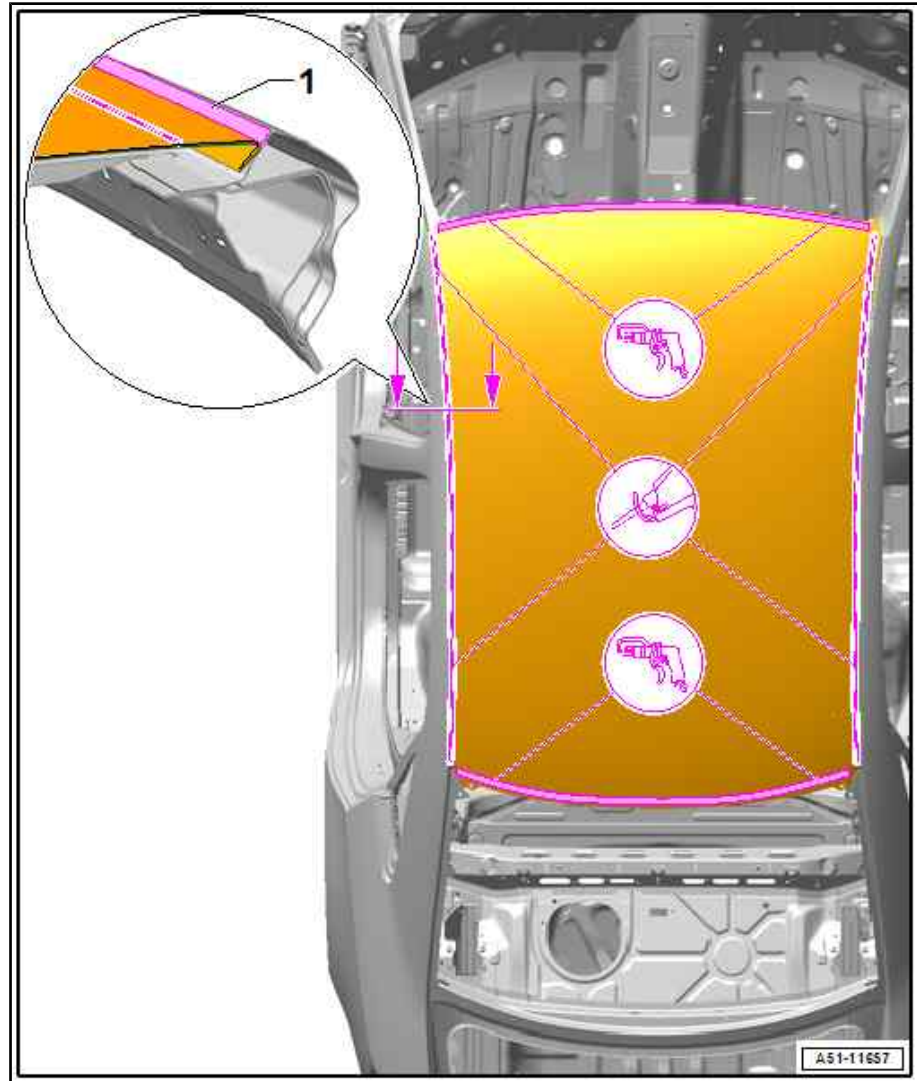
### Cutting locations



#### NOTICE

**Do not damage roof cross member (front and rear) when separating.**

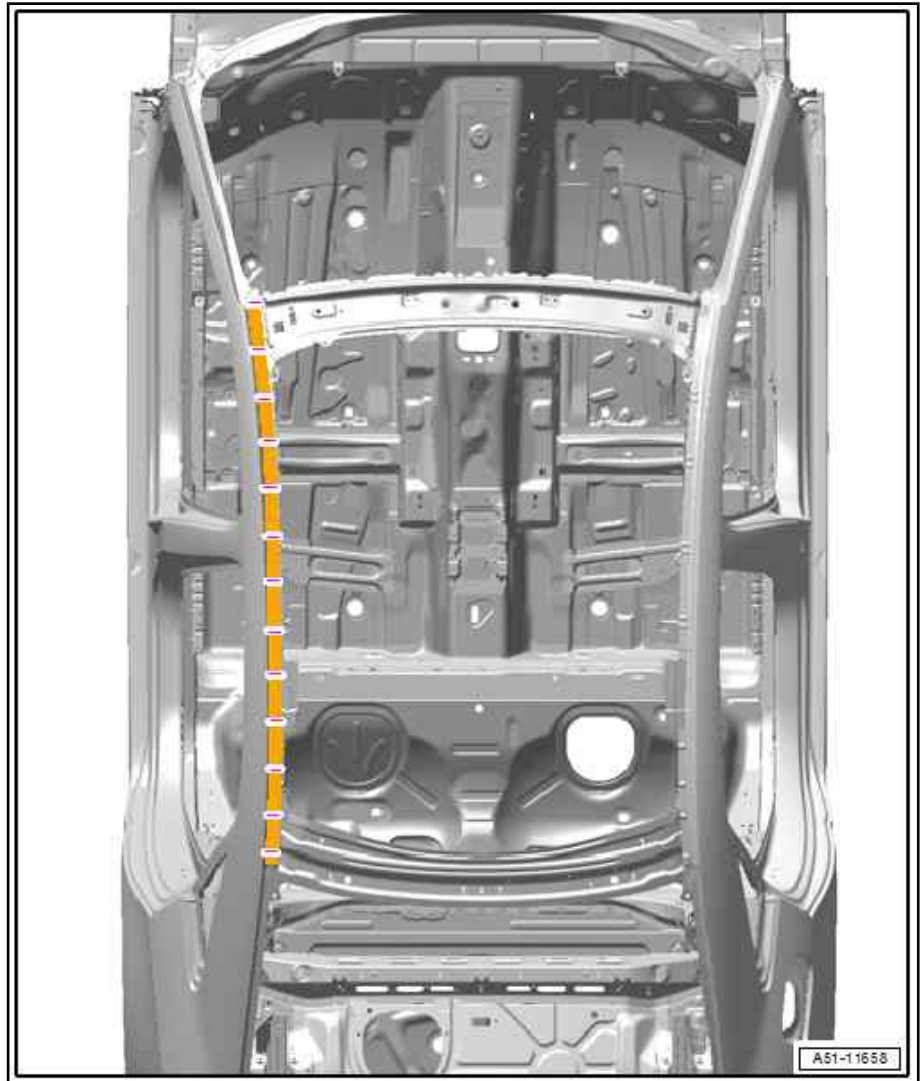
- Roughly cut out roof parallel with plasmatron weld seam -1- at a distance of approx. 30 mm using body saw .
- Drill off original joint to windscreen opening and rear window opening using spot weld breaker .
- Working from passenger compartment, separate bonded joints between roof and roof compartment, separate bonded joints between roof and roof cross members using electric cutter - V.A.G 1561 A- .



**Note**

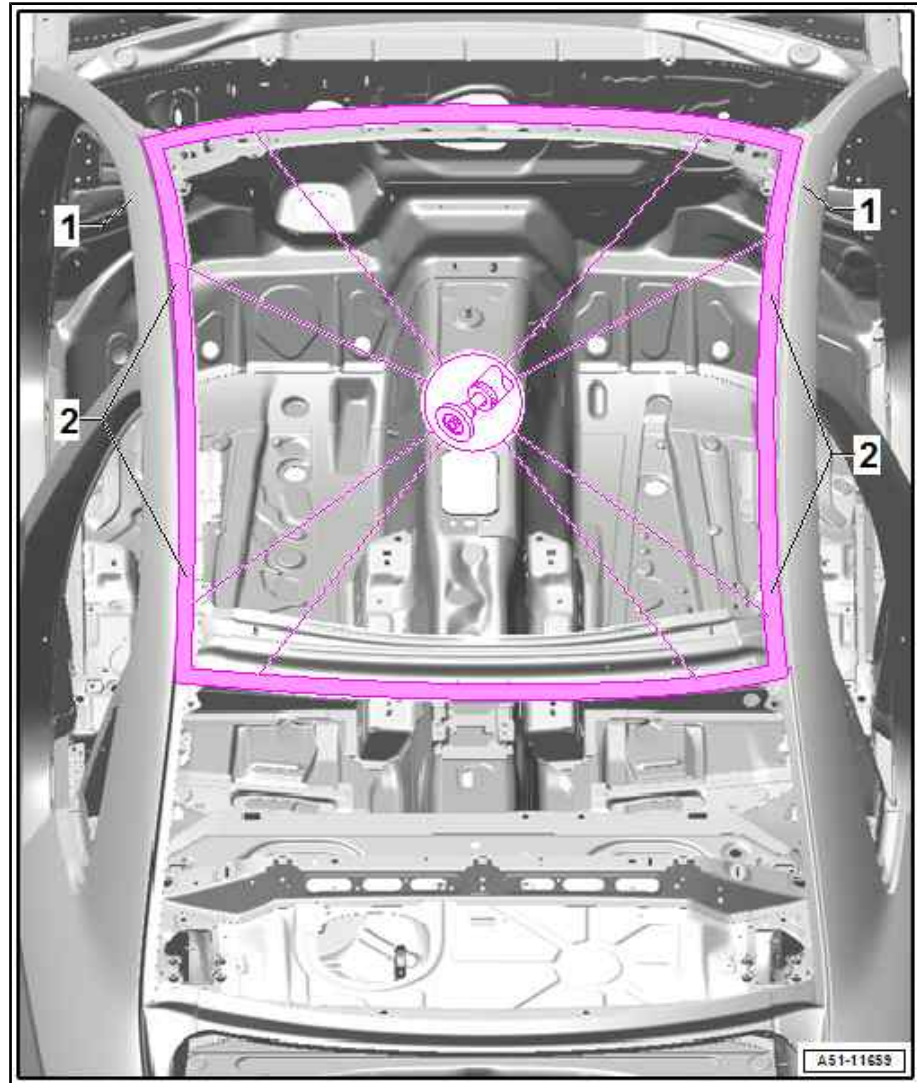
*Take care not to damage the roof side members when making cuts and when moving the remaining sections of the roof up and down.*

- Make cuts in remaining sections of roof using tin snips .
- Grip remaining sections with pliers and break open plasmatron weld seam by moving up and down.



**i** Note

- ◆ *Take care not to damage the roof side members -1- when removing the remaining sections of the roof -2-.*
- ◆ *Use a suitable flap disc; do not use a cutting disc or rough-filing disc.*
- Remove remaining material using compact angle grinder .
- Remove all residual adhesive and sealing compound from roof cross members at front and rear using scraper .
- Grind bonding areas down to bare metal.



### Replacement parts

- ◆ Roof
- ◆ Single-component assembly adhesive - D 190 MKD A3 - , 1 cartridge
- ◆ 2-component epoxy adhesive - DA 180 A00 A2 - , 2 sets of cartridges
- ◆ Cleaning solution - D 009 401 04-
- ◆ 2-component window adhesive - D 004 660 M2 - , 5 sets of cartridges
- ◆ Glass and paint primer - D 009 200 02-



## Preparing new part

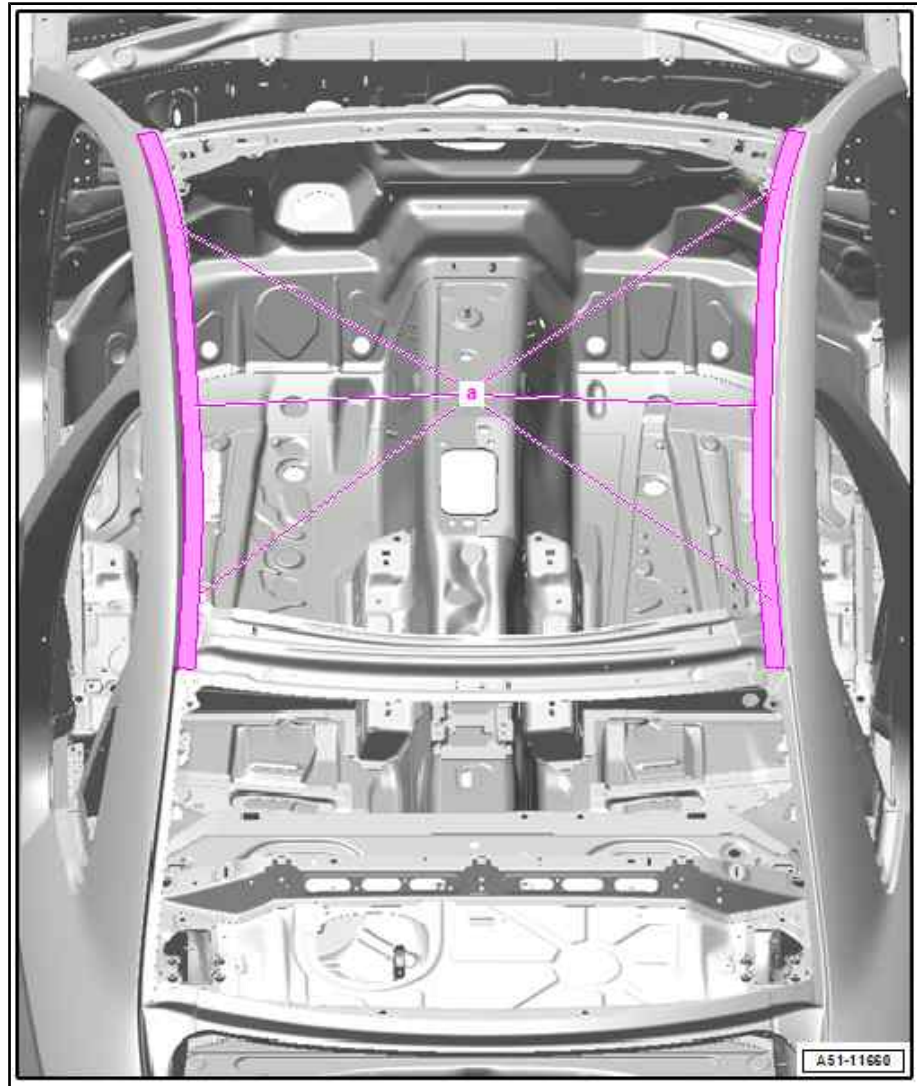


### Note

- ◆ *It is important to keep to the following procedure to ensure a satisfactory and effective roof repair.*
- ◆ *Bonded areas must not be treated with filler coat (surfacers) and painted before bonding in the roof.*
- ◆ *The adhesive materials must be applied very quickly.*
- ◆ *Make sure adhesive is applied before pot life is exceeded.*
- ◆ *Use a pneumatic cartridge gun to apply the bonding materials.*
- ◆ *Affixing adhesive tape to the roof parallel with the bonded seam on the side prevents soiling when bonding.*

## Bonding in

- Position roof on roof frame and check alignment of roof with roof side members (visual inspection).
- Check fit of roof with rear lid and windscreen.
- Fix roof in position in windscreen flange and sealing flange of rear lid using one self-tapping screw at each end.
- Remove roof.
- Apply glass and paint primer - D 009 200 02- in area of roof frame -a-.

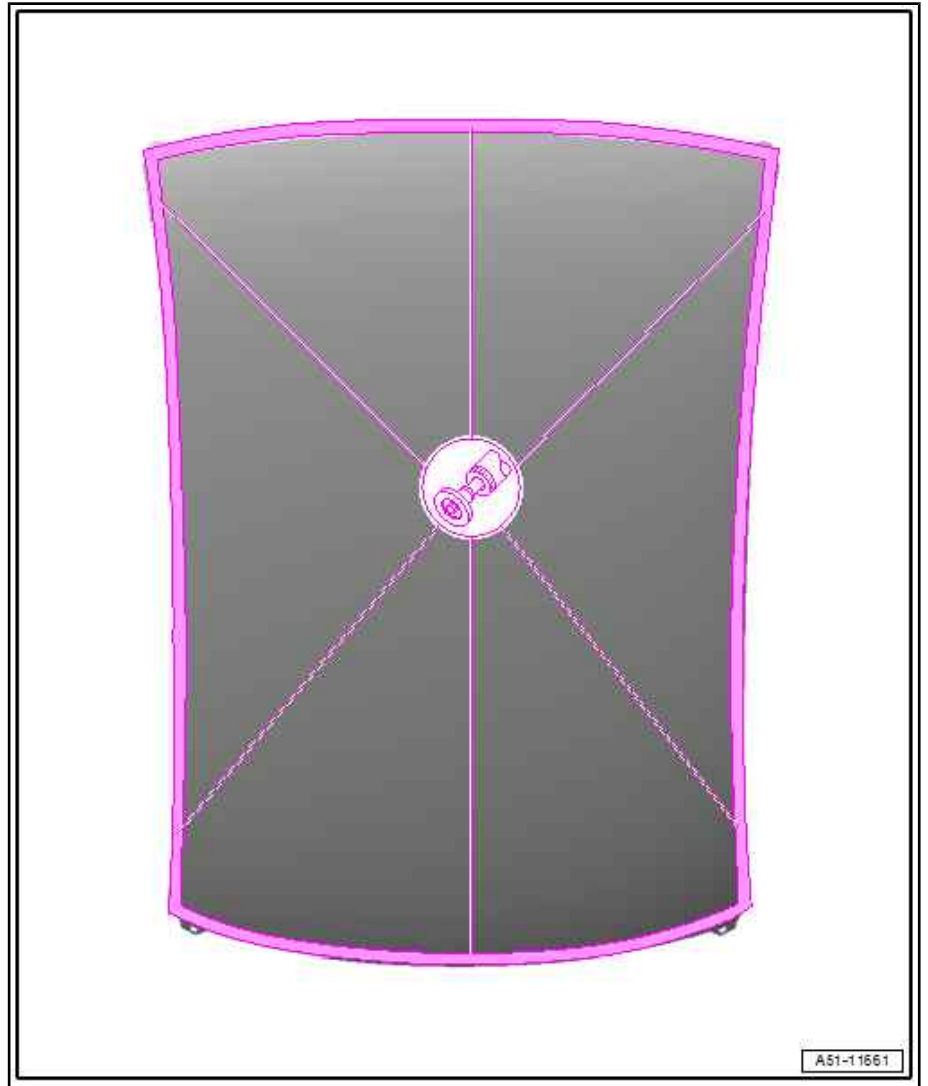


- Mask outside of roof panel parallel with side bonding area using adhesive tape.
- Attach four suction lifters - V.A.G 1344- or magnets - VAS 6739- to outside of roof panel.

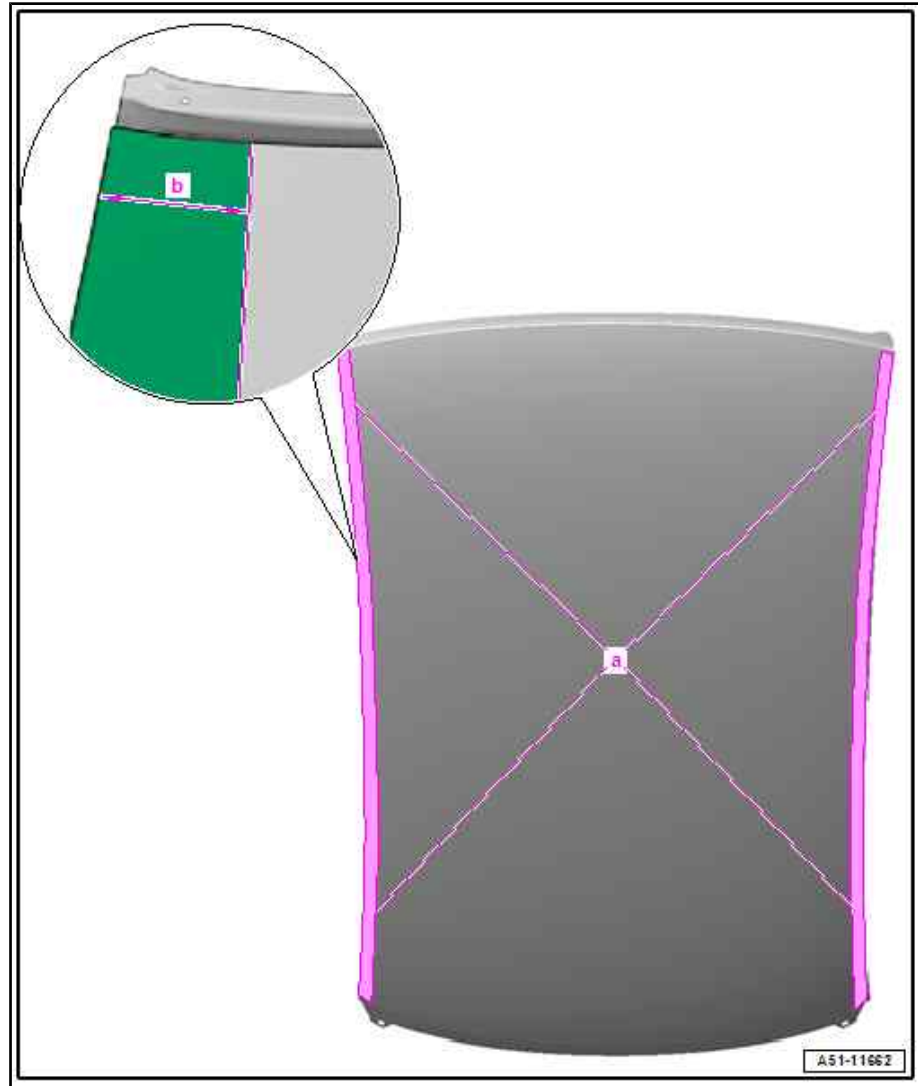
**Pre-treatment - applies to replacement part only**

- Grind welding surfaces down to bare metal.
- Roughen bonding surfaces using a clean sanding disc (grit size P 80 or P 100).
- Clean roof frame, roof reinforcement and roof with cleaning solution - D 009 401 04- .

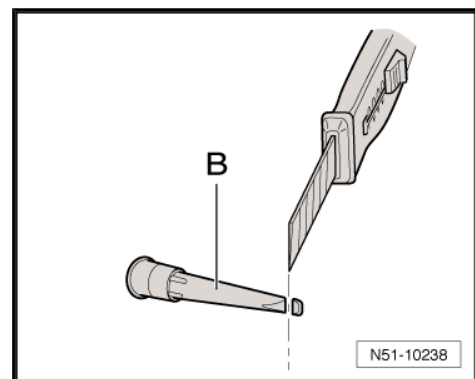
This ensures that the 2-component epoxy adhesive - DA 180 A00 A2 - forms a good joint with the bonding area.



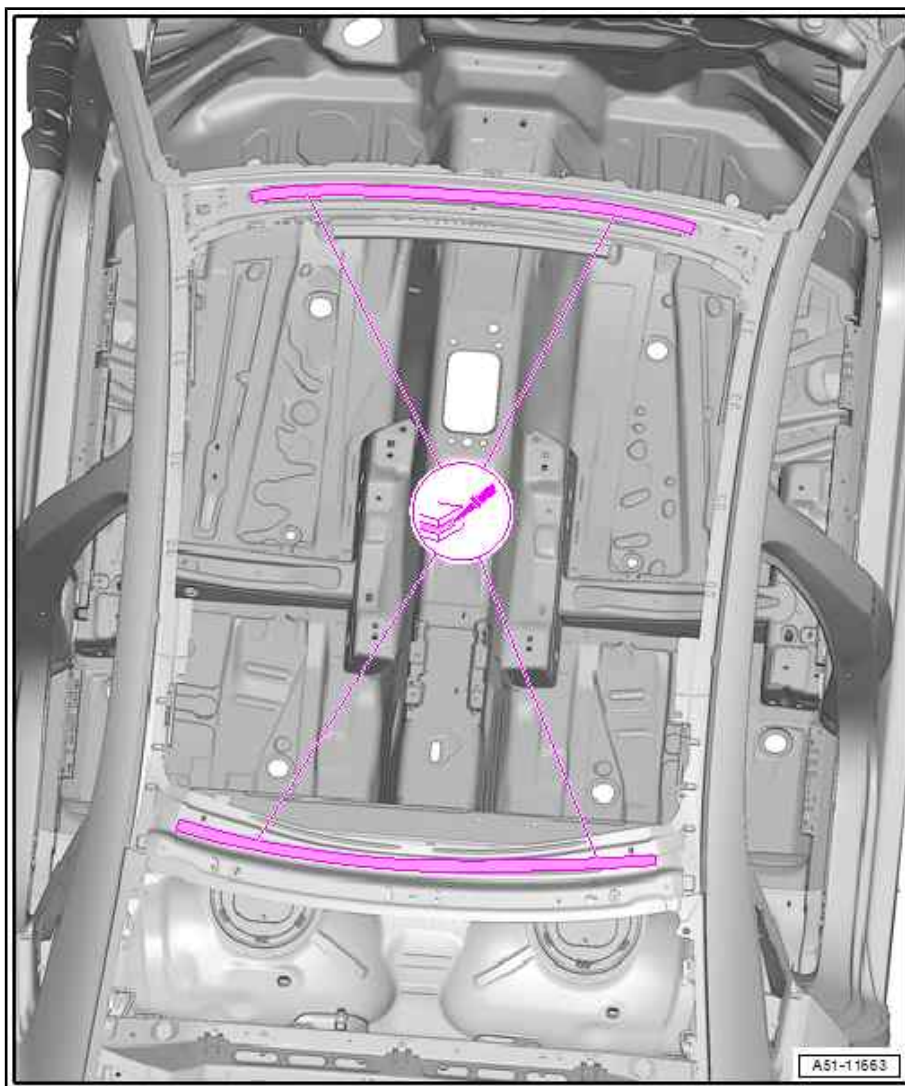
- Apply glass and paint primer - D 009 200 02- approx. 5 cm wide -b- on inner section of roof and inner side flange -a-.



- Cut off approx. 2 mm from nozzle -B- to obtain appropriate bead geometry.



- Apply single-component assembly adhesive - D 190 MKD A3- to roof cross members in the area of the factory bonding location using pneumatic cartridge gun - V.A.G 1761/1- .

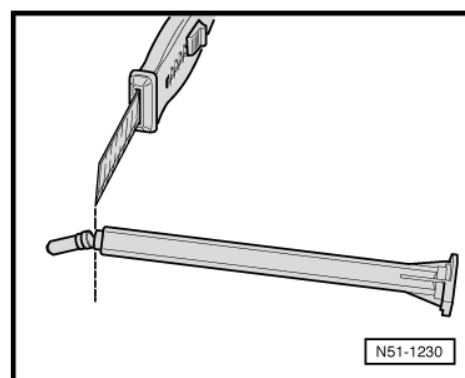


### Preparing new part

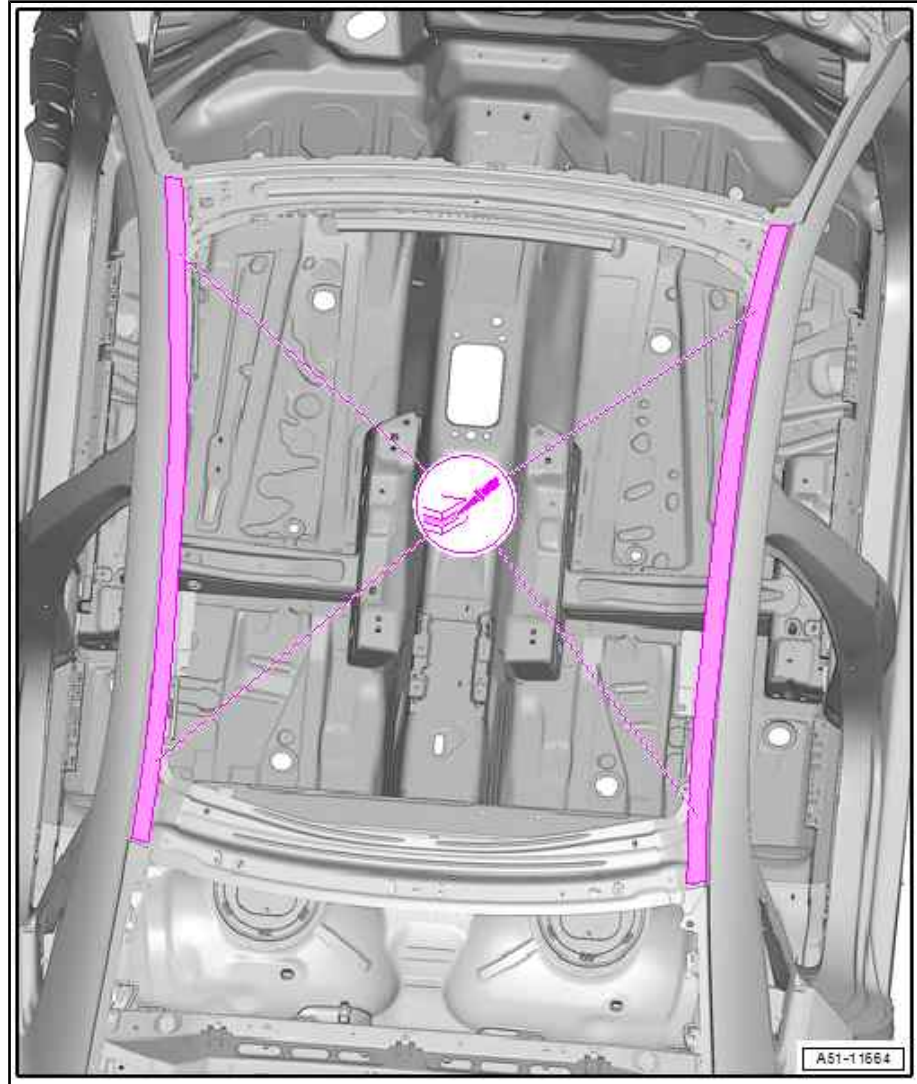
- Cut static mixer from 2-component epoxy adhesive set - DA 180 A00 A2 - down to 4th notch to obtain required bead cross section.

### Note

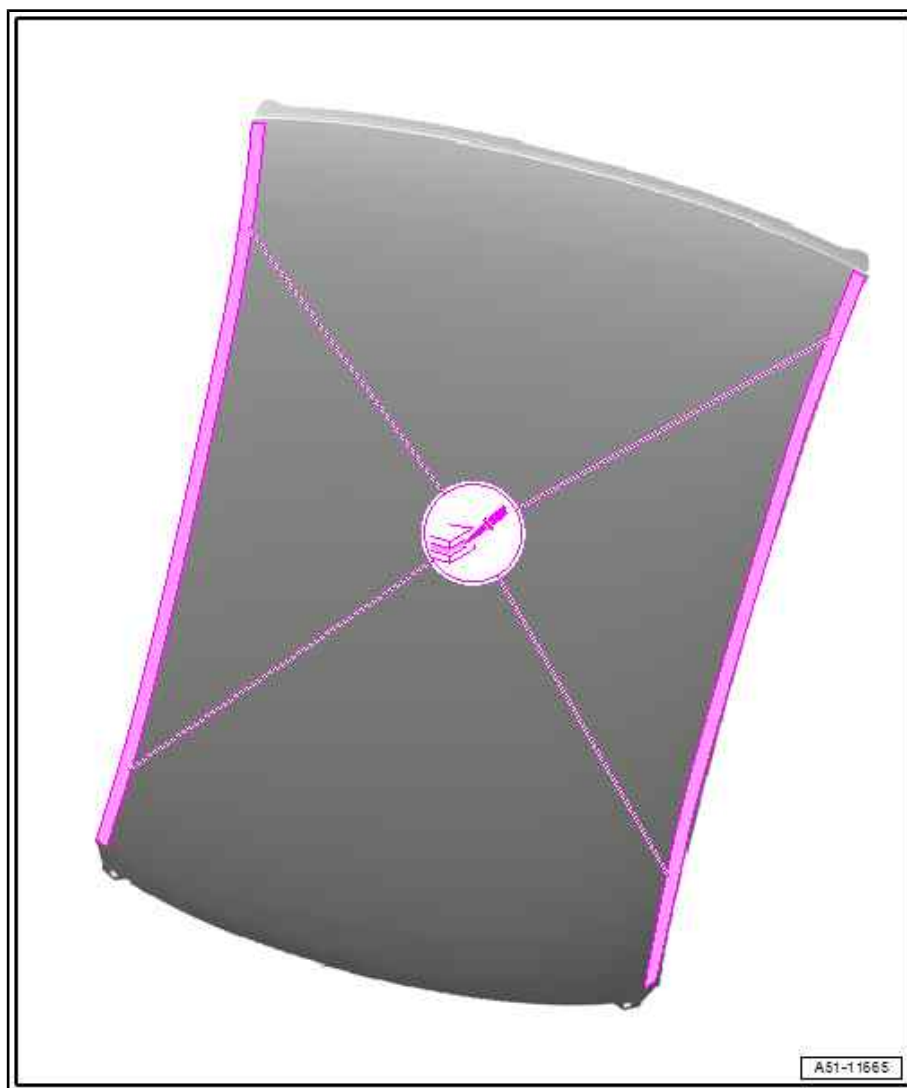
- ◆ *The pot life of the 2-component epoxy adhesive - DA 180 A00 A2 - is roughly 90 minutes.*
- ◆ *A second mechanic is required for the next steps.*



- Apply two continuous beads of 2-component epoxy adhesive - DA 180 A00 A2 - to bevelled sections of roof side members in area of zero-gap joint using double cartridge gun - VAS 6453- .



- Apply one continuous bead of 2-component epoxy adhesive - DA 180 A00 A2 - to side flanges of roof using double cartridge gun - VAS 6453- .



- Immediately fit and align roof.
- Use one self-tapping screw at each end to fix roof in position in centring hole in windscreen flange and sealing flange for rear lid.
- Fix roof in position at windscreen opening and rear window opening using mole grips, 18-18 - VAS 5430/1- .

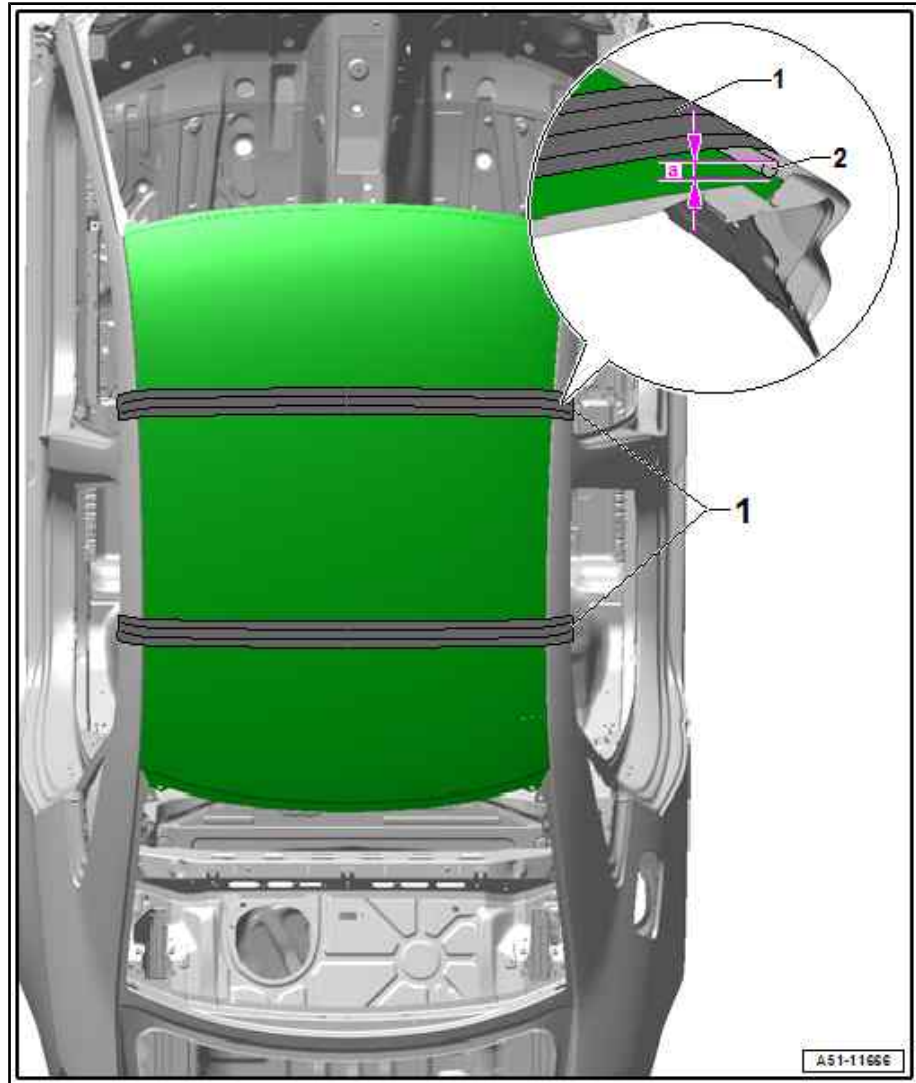
#### Adjusting roof depth

- Additionally fix roof in position with two tensioning straps -1-.
- Set required depth using e.g. drill bit or suitable wooden spacer -2-.

Depth setting in centre part of front door -a = 3.0 mm -

Depth setting for rear section -a = 2.5 mm -

- Roughly spread any 2-component epoxy adhesive - DA 180 A00 A2 - that comes out at edge of roof.



**!** NOTICE

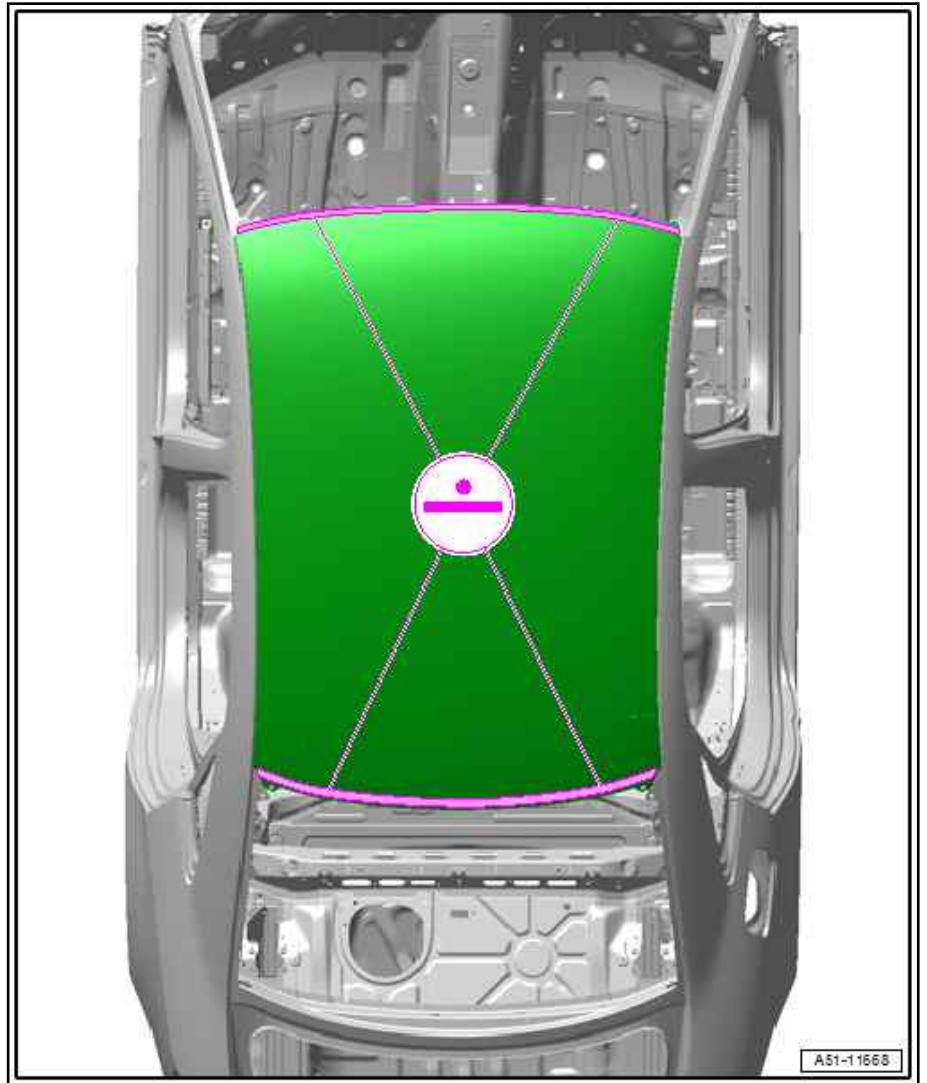
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**!** CAUTION

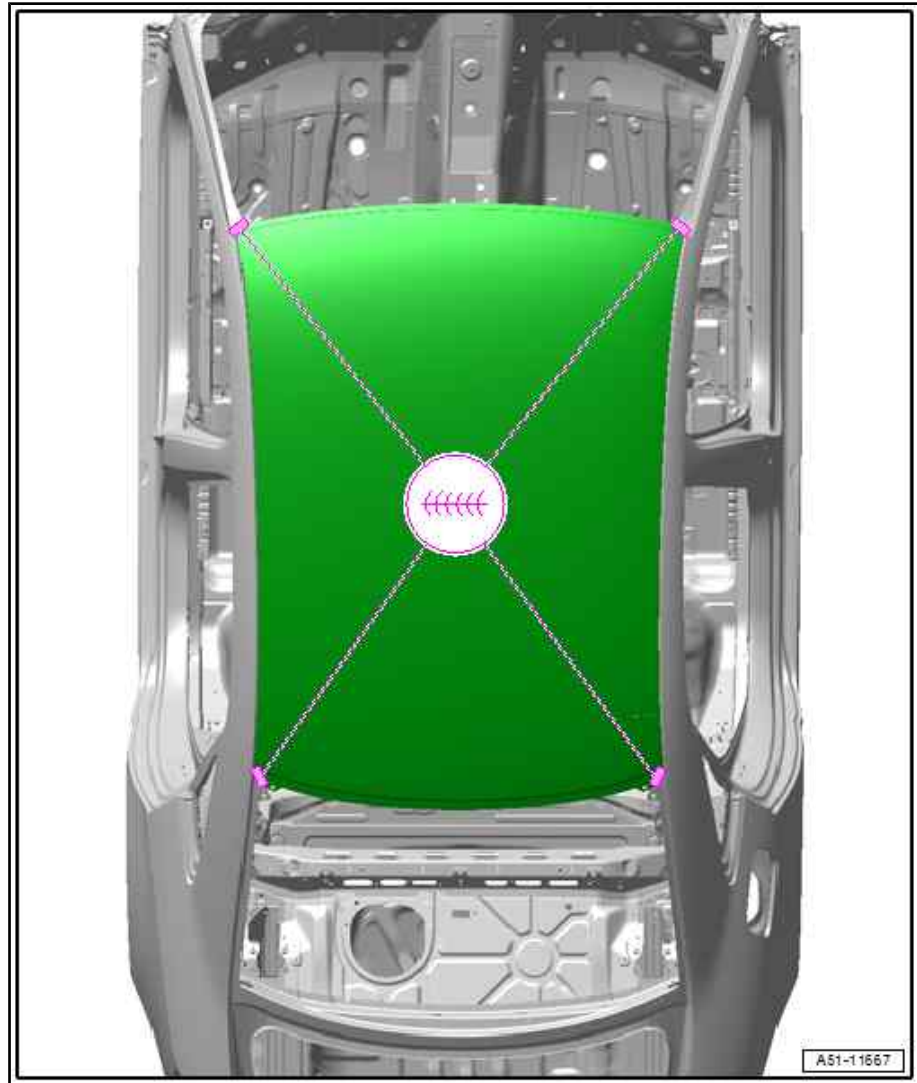
Allow bonded joint on roof to harden for 60 minutes at approx. 65° to 80° C with radiant heater. Check temperature constantly with temperature sensor.

**Welding in**

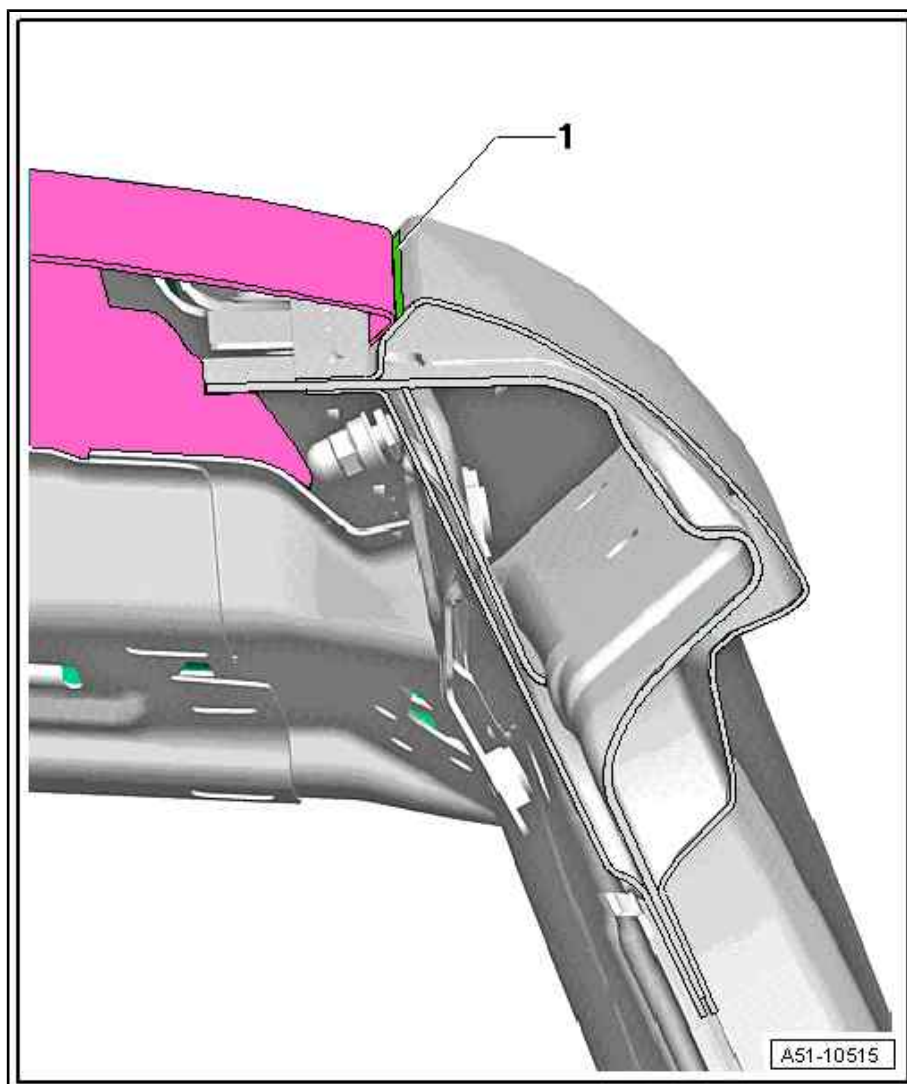
- Weld in roof using resistance spot welder : RP spot weld seam.



- Make additional welds for roof using shielded arc welding equipment : SG continuous seam.
- Grind down SG continuous weld seams using compact angle grinder .



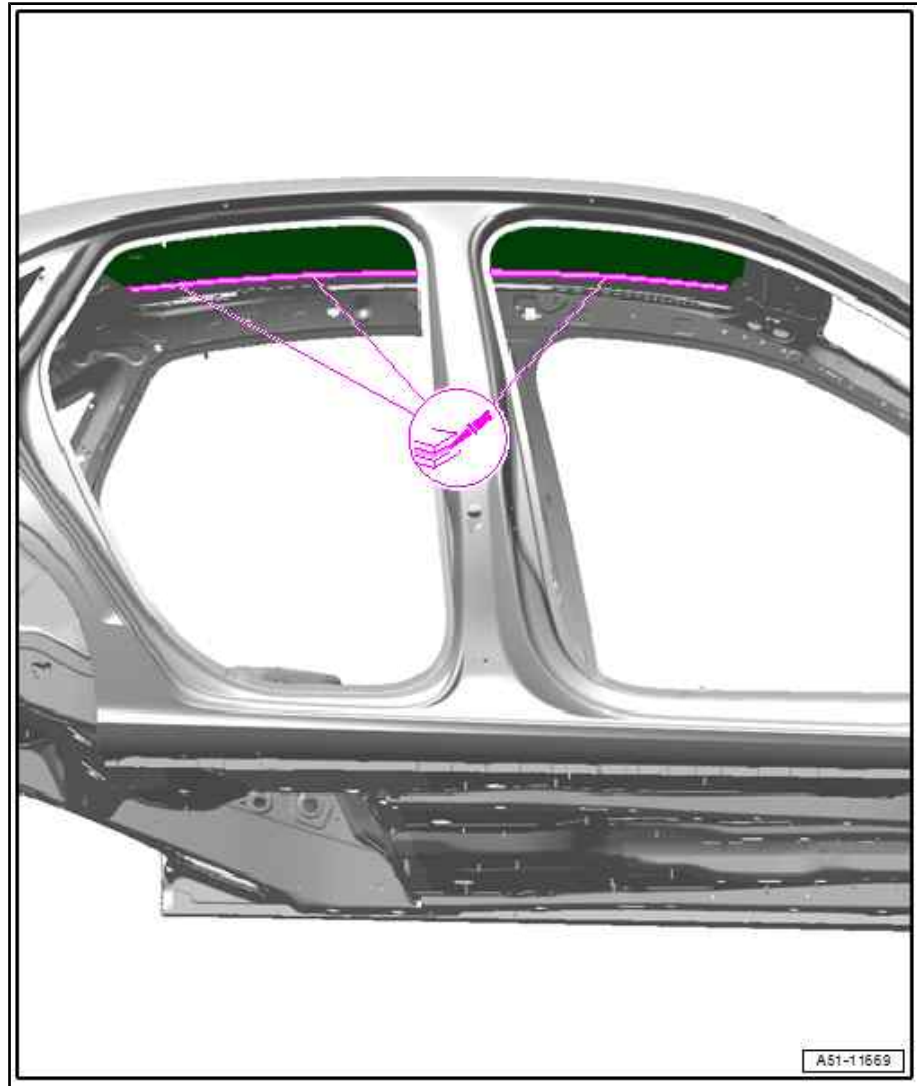
- Grind zero-gap joint -1- into shape (left and right).



**i** Note

*Please note instructions for use: window adhesive should be applied at a temperature of approx. 20°C.*

- Apply 2-component window adhesive - D 004 660 M2 - -3- in roof side member using double cartridge gun - VAS 5237- .
- ◆ 1 = 2-component epoxy adhesive - DA 180 A00 A2 -
- ◆ 2 = Glass and paint primer - D 009 200 02-
- ◆ 3 = 2-component window adhesive - D 004 660 M2 -





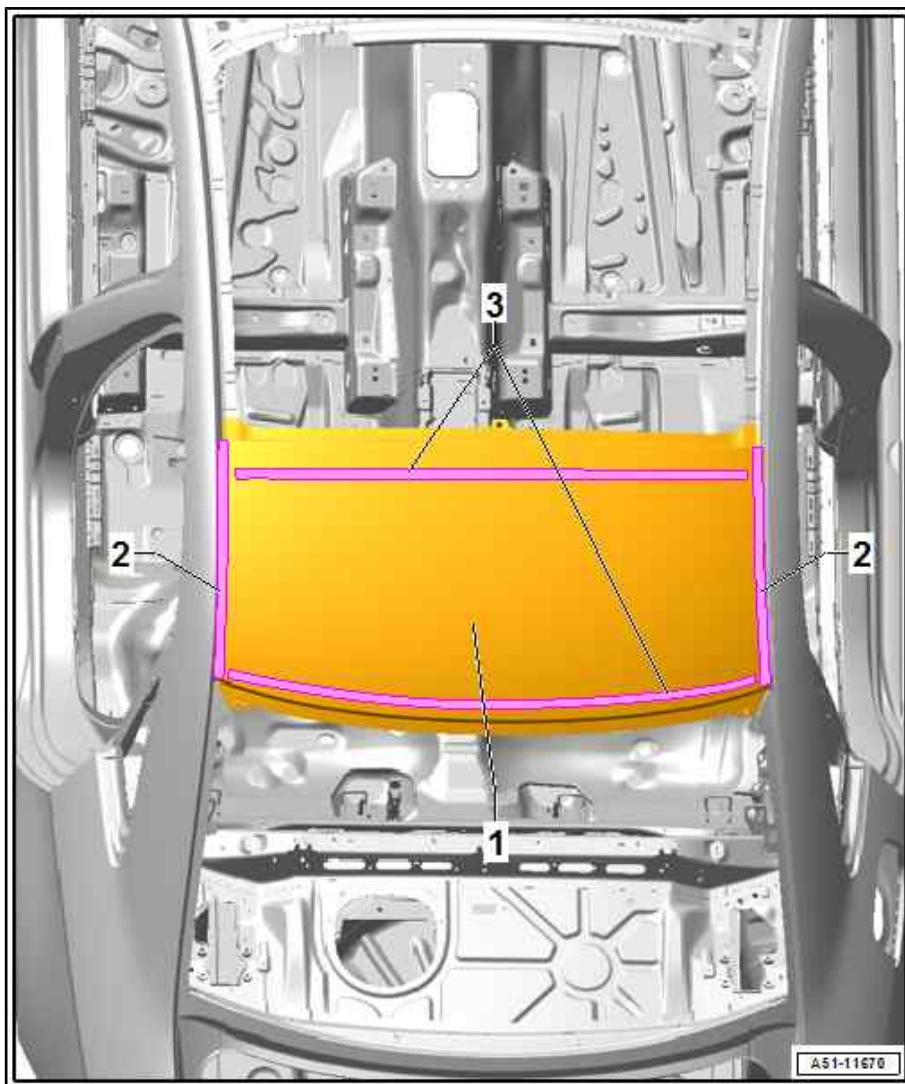
RO: 51 23 55 00

## 7 Roof - Renewal (vehicles with panoramic tilting sunroof - Saloon)

1 - Roof rear section

2 - Plasmatron weld seam

3 - Bonded area



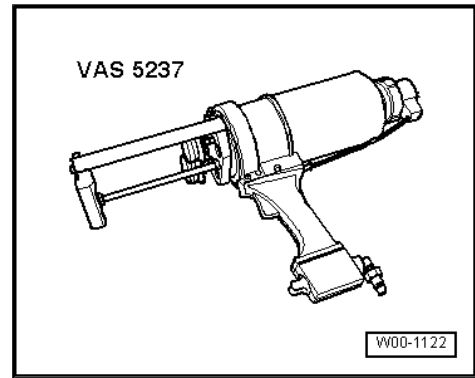
### 7.1 Tools

#### Special tools and workshop equipment required

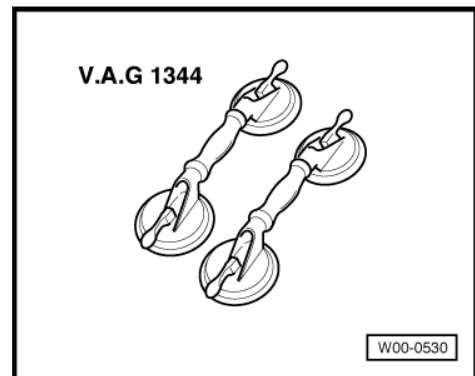
- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Drill
- ◆ Spot weld breaker
- ◆ Body saw
- ◆ Electric cutter
- ◆ Mole grips, 18-18 - VAS 5430/1-
- ◆ Double cartridge gun - VAS 6453-



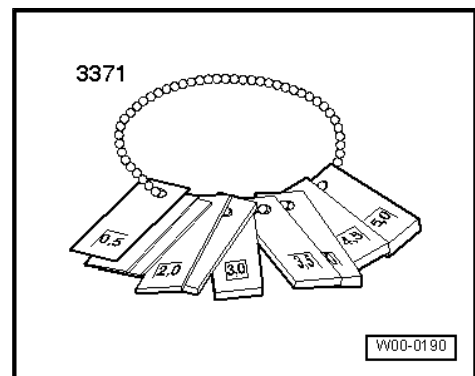
- ◆ Double cartridge gun - VAS 5237-



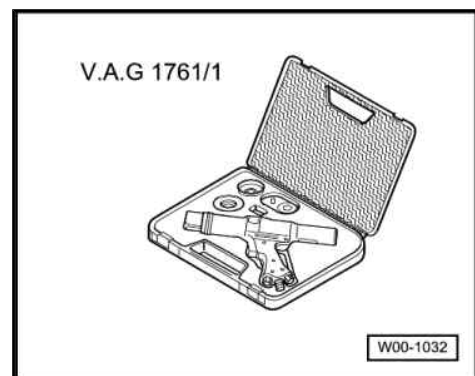
- ◆ Suction lifter - V.A.G 1344- or magnet - VAS 6739-



- ◆ Setting gauge - 3371-

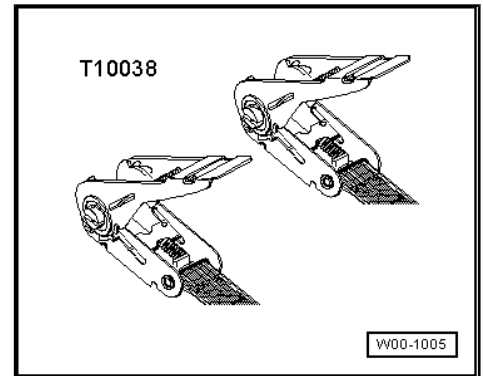


- ◆ Compressed-air gun - V.A.G 1761/1-





◆ Tensioning strap - T 10038-



**!** NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

1 - 2-component window adhesive - D 004 660 M2 -

- Open cap.

2 - Static mixer

3 - Extension hose

Part number 000 809 937

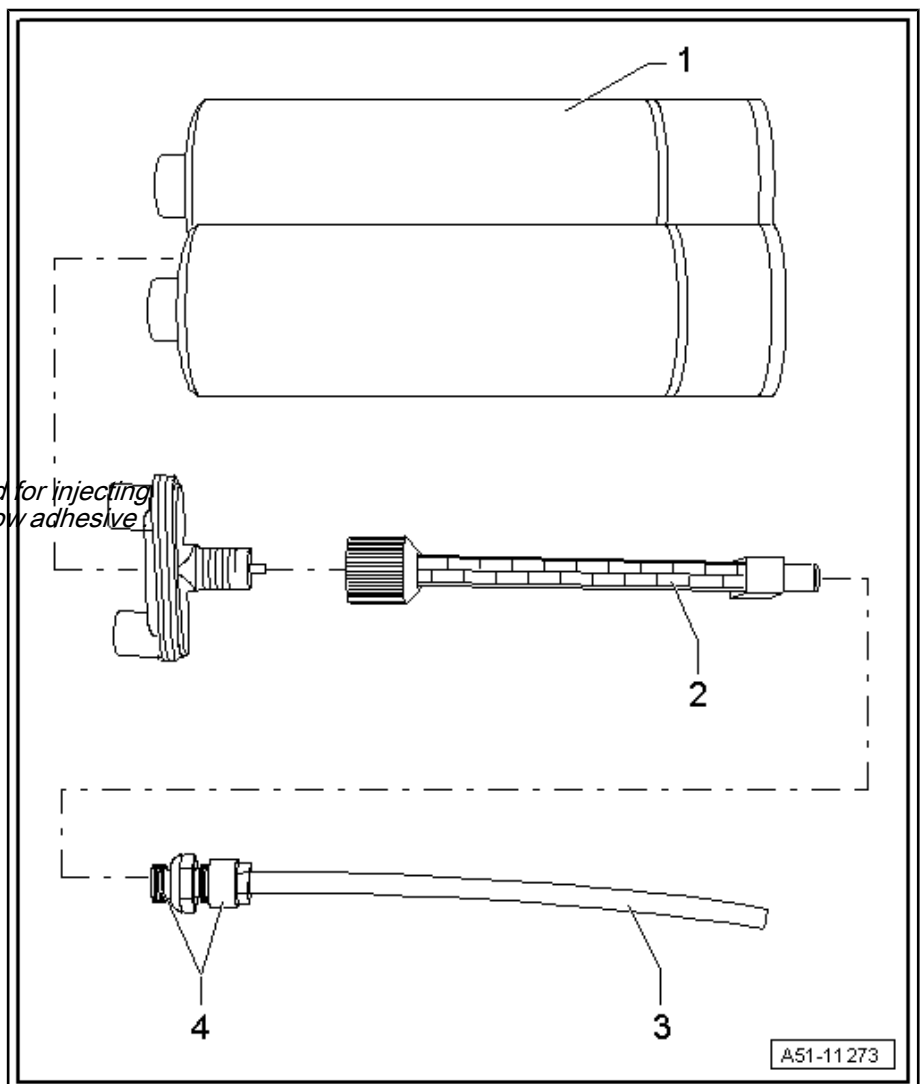
- Screw onto static mixer -2- with adapter -4-.

4 - Adapter



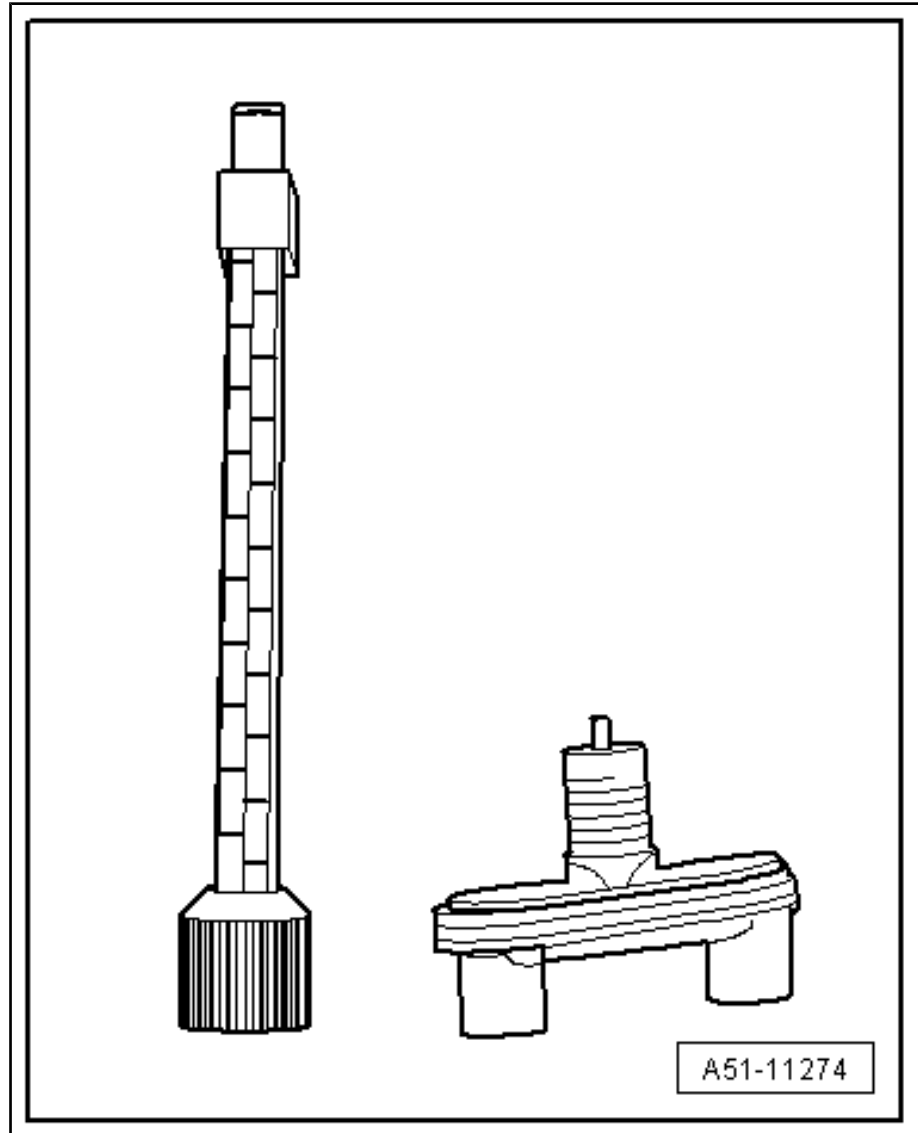
Note

*The adapter is required for injecting the 2-component window adhesive.*

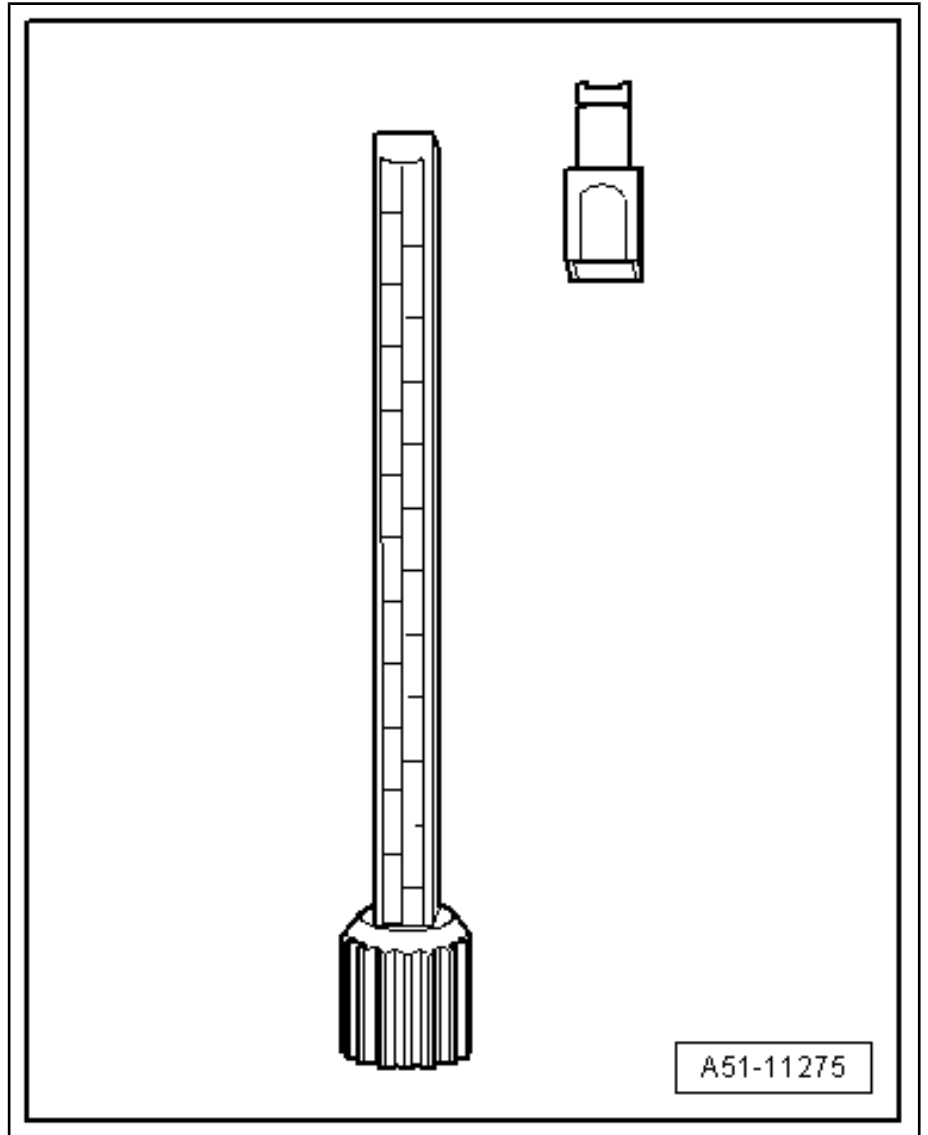


Instructions for using extension hose for window adhesive

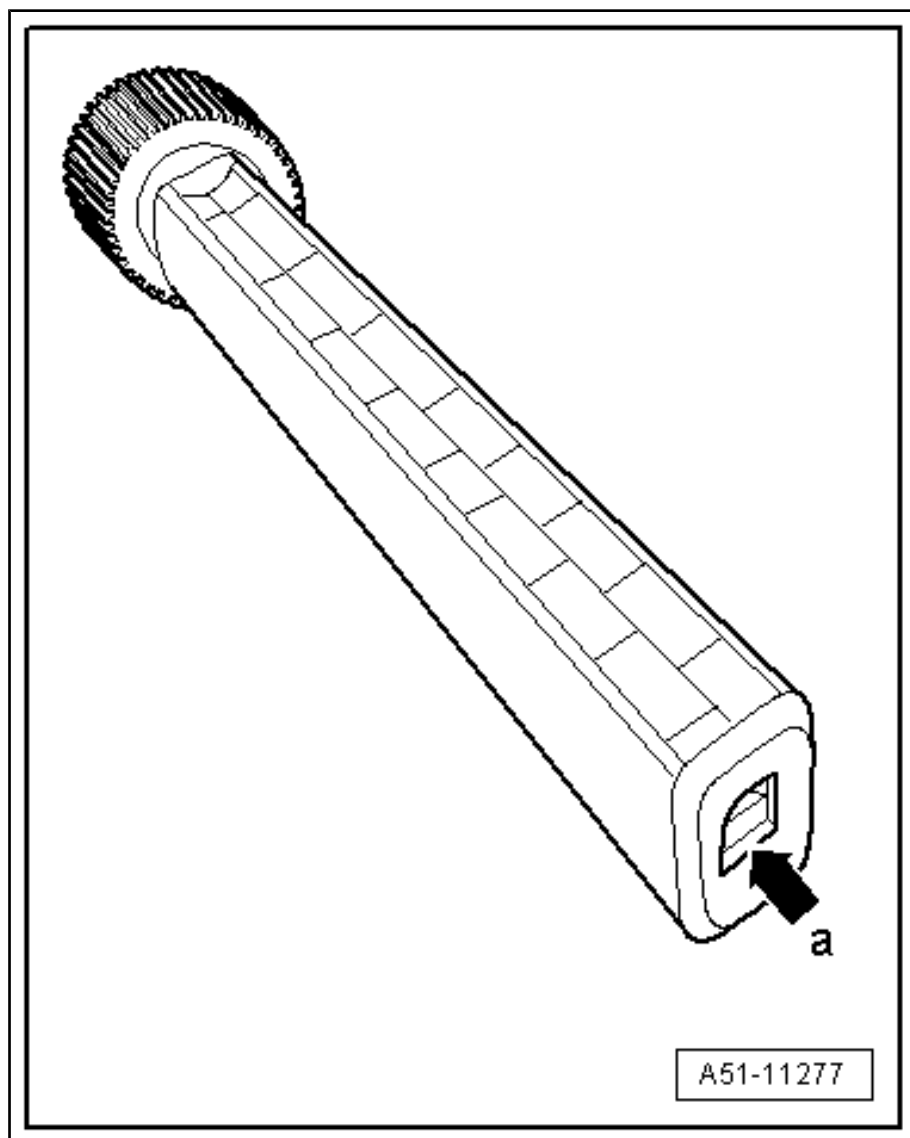
- Take static mixer out of window adhesive kit.



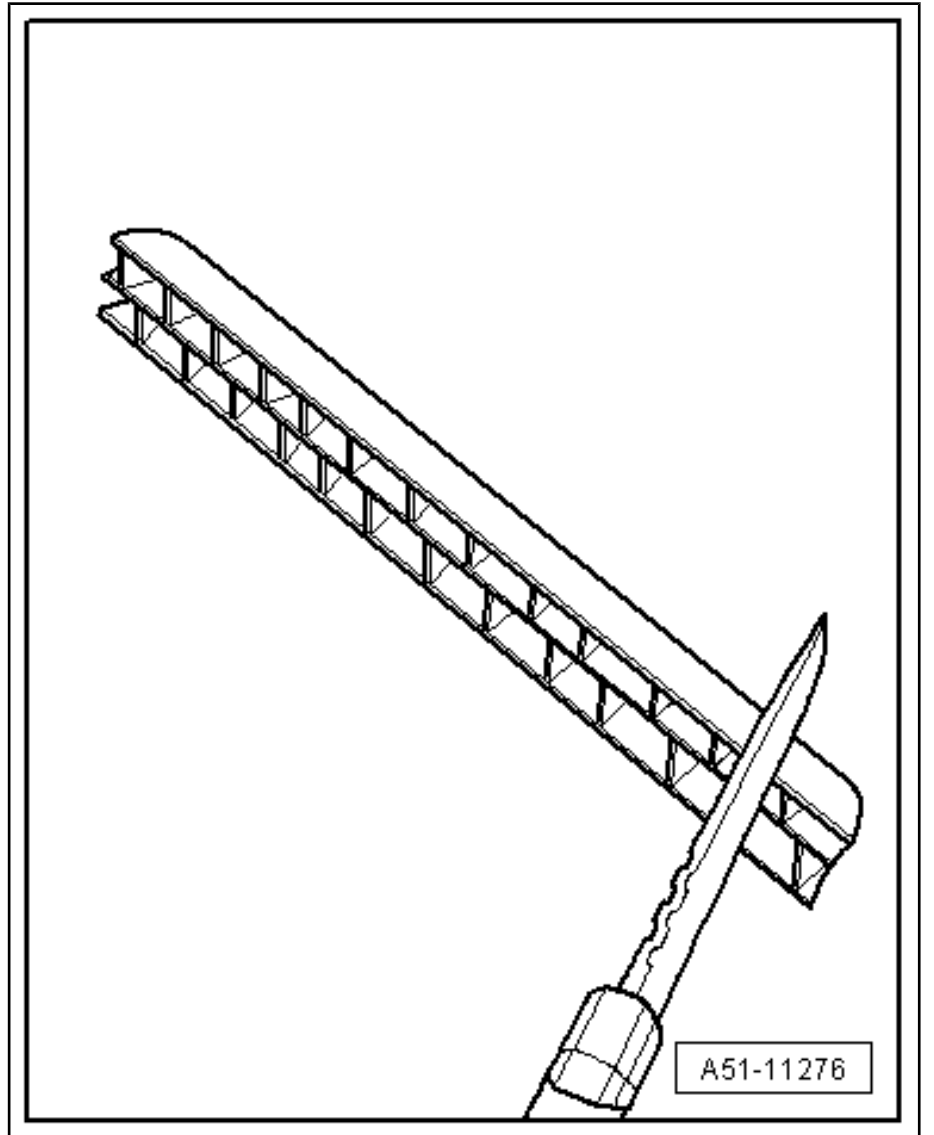
- Remove front cap from static mixer.



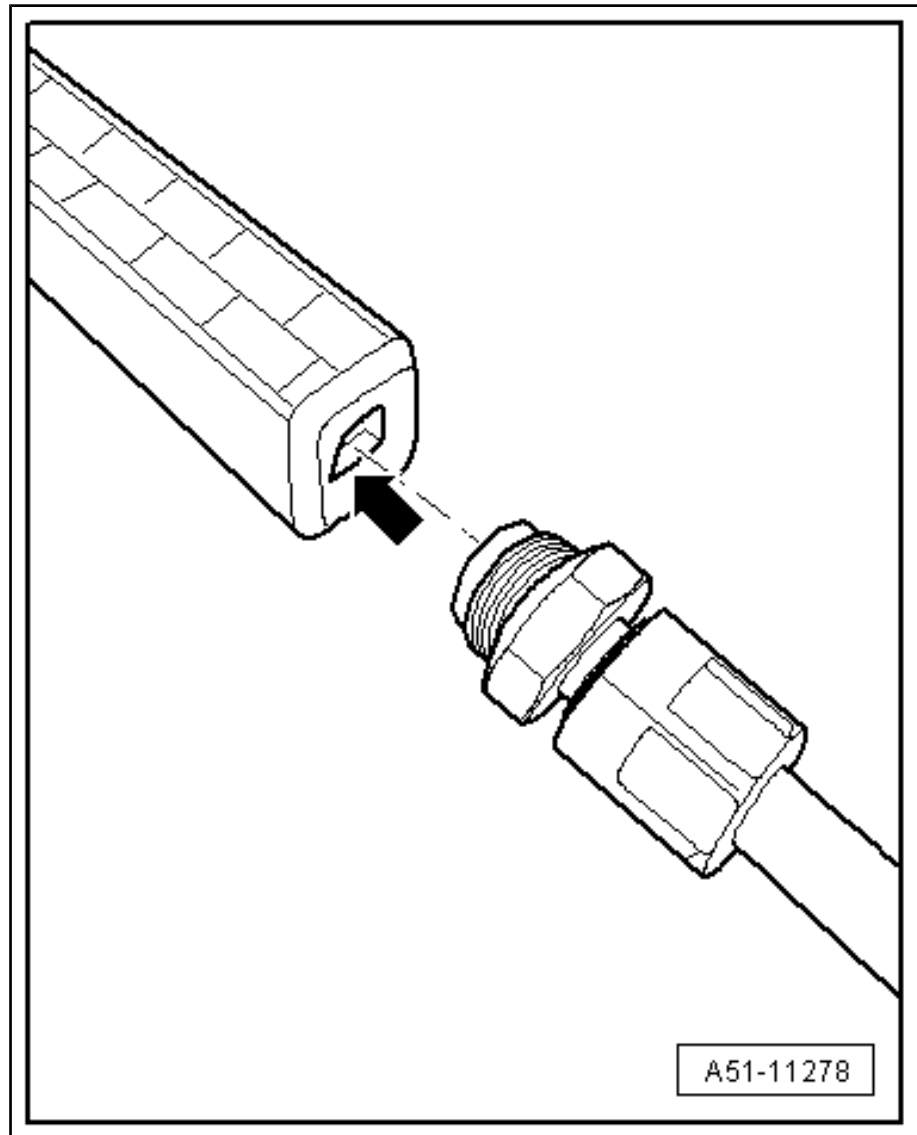
- Drill out opening in static mixer -a- to 9 mm  $\varnothing$  using drill .



- Shorten inner section of mixer so that hose can be screwed in fully.



- Screw extension hose onto mixer.



## 7.2 Procedure

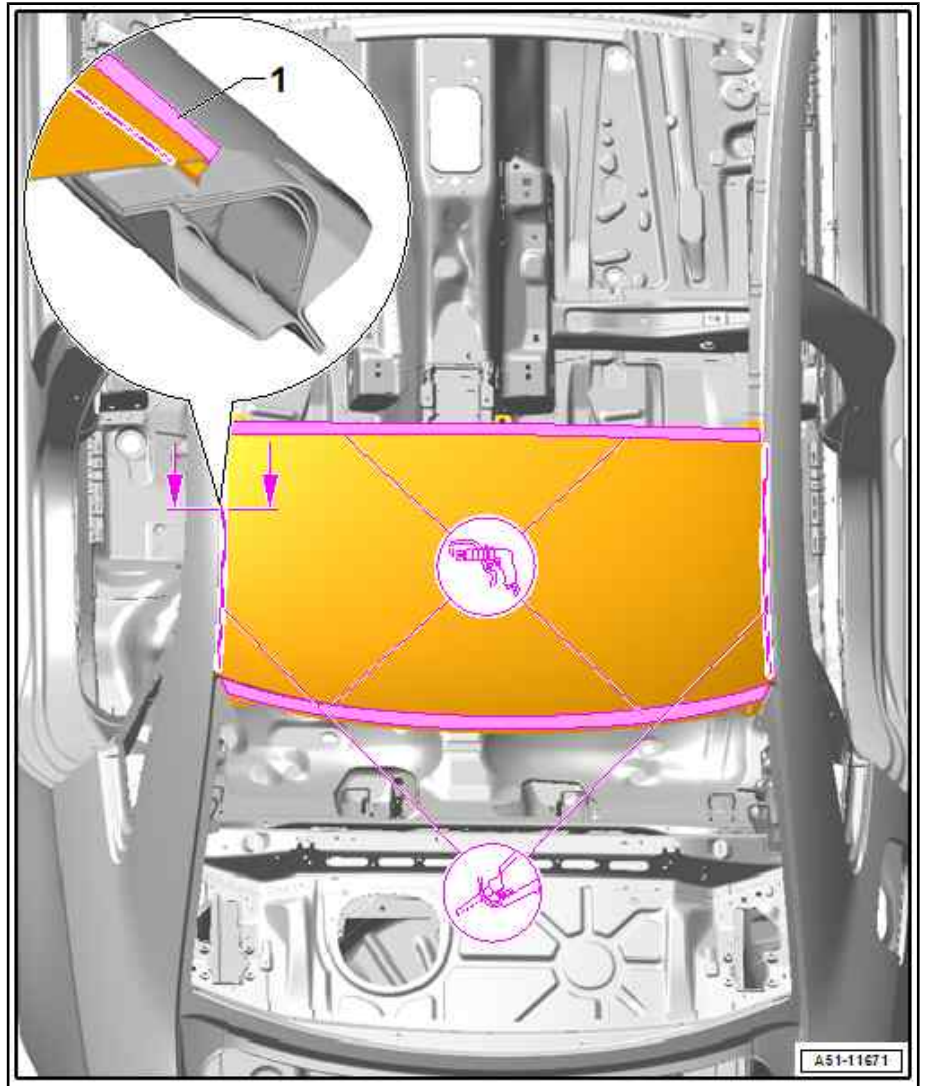
### Cutting locations



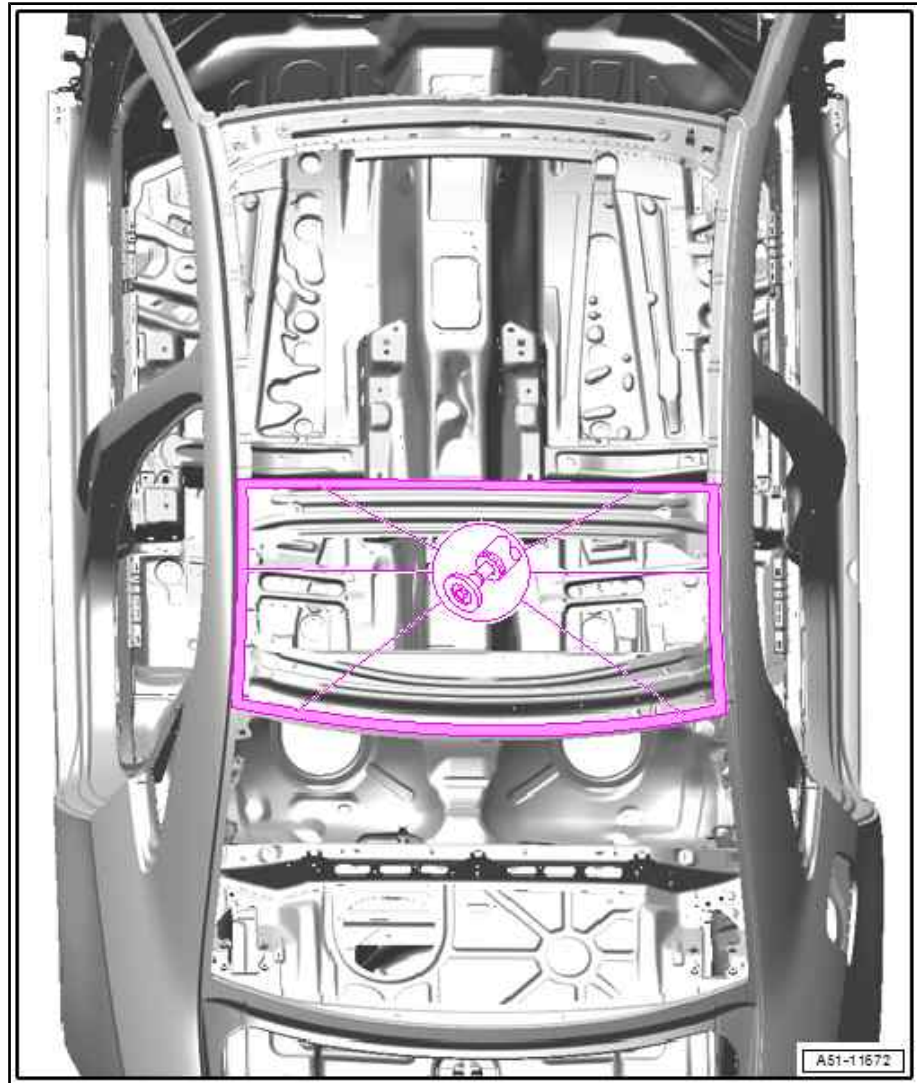
**NOTICE**

Take care not to damage roof cross member when cutting.

- Roughly cut out roof parallel with plasmatron weld seam -1- at a distance of approx. 30 mm using body saw .
- Working from passenger compartment, separate bonded joints between roof and roof cross members using electric cutter - V.A.G 1561 A- .
- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .  
Take care not to damage roof frame when removing remaining material from roof frame.  
Do not use cutting discs or rough-filing discs.



### Replacement parts

- ◆ Roof rear section
- ◆ Single-component assembly adhesive - D 190 MKD A3 - , 1 cartridge
- ◆ 2-component epoxy adhesive - DA 180 A00 A2 - , 1 set of cartridges
- ◆ Cleaning solution - D 009 401 04-
- ◆ 2-component window adhesive - D 004 660 M2 - , 3 sets of cartridges
- ◆ Glass and paint primer - D 009 200 02-



## Bonding in

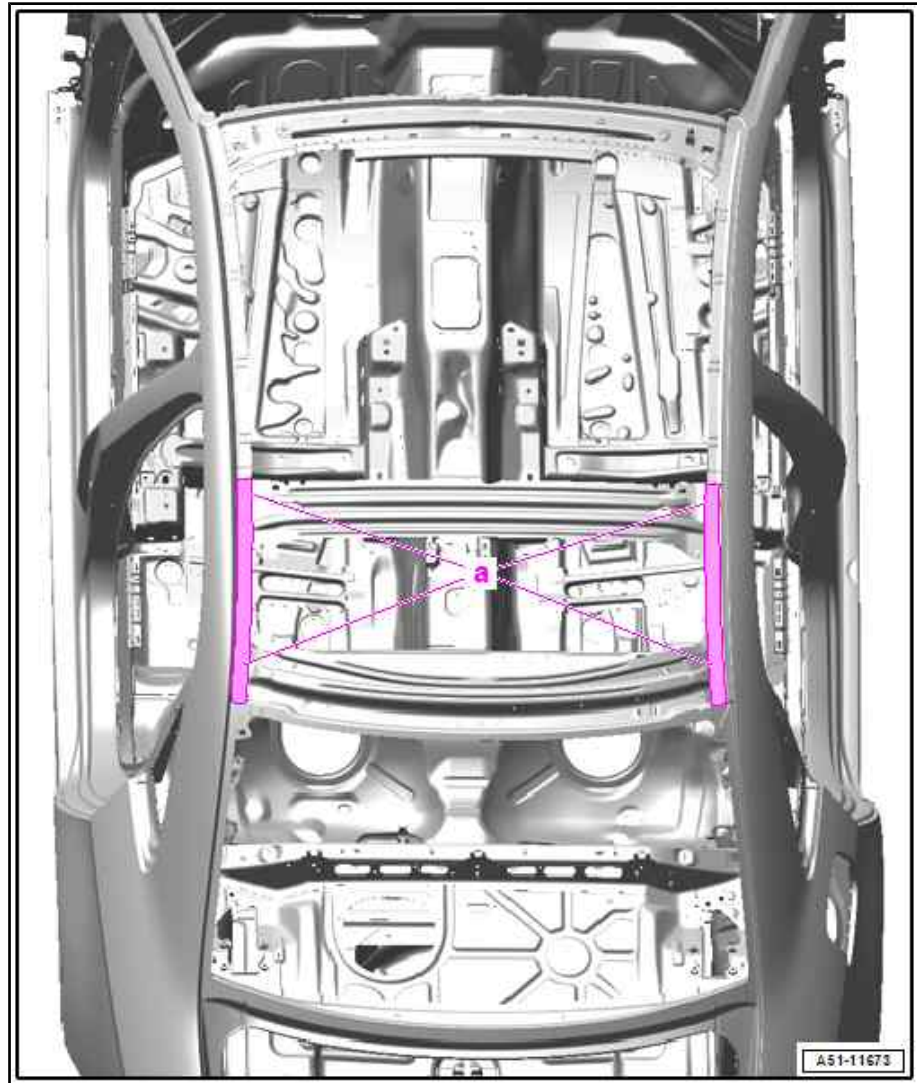


### Note

- ◆ *It is important to keep to the following procedure to ensure a satisfactory and effective roof repair.*
- ◆ *Bonded areas must not be treated with filler coat (surfacers) and painted before bonding in the roof.*
- ◆ *The adhesive materials must be applied very quickly.*
- ◆ *Make sure adhesive is applied before pot life is exceeded.*
- ◆ *Use a pneumatic cartridge gun to apply the bonding materials.*
- ◆ *Affixing adhesive tape to the roof parallel with the bonded seam on the side prevents soiling when bonding.*

A second mechanic is required for the next steps.

- Position roof on roof frame and check alignment of roof with roof side members (visual inspection).
- Check fit of roof with rear lid and glass roof.
- Fix roof in position in glass roof flange and sealing flange of rear lid using one self-tapping screw at each end.
- Remove roof.
- Apply glass and paint primer - D 009 200 02- in area of roof frame -a-.

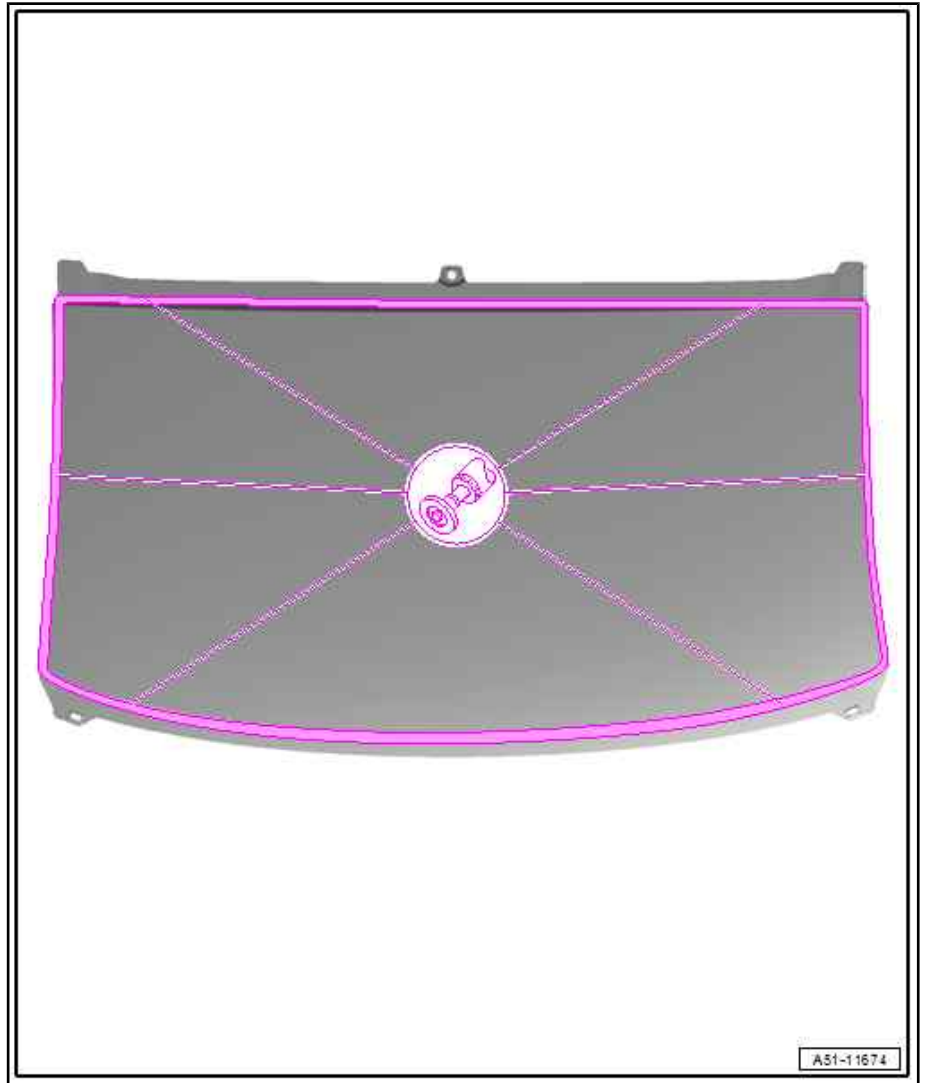


- Mask outside of roof panel parallel with side bonding area using adhesive tape.
- Attach four suction lifters - V.A.G 1344- or magnets - VAS 6739- to outside of roof panel.

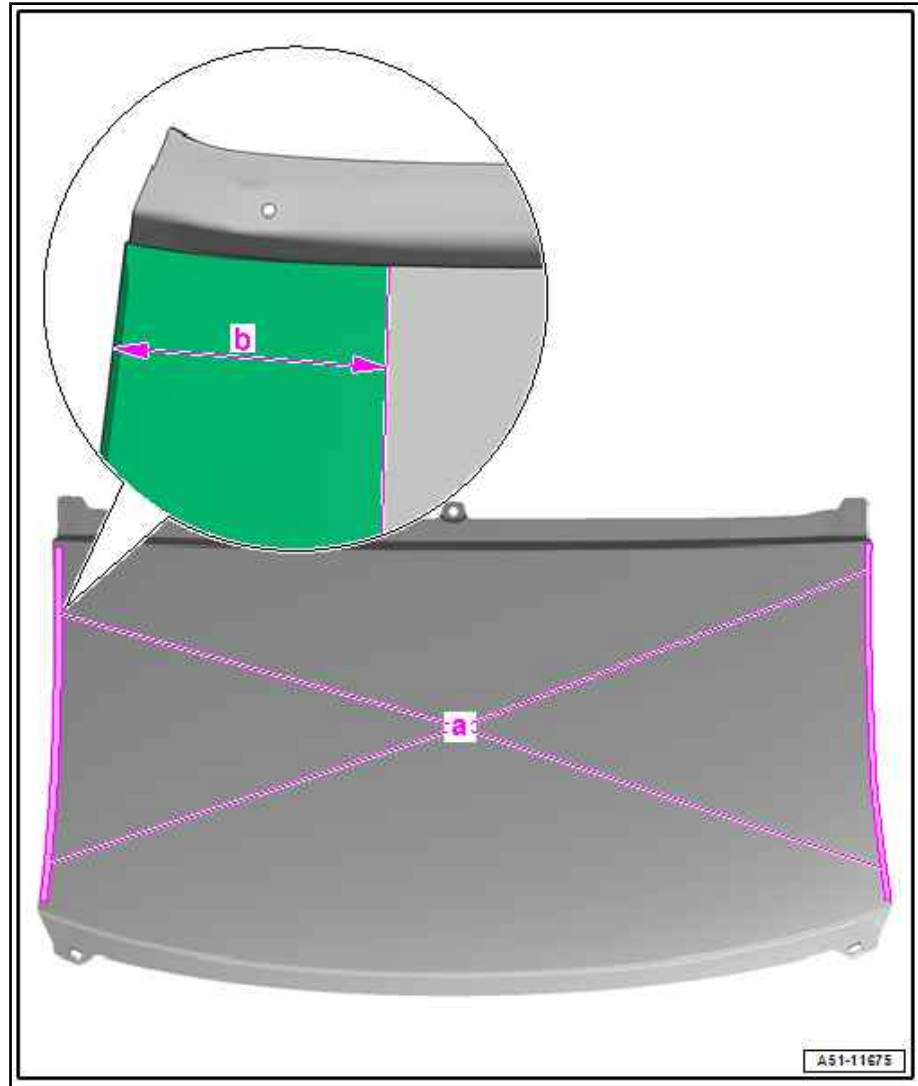
**Pre-treatment - applies to replacement part only**

- Grind welding surfaces down to bare metal.
- Roughen bonding surfaces using a clean sanding disc (grit size P 80 or P 100).
- Clean roof frame, roof reinforcement and roof with cleaning solution - D 009 401 04- .

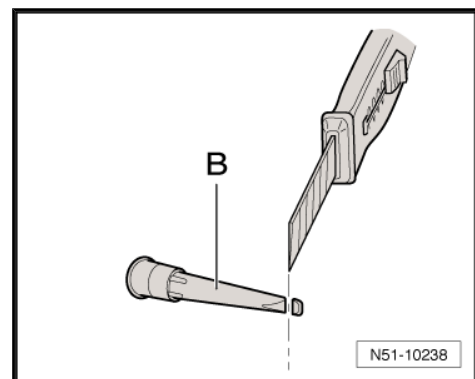
This ensures that the 2-component epoxy adhesive - DA 180 A00 A2 - forms a good joint with the bonding area.



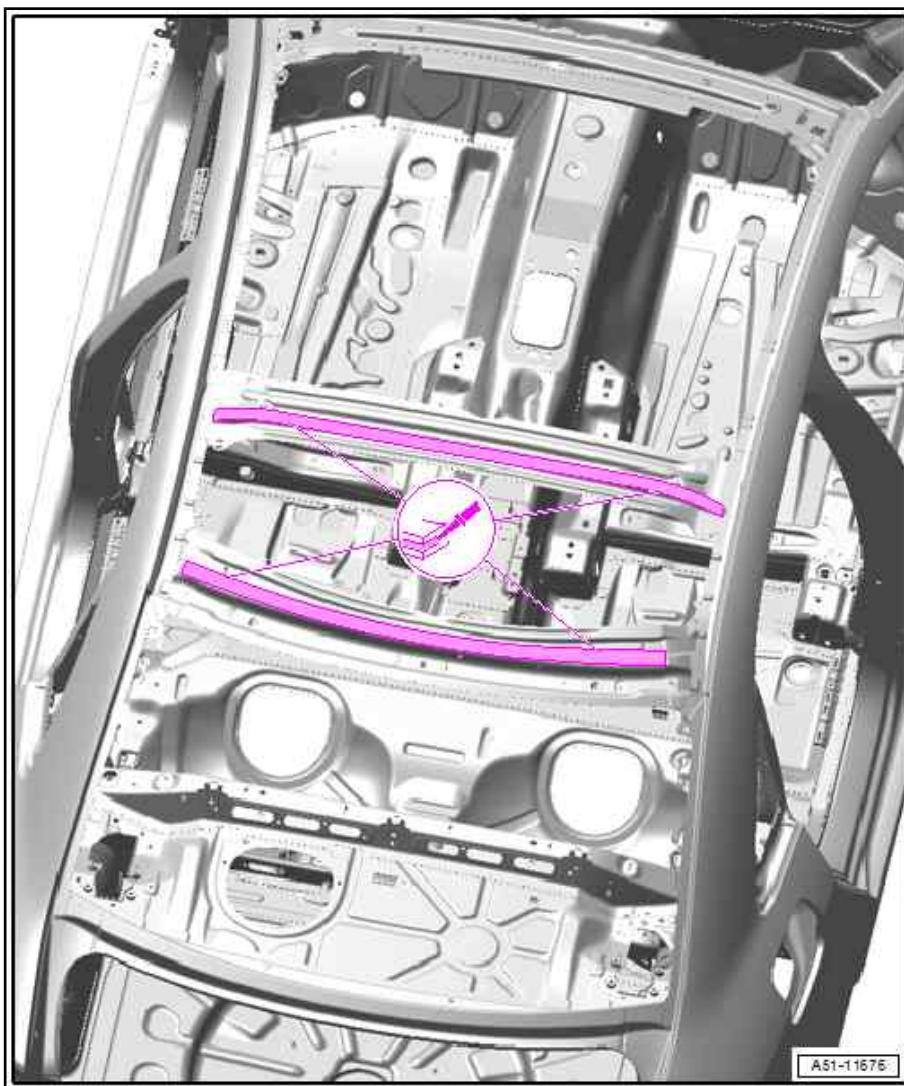
- Apply glass and paint primer - D 009 200 02- approx. 5 cm wide -b- on inner section of roof and inner side flange -a-.



- Cut off approx. 2 mm from nozzle -B- to obtain appropriate bead geometry.



- Apply single-component assembly adhesive - D 190 MKD A3- to roof cross members in the area of the factory bonding location using pneumatic cartridge gun - V.A.G 1761/1- .

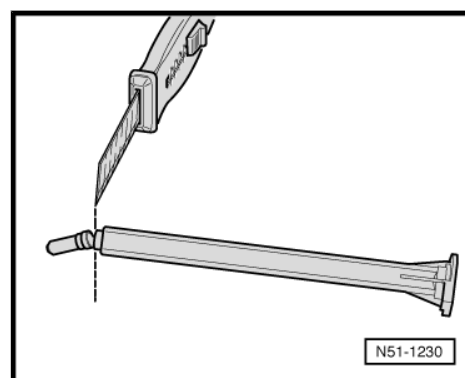


#### Preparing new part

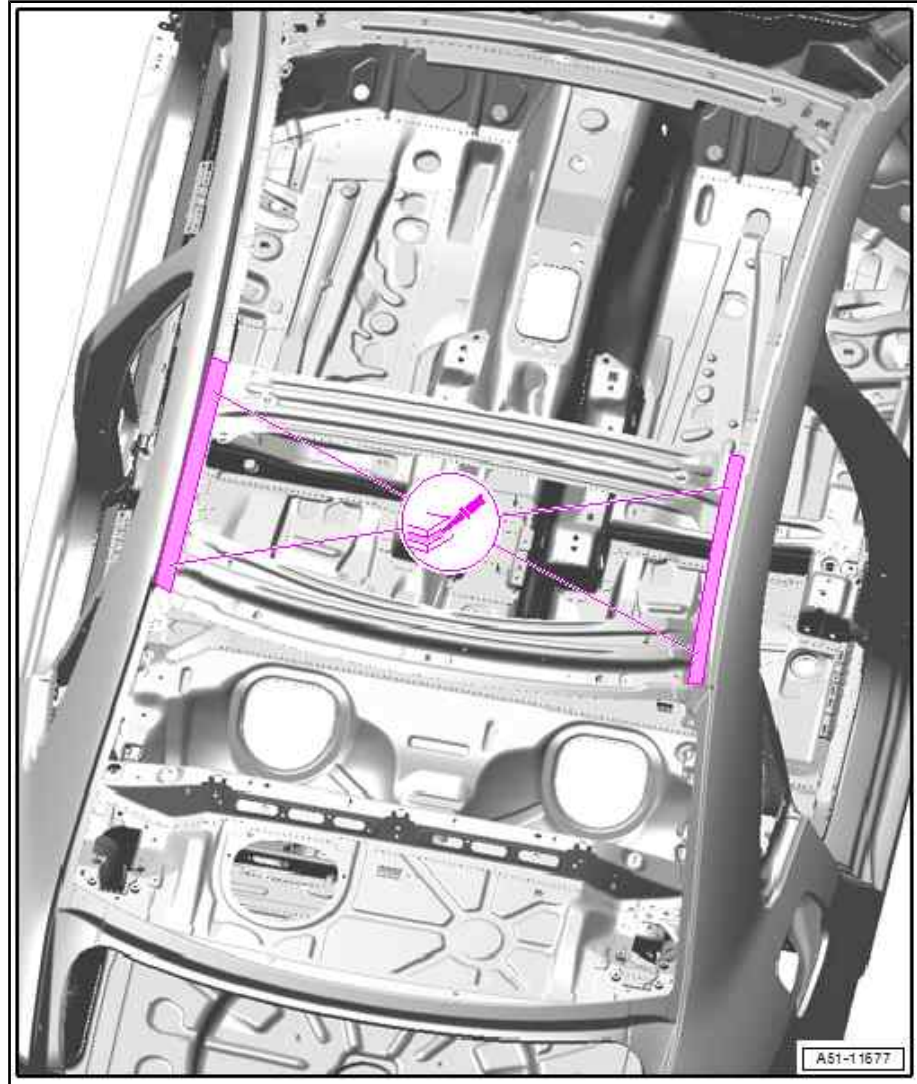
- Cut static mixer from 2-component epoxy adhesive set - DA 180 A00 A2 - down to 4th notch to obtain required bead cross section.

#### Note

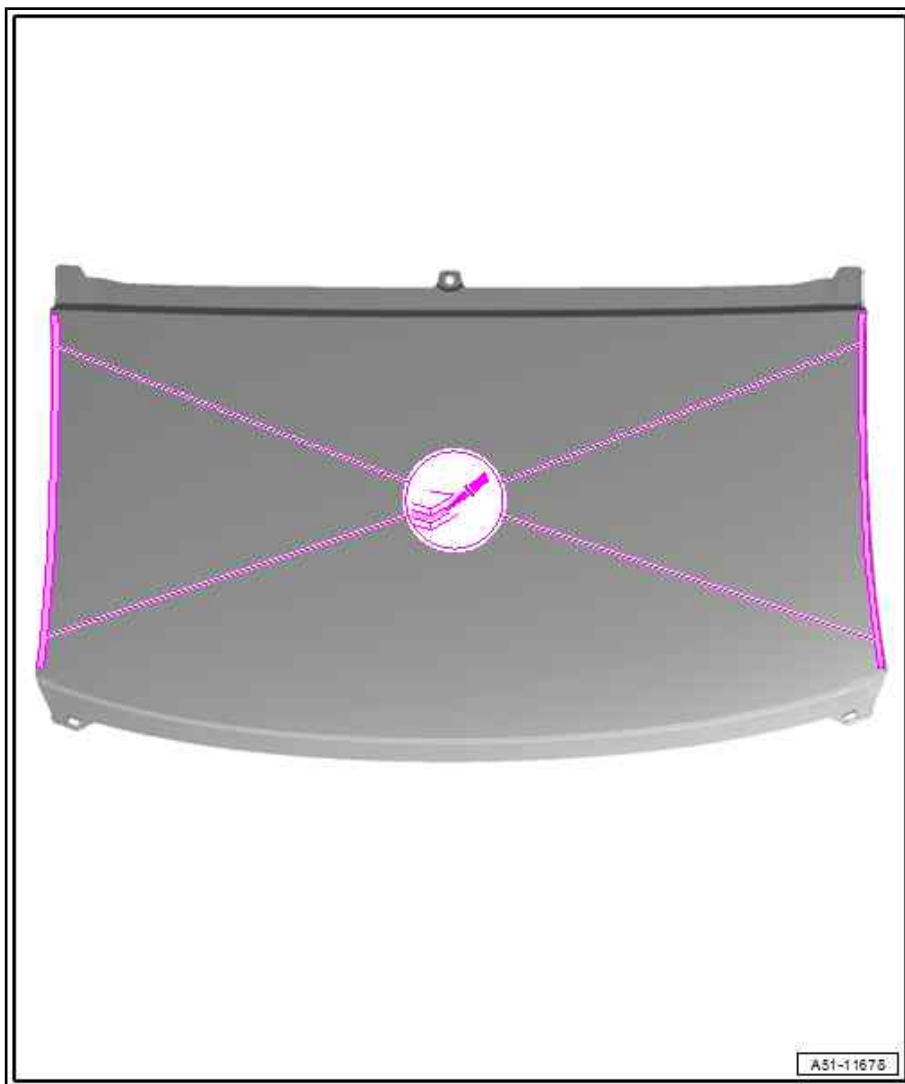
*The pot life of the 2-component epoxy adhesive - DA 180 A00 A2 - is roughly 90 minutes.*



- Apply two continuous beads of 2-component epoxy adhesive - DA 180 A00 A2 - to bevelled sections of roof side members in area of zero-gap joint using double cartridge gun - VAS 6453- .



- Apply one continuous bead of 2-component epoxy adhesive - DA 180 A00 A2 - to side flanges of roof using double cartridge gun - VAS 6453- .

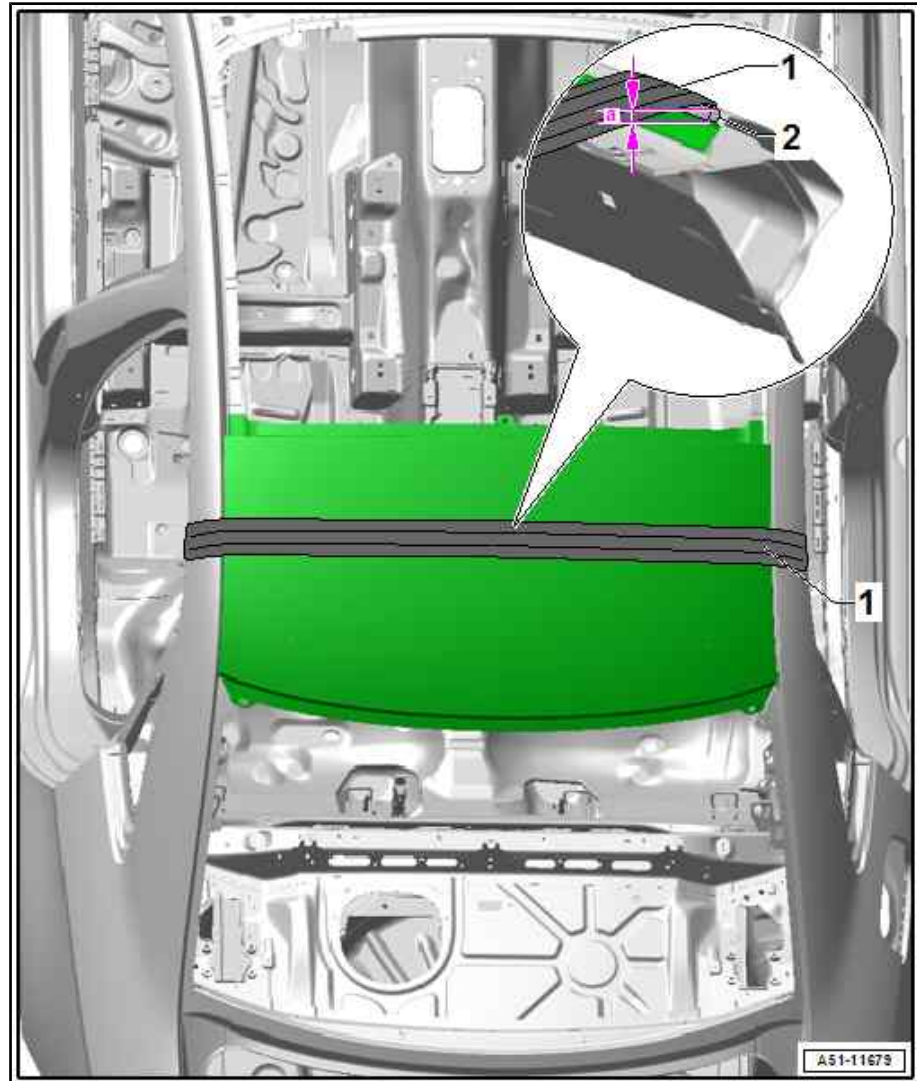


- Immediately fit and align roof.
- Use one self-tapping screw at each end to fix roof in position in centring hole in glass roof flange and sealing flange for rear lid.
- Fix roof in position with mole grips, 18-18 - VAS 5430/1- .

#### **Adjusting roof depth**

- Additionally fix roof in position with one tensioning strap - T 10038- -1-.
- Set required depth using e.g. drill bit or suitable wooden spacer -2-.

Depth setting for rear section -a = 2.5 mm -



- Roughly spread any 2-component epoxy adhesive - DA 180 A00 A2 - that comes out at edge of roof.

**CAUTION**

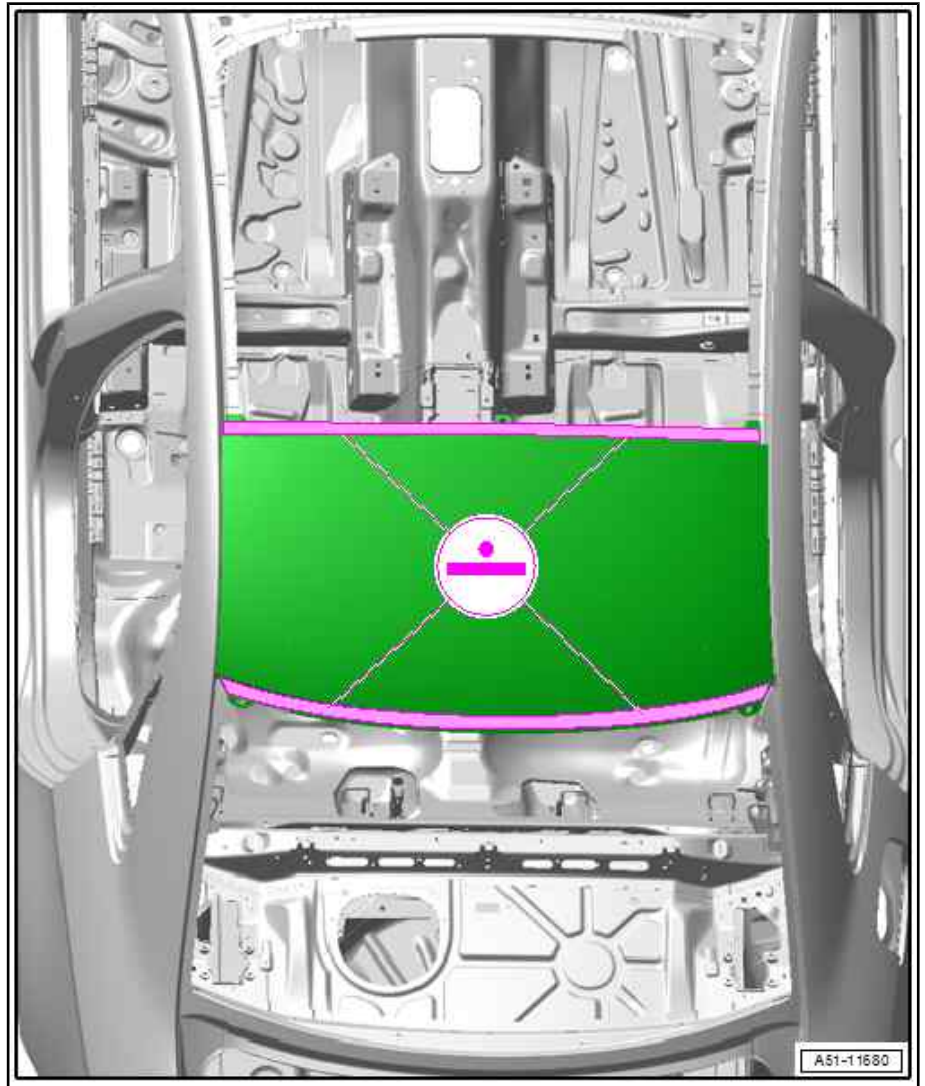
Allow bonded joint on roof to harden for 60 minutes at approx. 65° to 80° C with radiant heater. Check temperature constantly with temperature sensor.

**NOTICE**

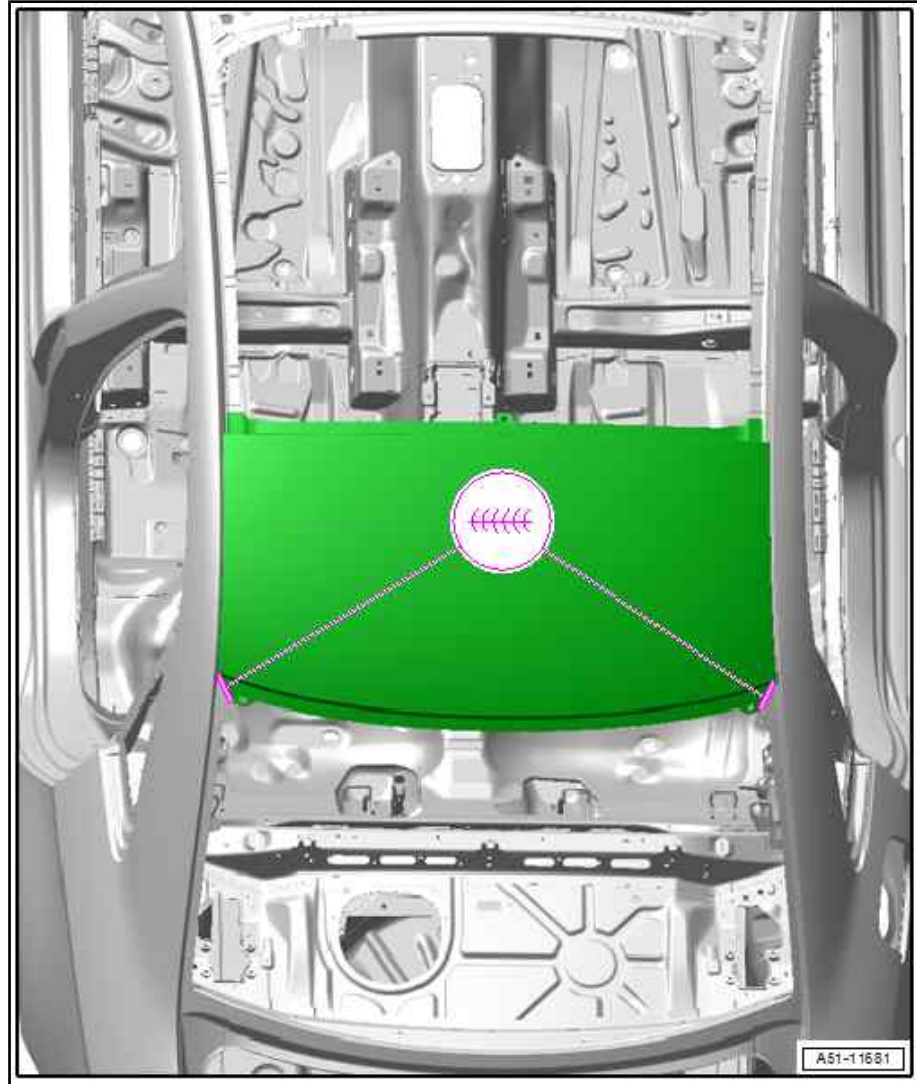
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

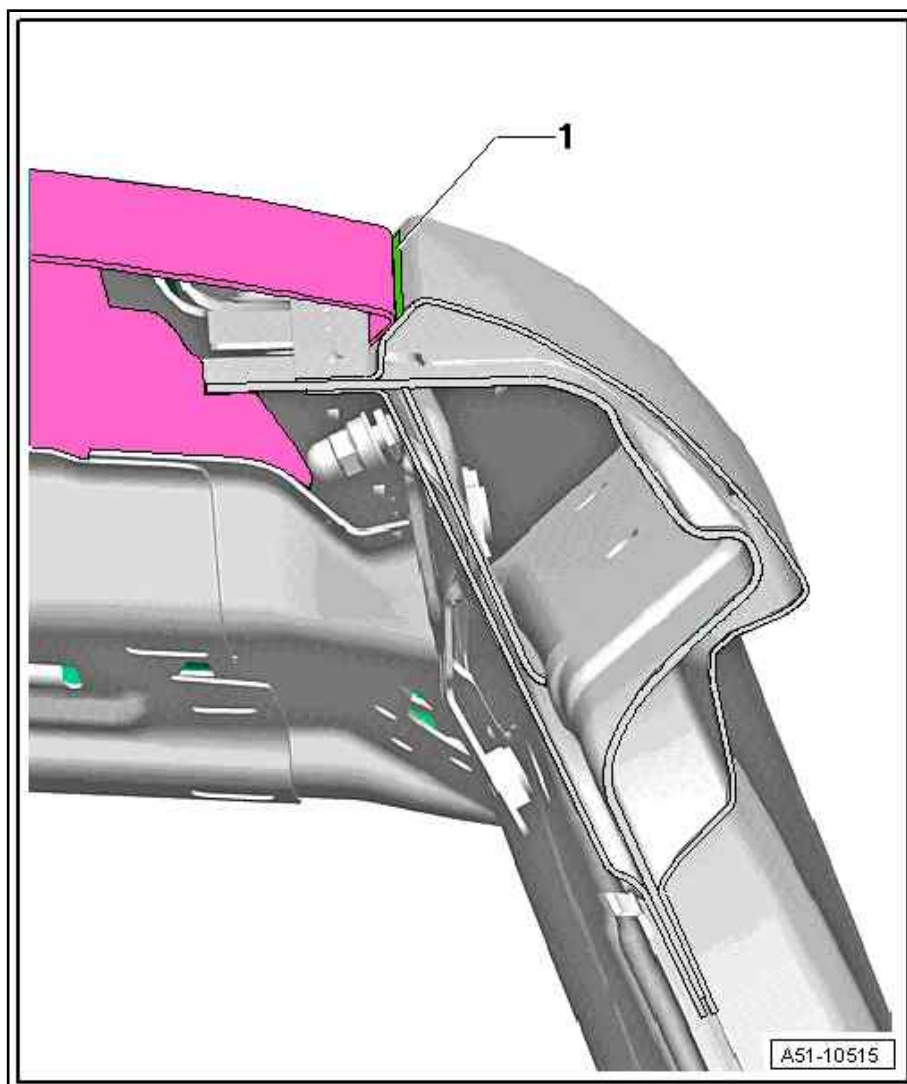
- Weld in roof using resistance spot welder : RP spot weld seam.



- Make additional weld for roof using shielded arc welding equipment : 2x SG continuous seam.



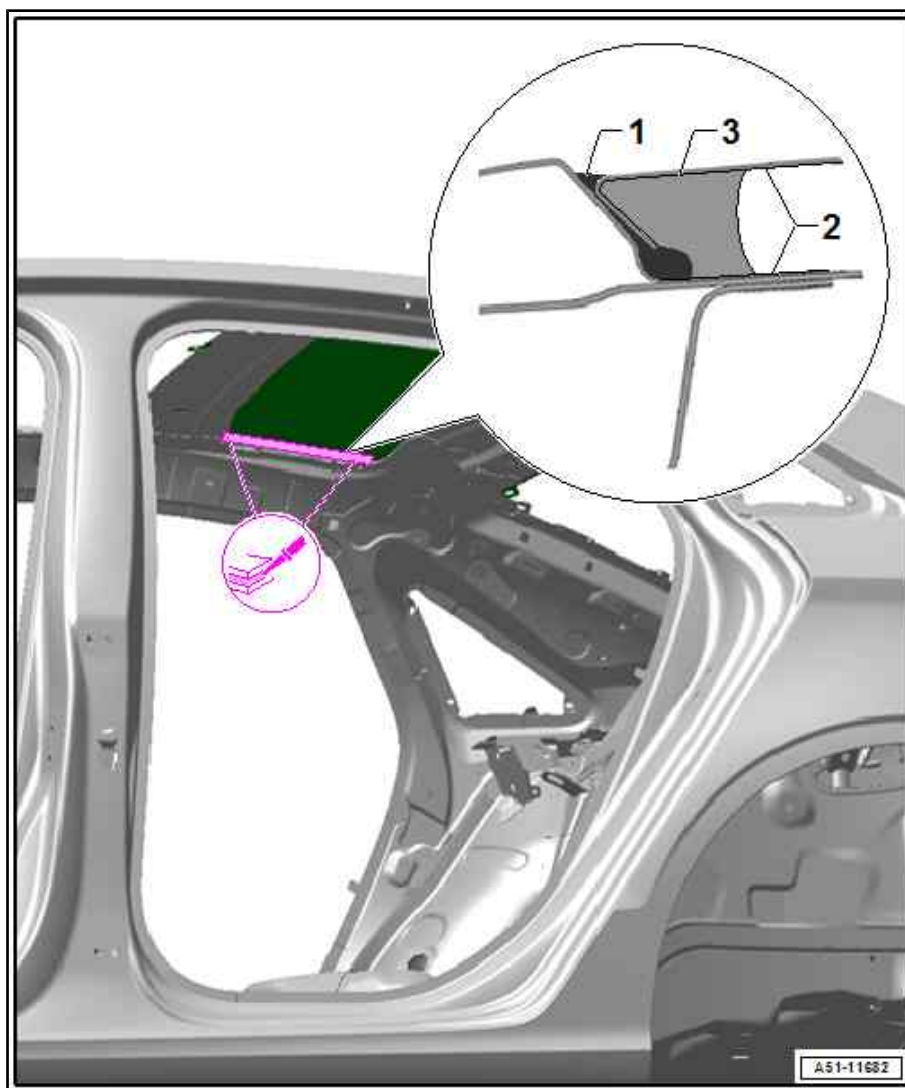
- Grind zero-gap joint -1- into shape (left and right).



**i** Note

*Please note instructions for use: window adhesive should be applied at a temperature of approx. 20°C.*

- Apply 2-component window adhesive - D 004 660 M2 - -3- in roof side member using double cartridge gun - VAS 5237- .
- ◆ 1 = 2-component epoxy adhesive - DA 180 A00 A2 -
- ◆ 2 = Glass and paint primer - D 009 200 02-
- ◆ 3 = 2-component window adhesive - D 004 660 M2 -

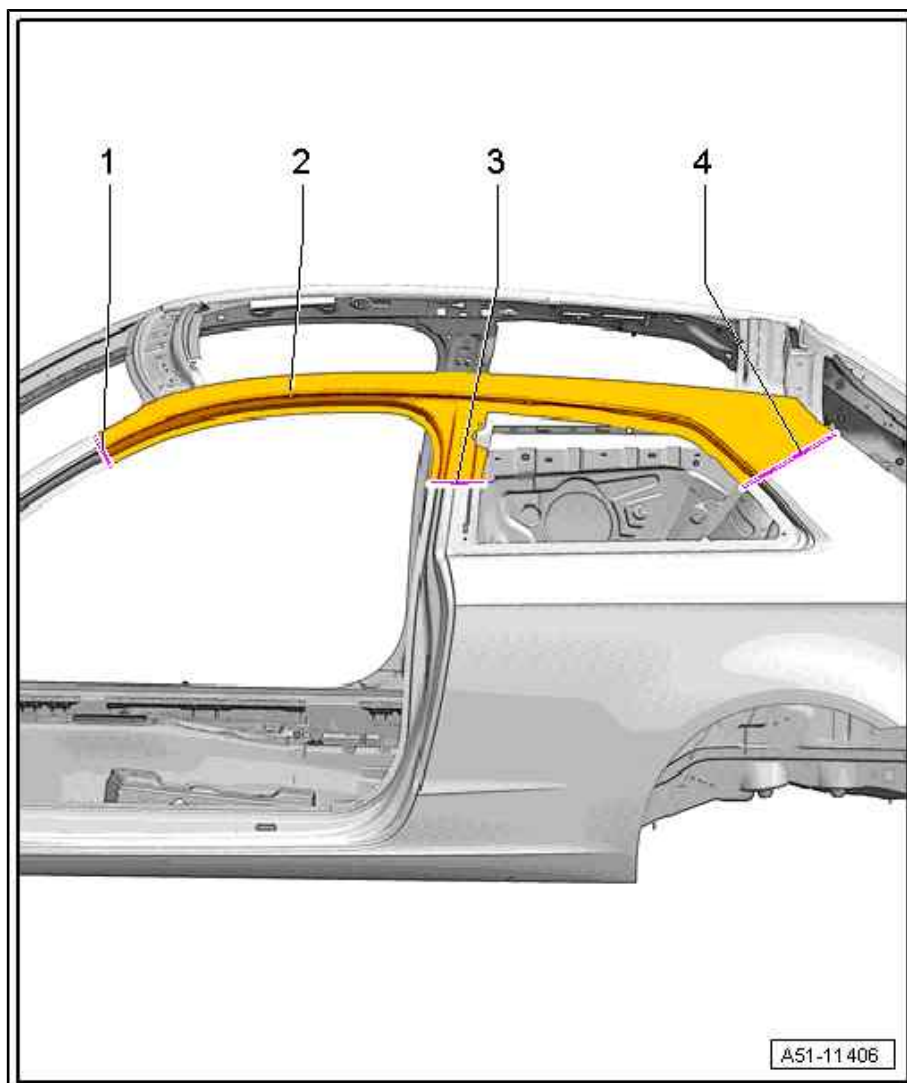




RO: 51 05 55 50

## 8 Roof side member - Renewal (A3)

- 1 - Separating cut in A-pillar
- 2 - Roof side member
- 3 - Separating cut in B-pillar
- 4 - Separating cut in C-pillar



### 8.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker

#### NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .



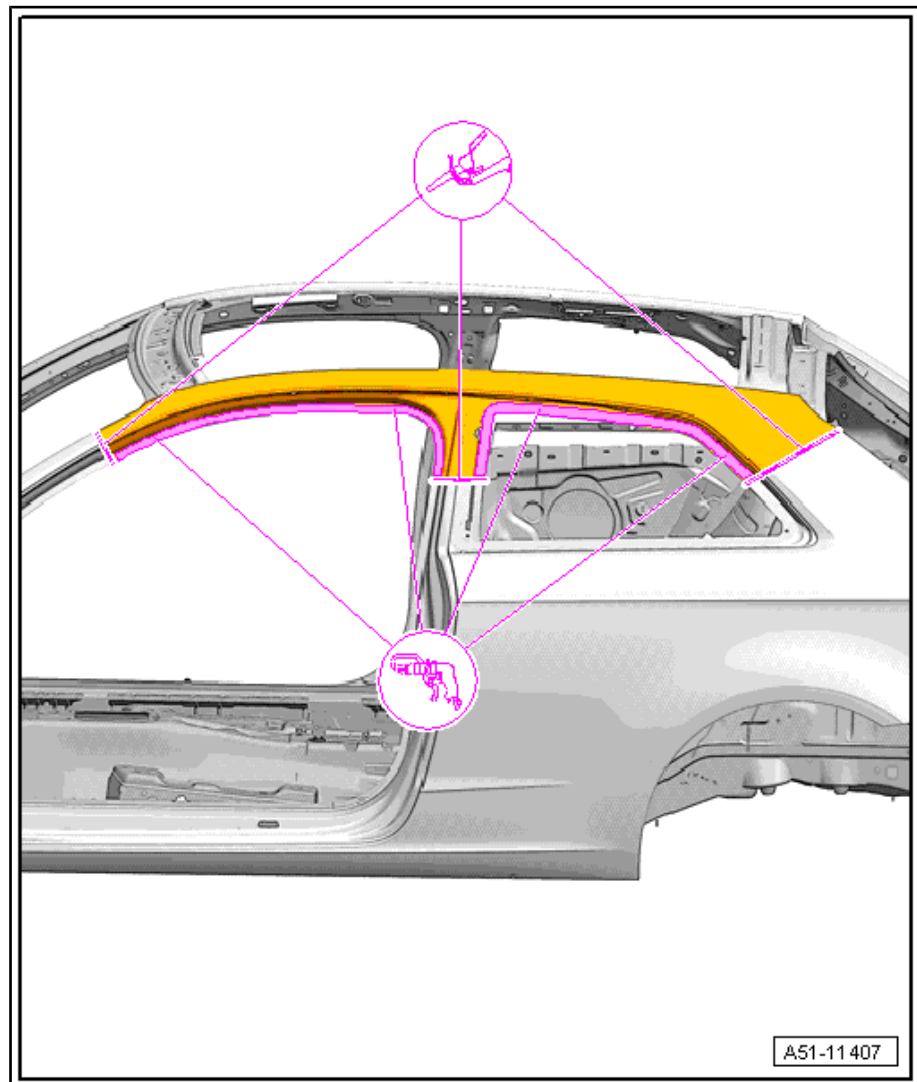
## 8.2 Procedure

- Removing standard roof ⇒ [page 128](#)
- Removing roof (vehicle with panoramic sunroof) ⇒ [page 151](#)

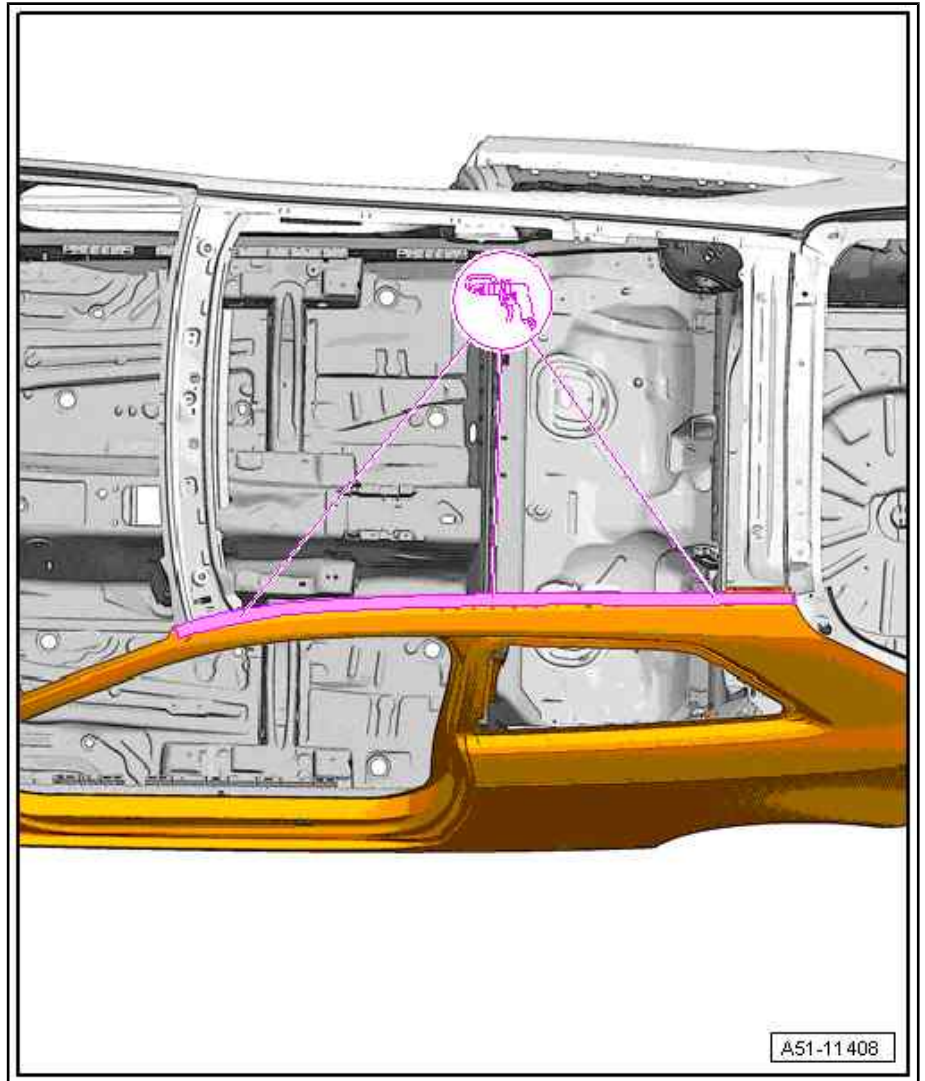
### Cutting locations

Permitted separating cuts on complete side panel ⇒ [page 125](#) .

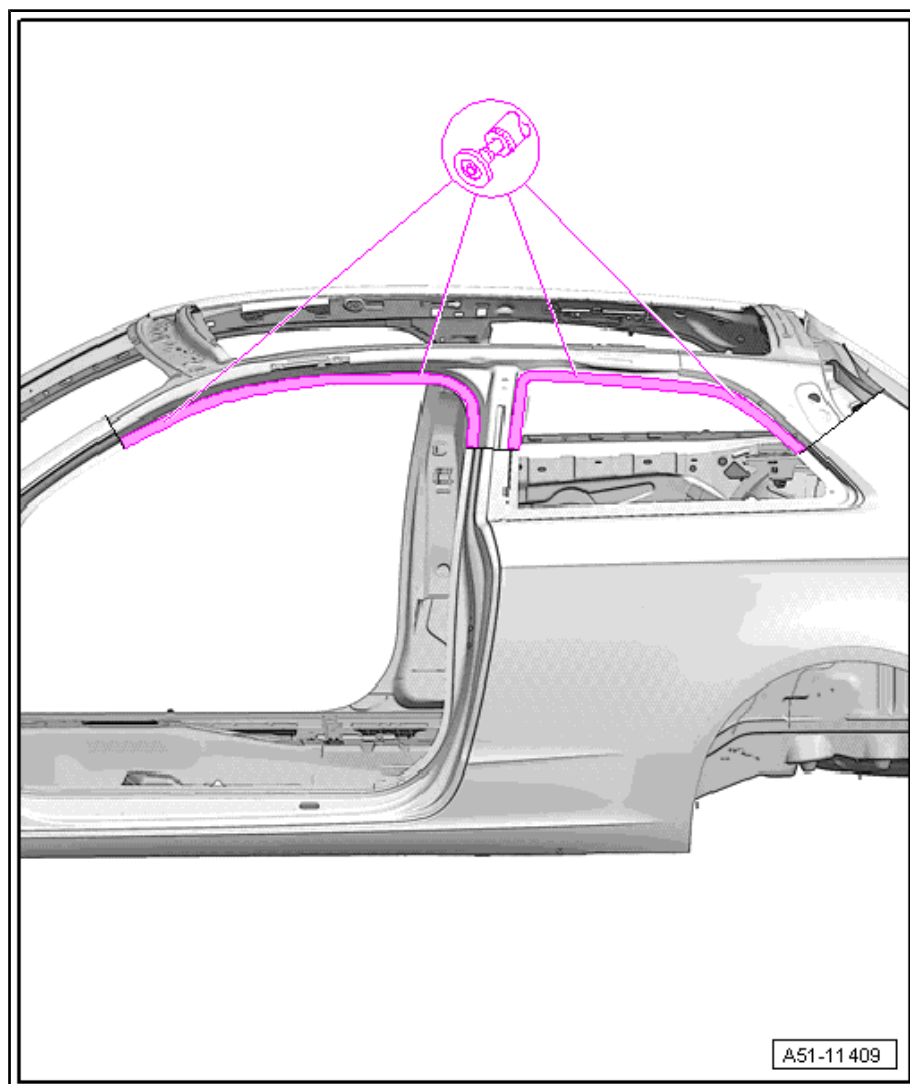
- Make separating cuts according to extent of damage using body saw .
- Separate original joint using spot weld breaker .



- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.

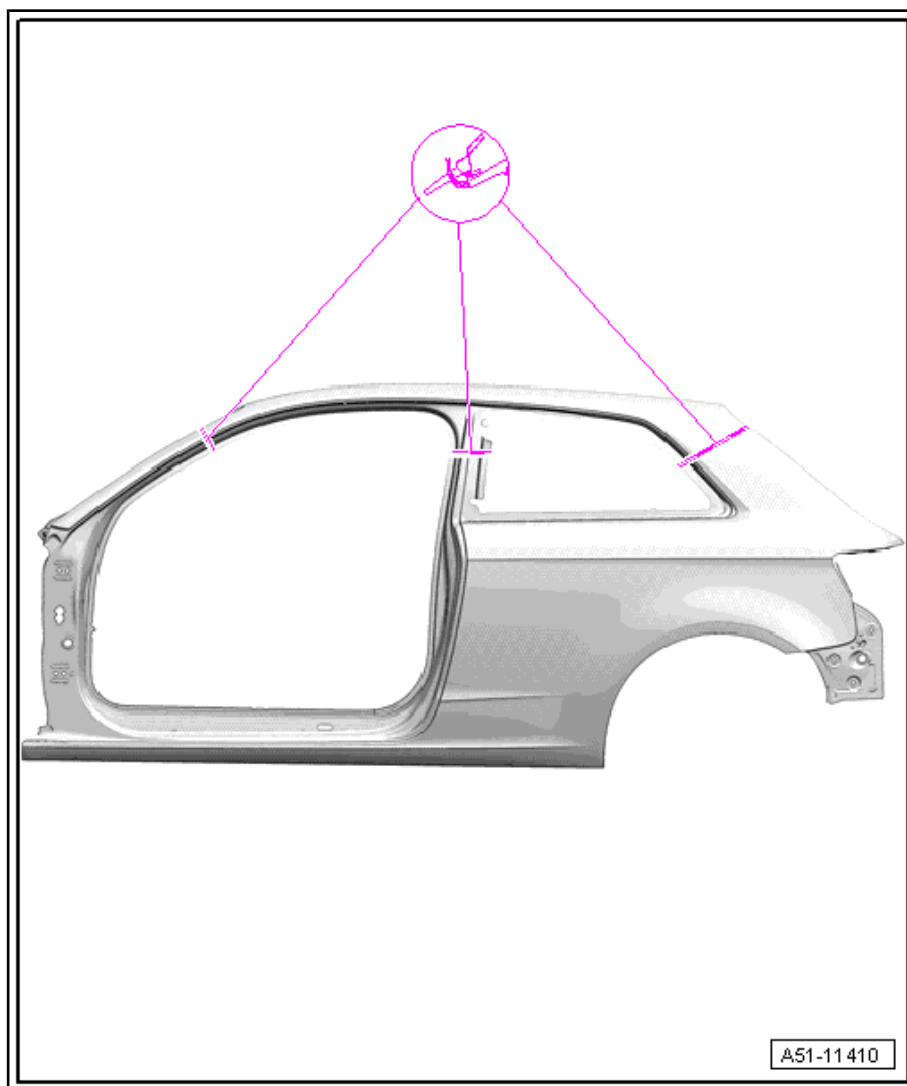


#### Replacement part

- ◆ Side panel

#### Preparing new part

- Transfer separating cuts to new part and cut using body saw .

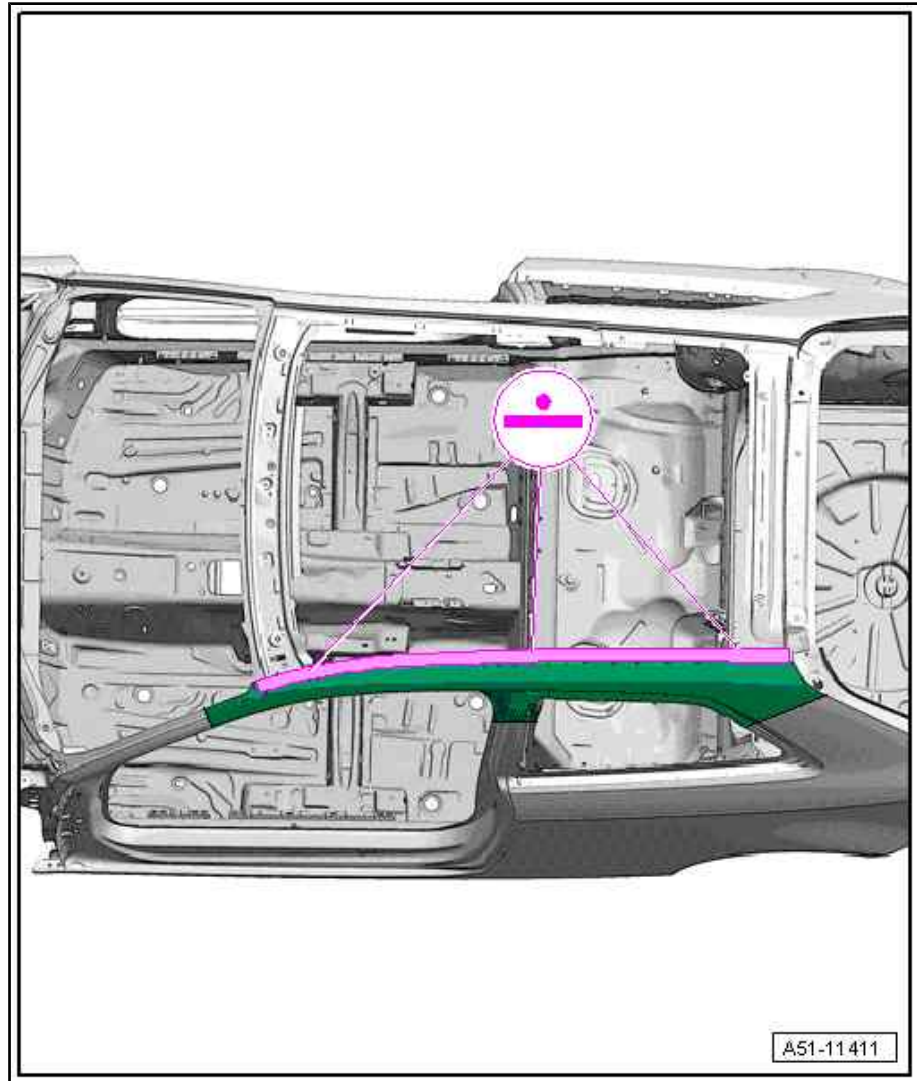


**!** NOTICE

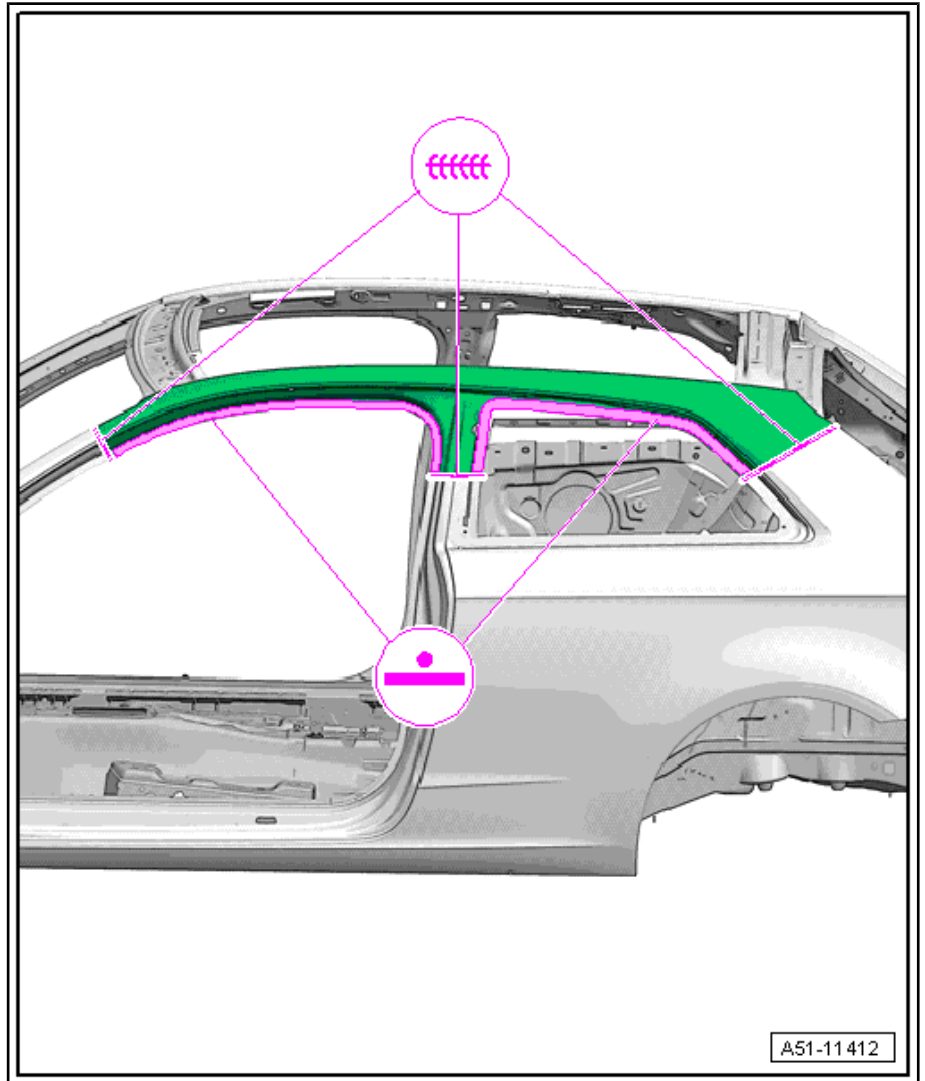
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Match up roof side member and fix in position.
- Check fit relative to bolt-on parts.
- Weld in roof side member using resistance spot welder : RP spot weld seam.



- Butt weld separating cuts using shielded arc welding equipment : SG continuous seam.
- Weld in roof side member using resistance spot welder : RP spot weld seam.



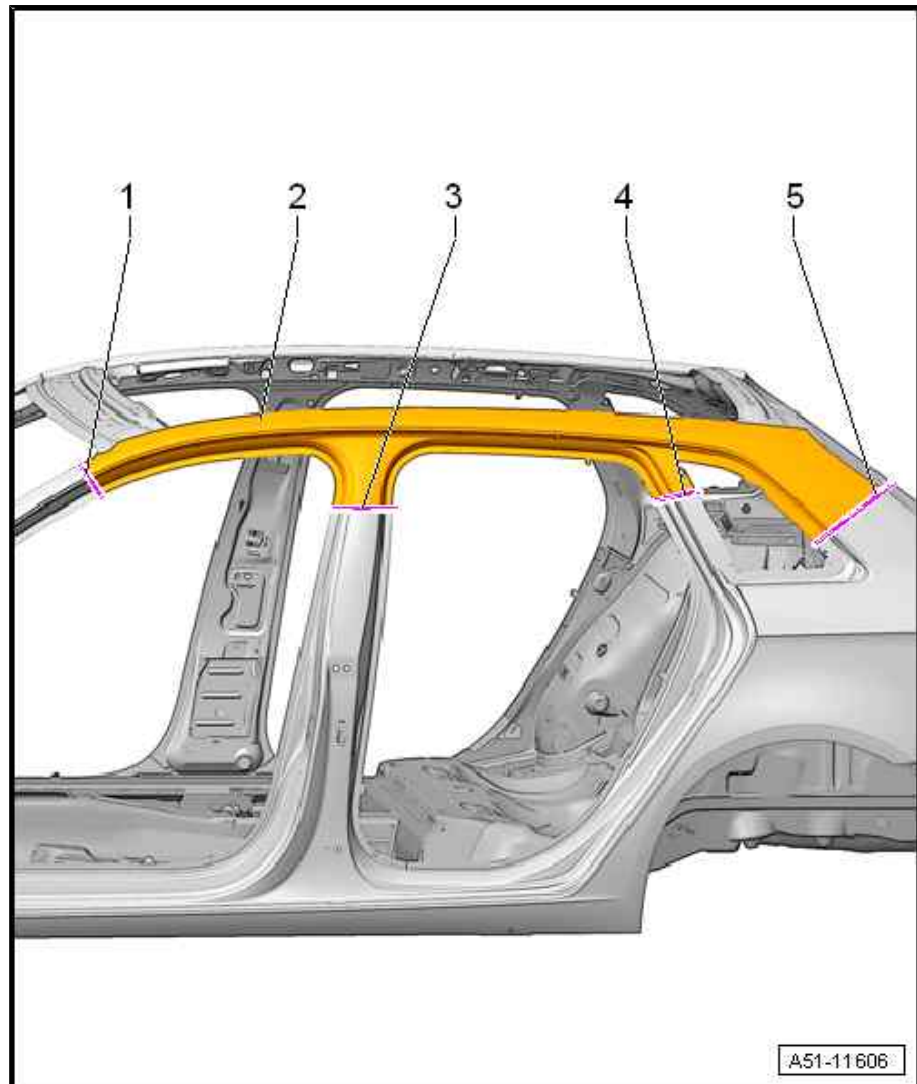
- Welding in standard roof (A3) ⇒ [page 128](#)
- Welding in roof (vehicle with panoramic sunroof) ⇒ [page 151](#)



RO: 51 05 55 50

## 9 Roof side member - Renewal (Sportback)

- 1 - Separating cut in A-pillar
- 2 - Roof side member
- 3 - Separating cut in B-pillar
- 4 - Separating cut in C-pillar
- 5 - Separating cut in D-pillar



### 9.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker

#### NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .



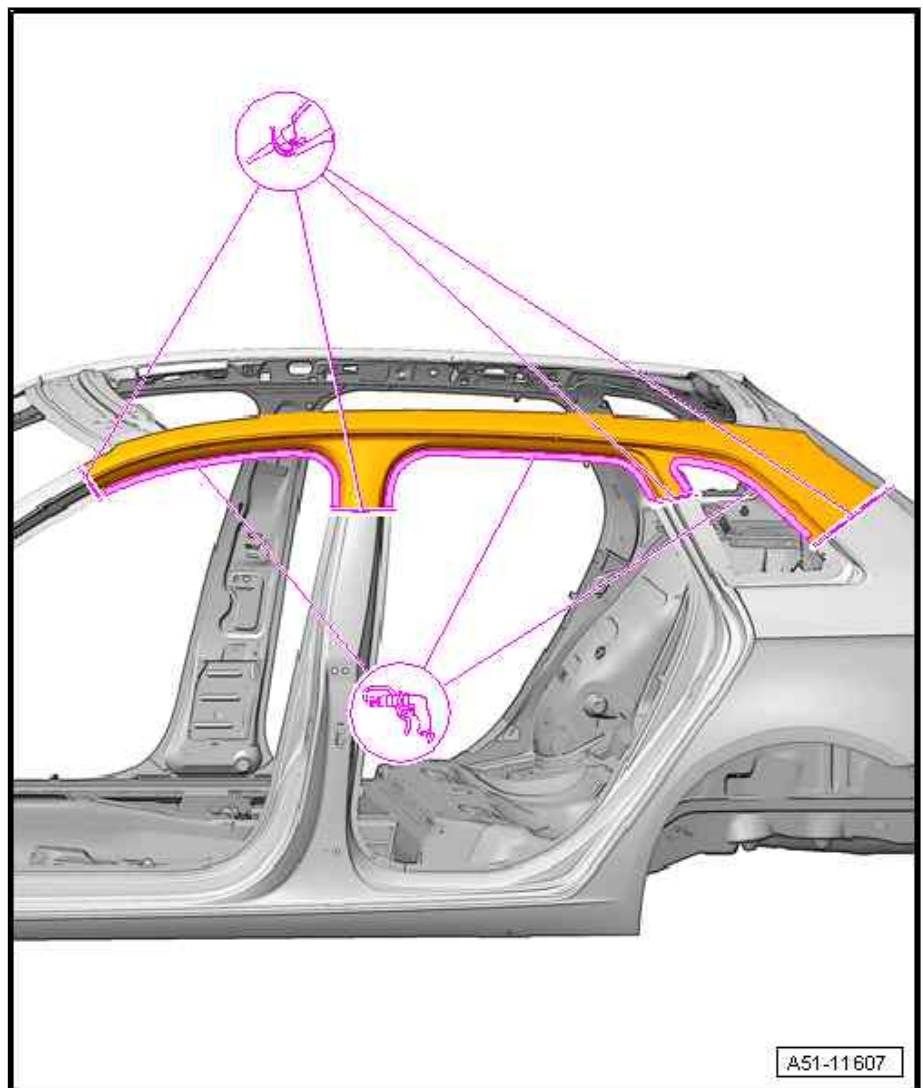
## 9.2 Procedure

- Removing standard roof (Sportback) ⇒ [page 173](#)
- Removing roof (vehicle with panoramic sunroof - Sportback) ⇒ [page 196](#)

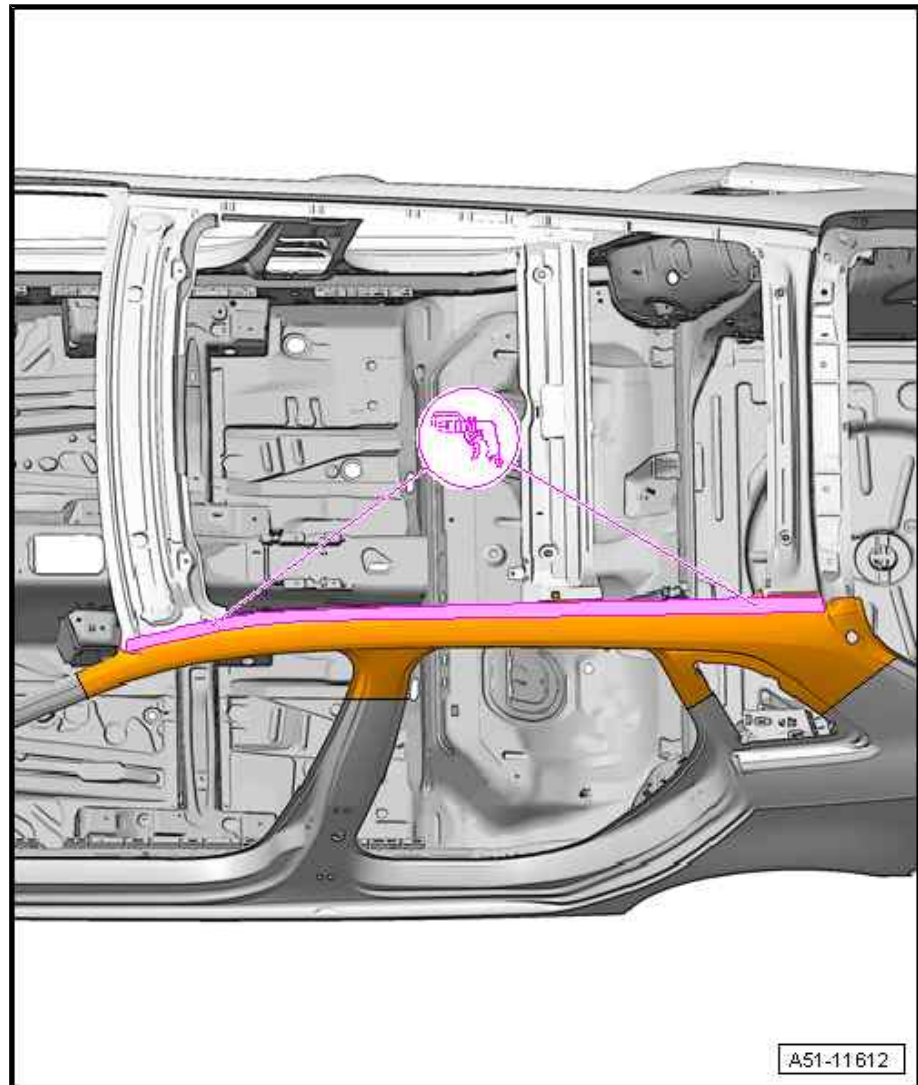
### Cutting locations

Permitted separating cuts on complete side panel ⇒ [page 125](#) .

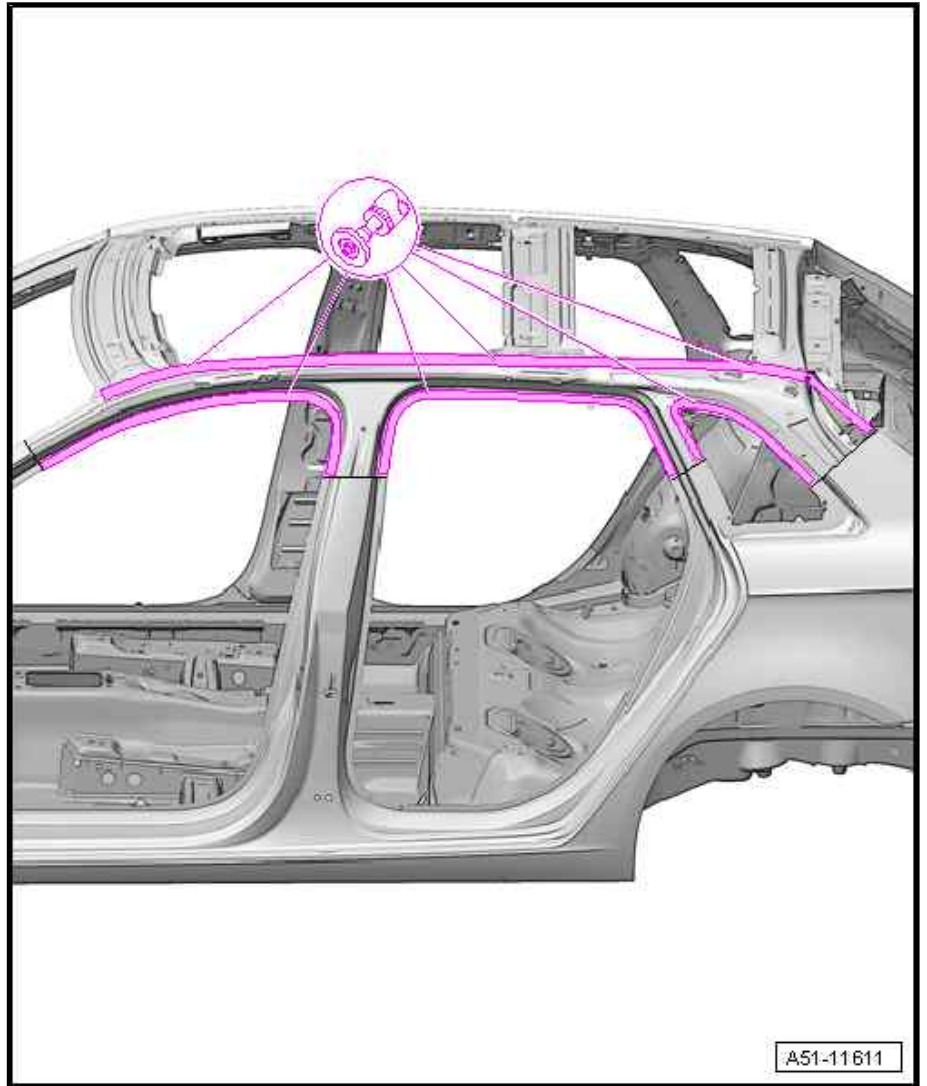
- Make separating cuts according to extent of damage using body saw .
- Separate original joint using spot weld breaker .



- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.

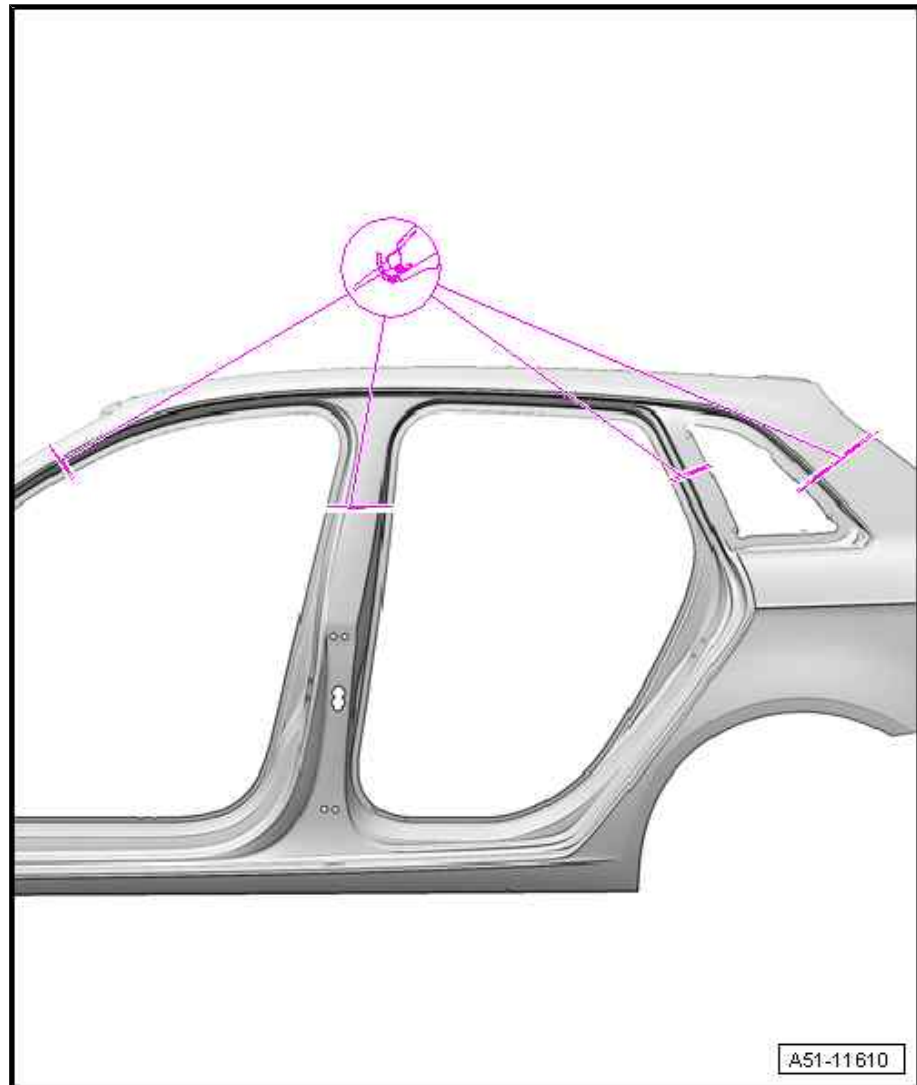


**Replacement part**

- ◆ Side panel

**Preparing new part**

- Transfer separating cuts to new part and cut using body saw .

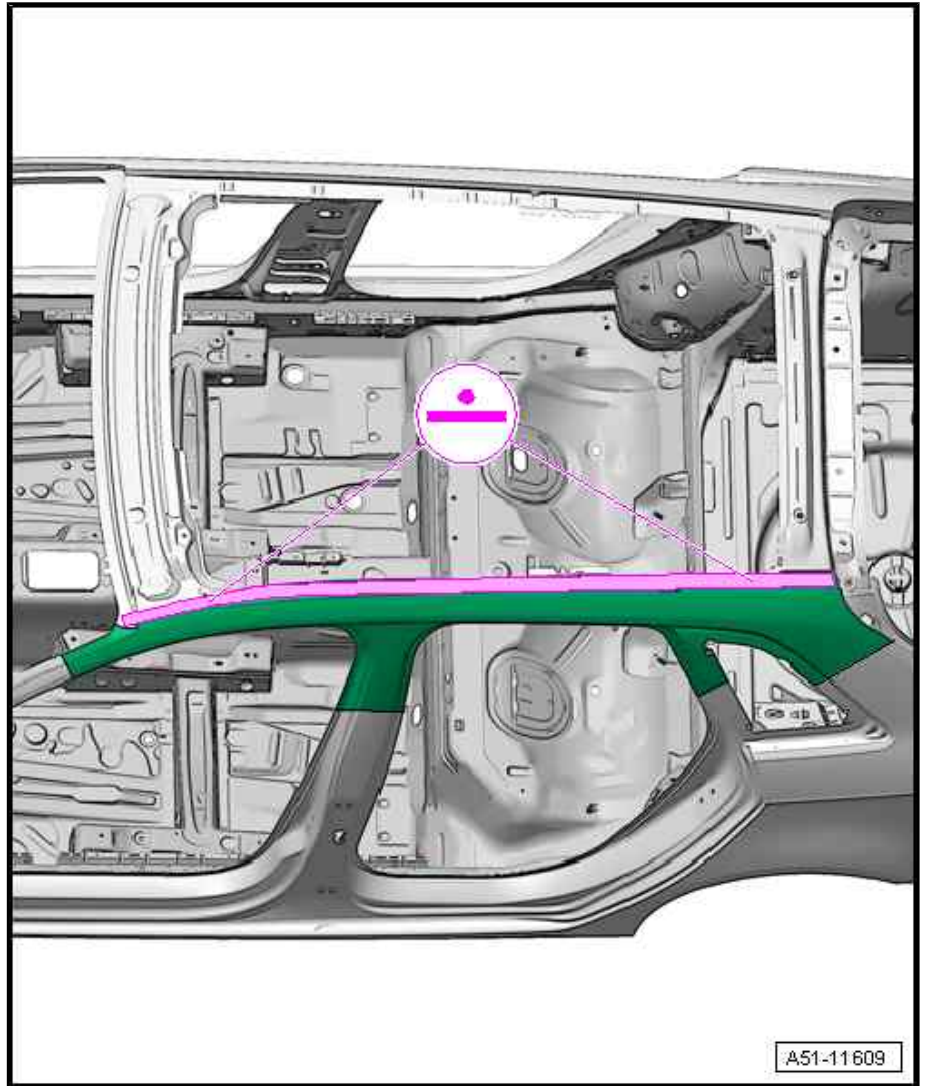


**!** NOTICE

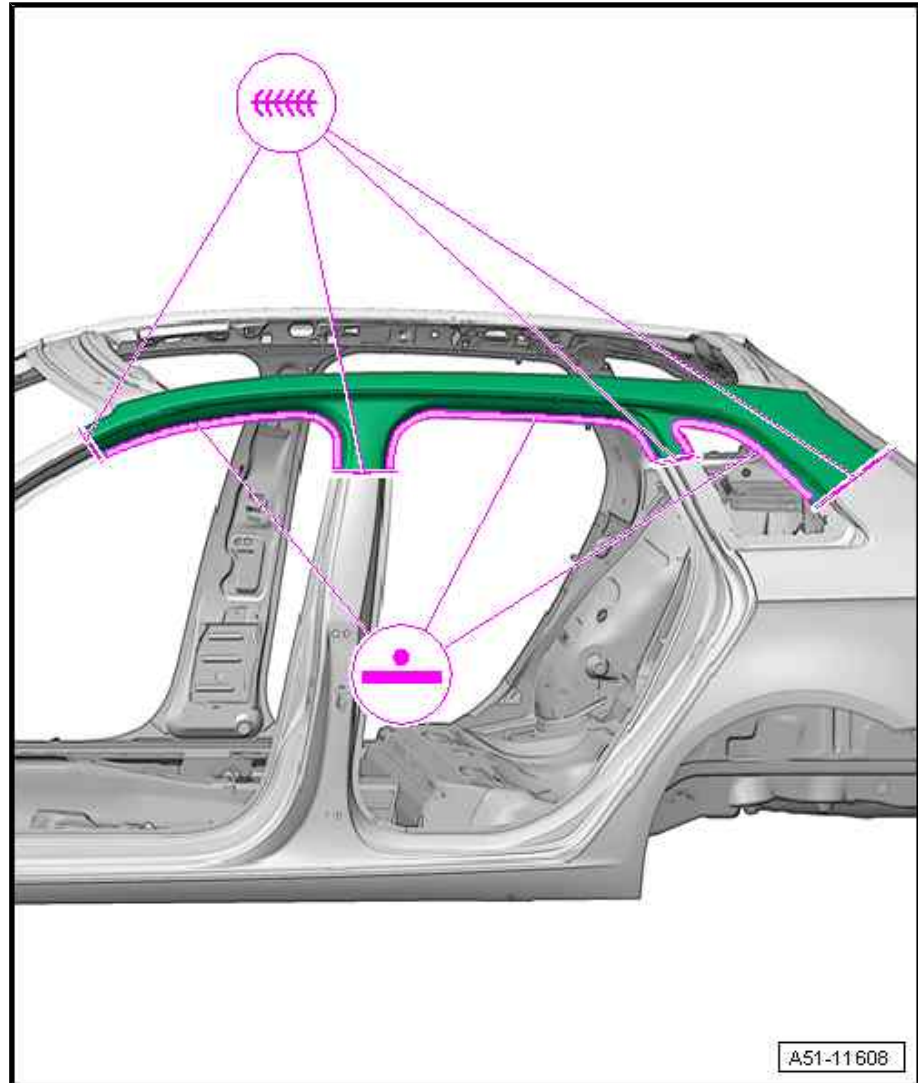
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Match up roof side member and fix in position.
- Check fit relative to bolt-on parts.
- Weld in roof side member using resistance spot welder : RP spot weld seam.



- Butt weld separating cuts using shielded arc welding equipment : SG continuous seam.
- Weld in roof side member using resistance spot welder : RP spot weld seam.



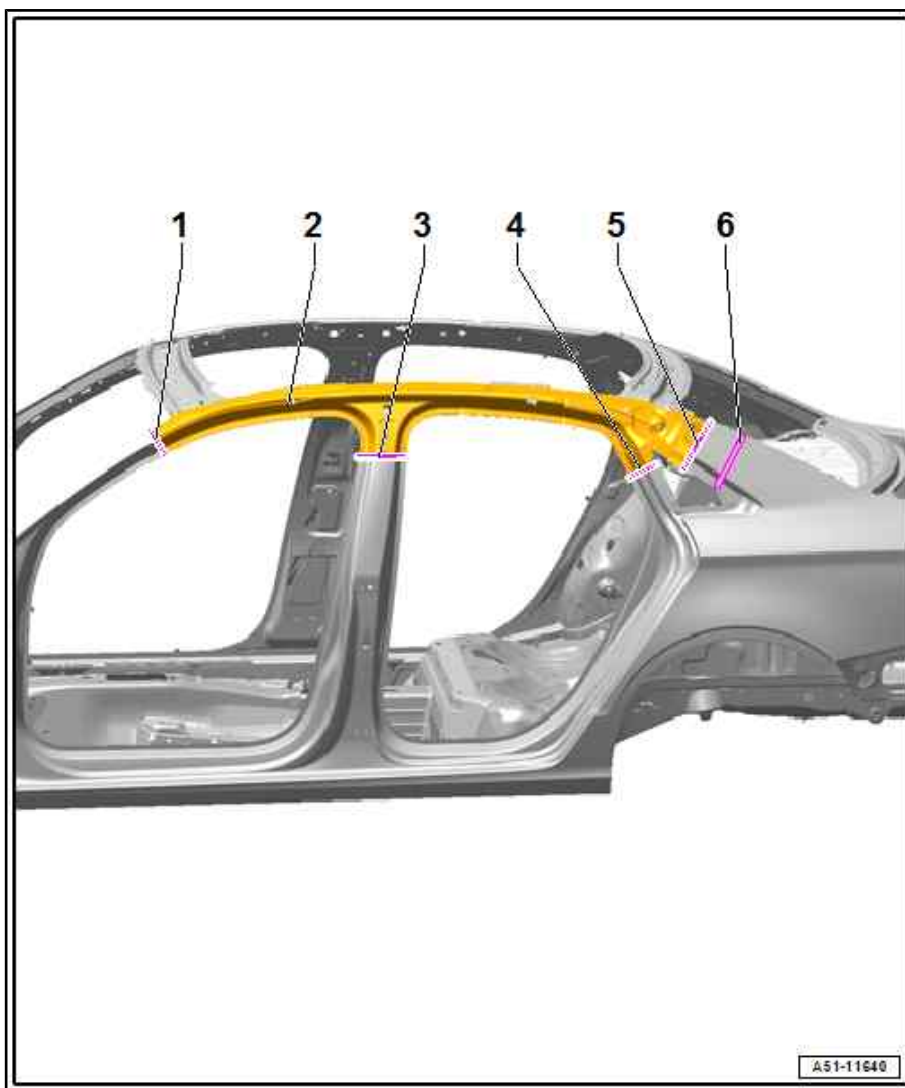
- Welding in standard roof (Sportback) ⇒ [page 173](#)
- Welding in roof (vehicle with panoramic sunroof - Sportback)  
⇒ [page 196](#)



RO: 51 05 55 50

## 10 Roof side member - Renewal (Saloon)

- 1 - Separating cut in A-pillar
- 2 - Roof side member
- 3 - Separating cut in B-pillar
- 4 - Separating cut in C-pillar
- 5 - Separating cut in D-pillar
- 6 - Moulded foam insert



### 10.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker

#### NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .



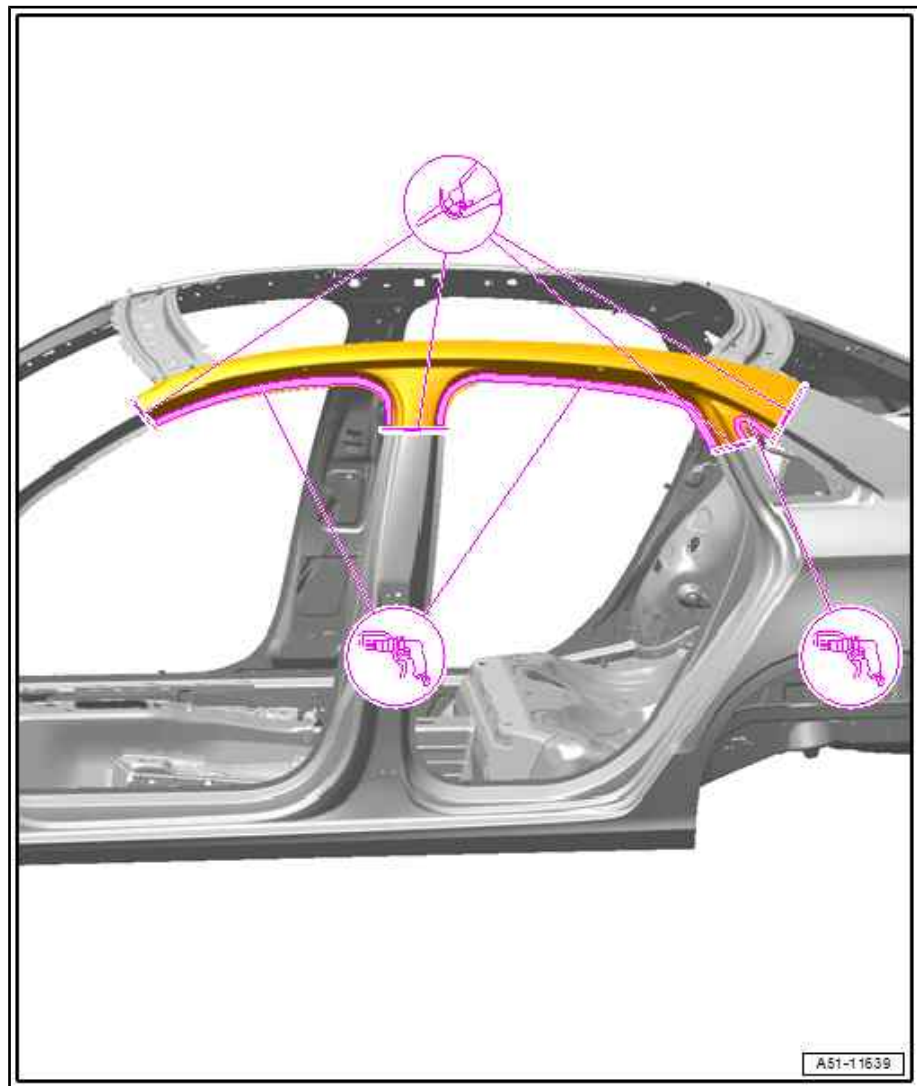
## 10.2 Procedure

- Welding in roof (standard roof version) ⇒ [page 218](#)
- Welding in roof (panoramic sunroof) ⇒ [page 241](#)

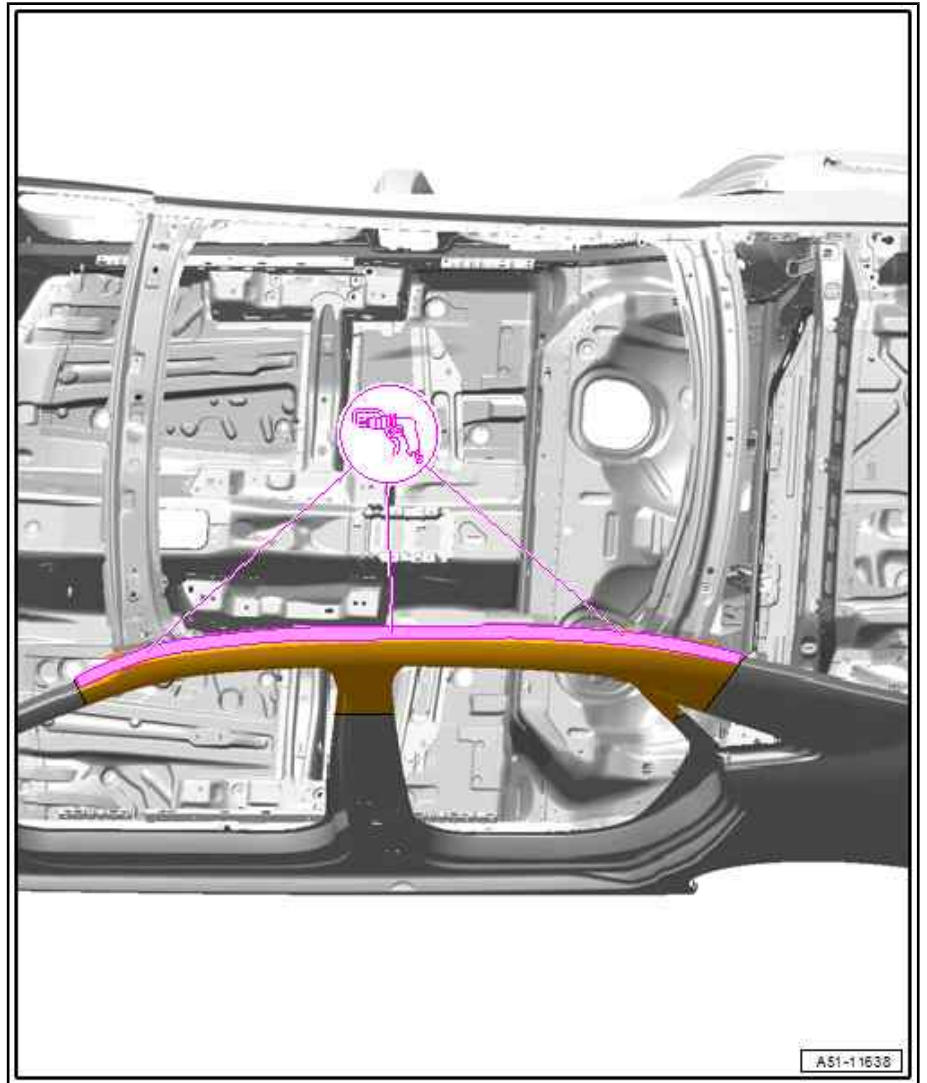
### Cutting locations

Permitted separating cuts on complete side panel ⇒ [page 125](#) .

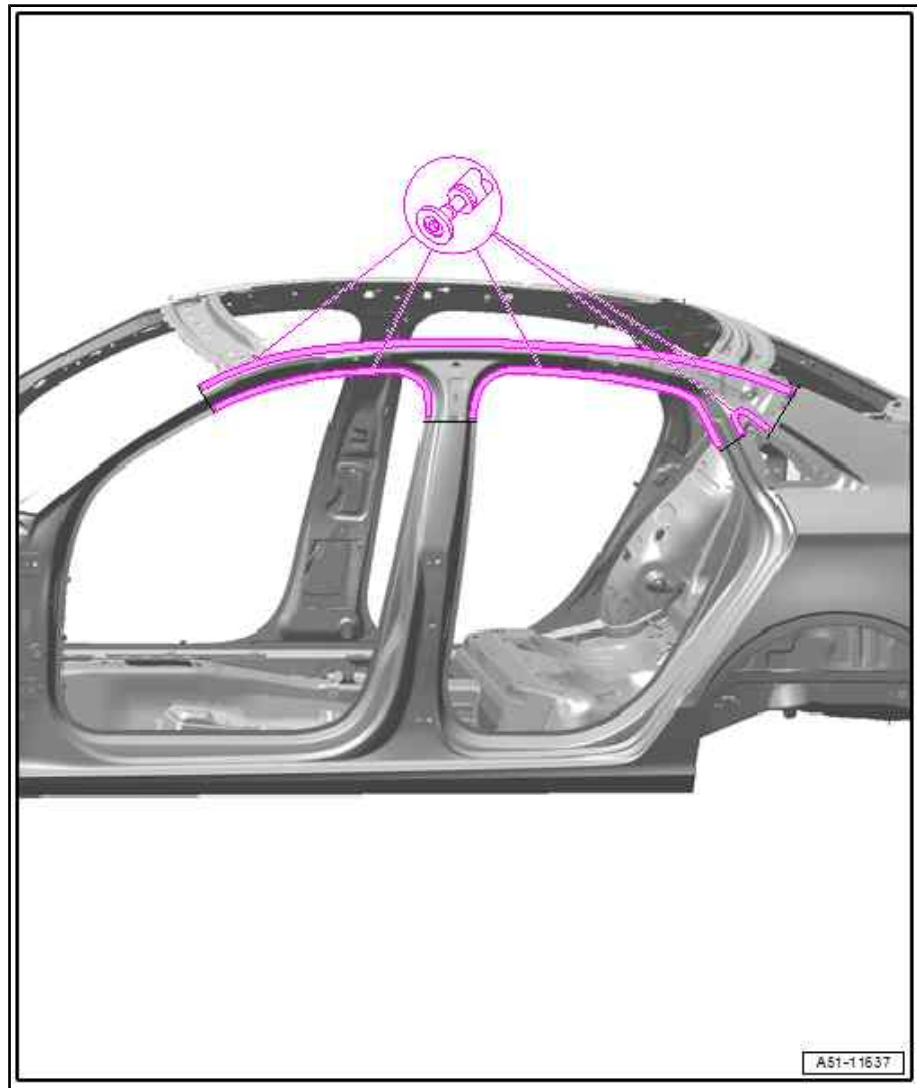
- Make separating cuts according to extent of damage using body saw .
- Separate original joint using spot weld breaker .



- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.

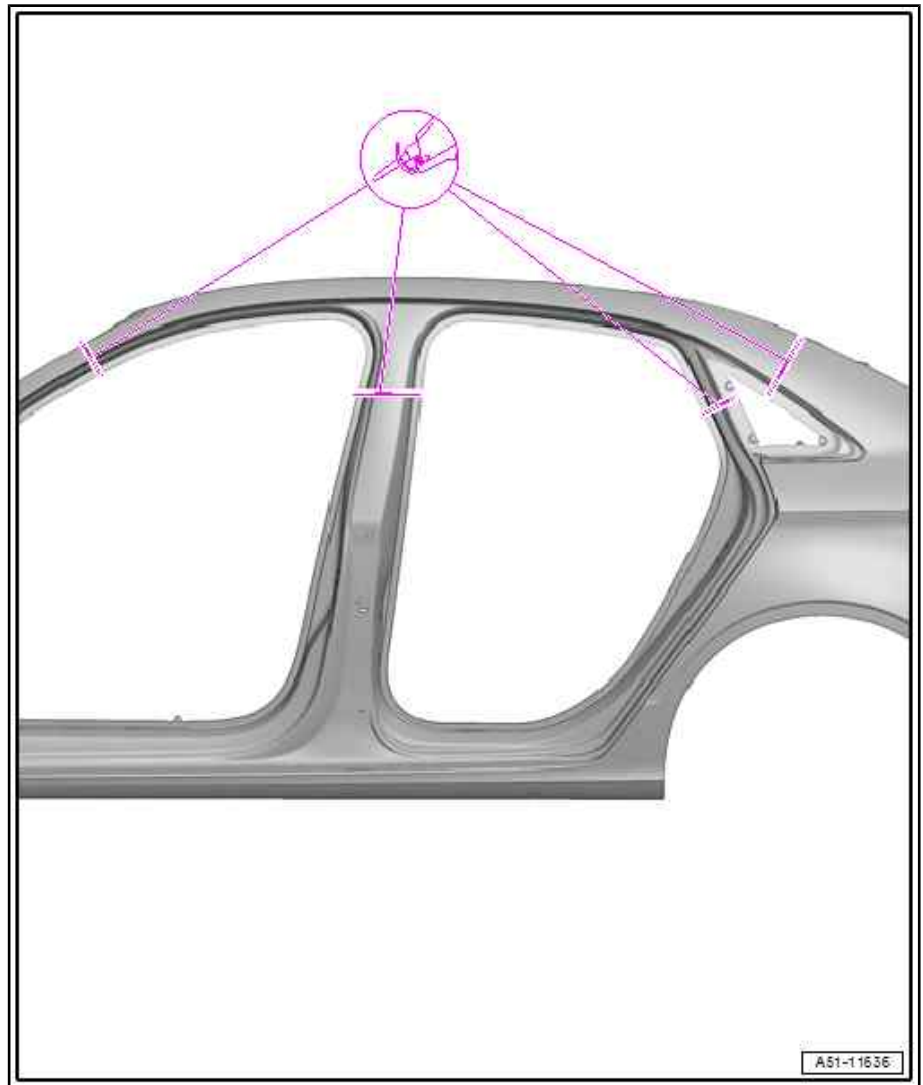


#### Replacement part

- ◆ Side panel

#### Preparing new part

- Transfer separating cuts to new part and cut using body saw .

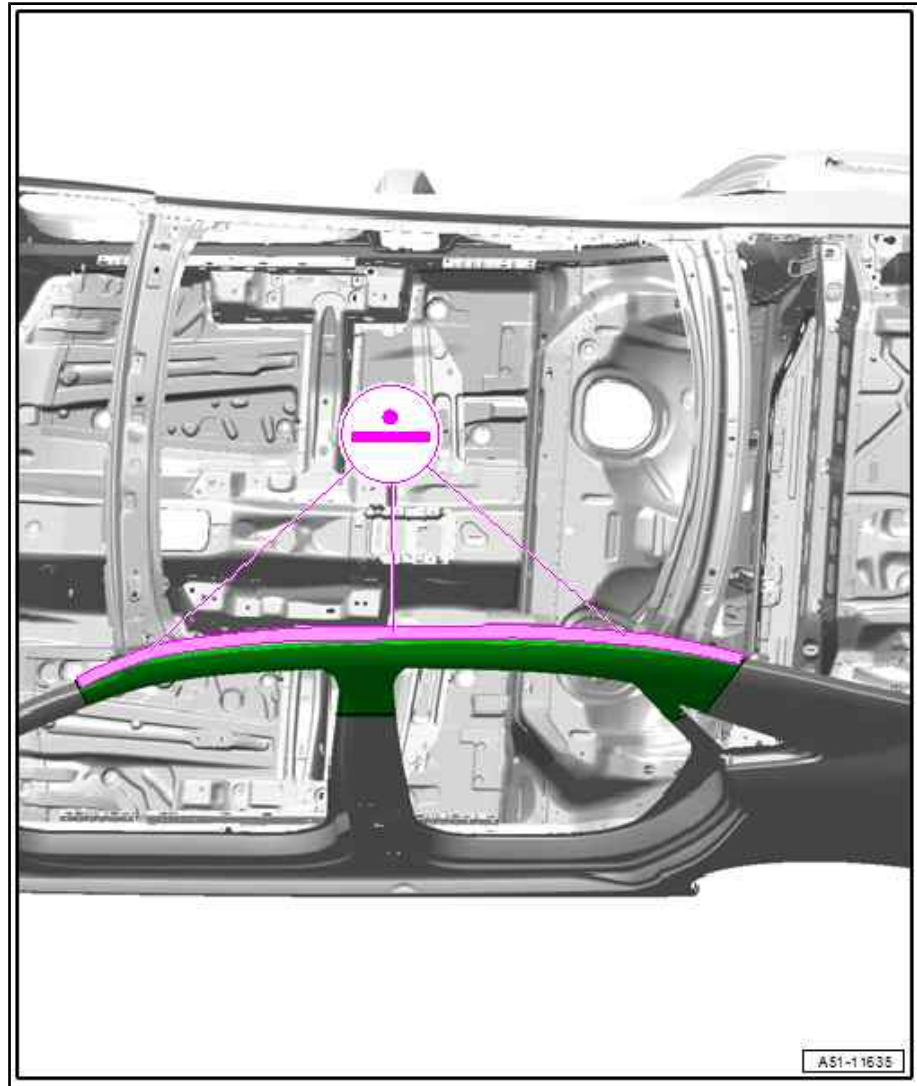


**!** NOTICE

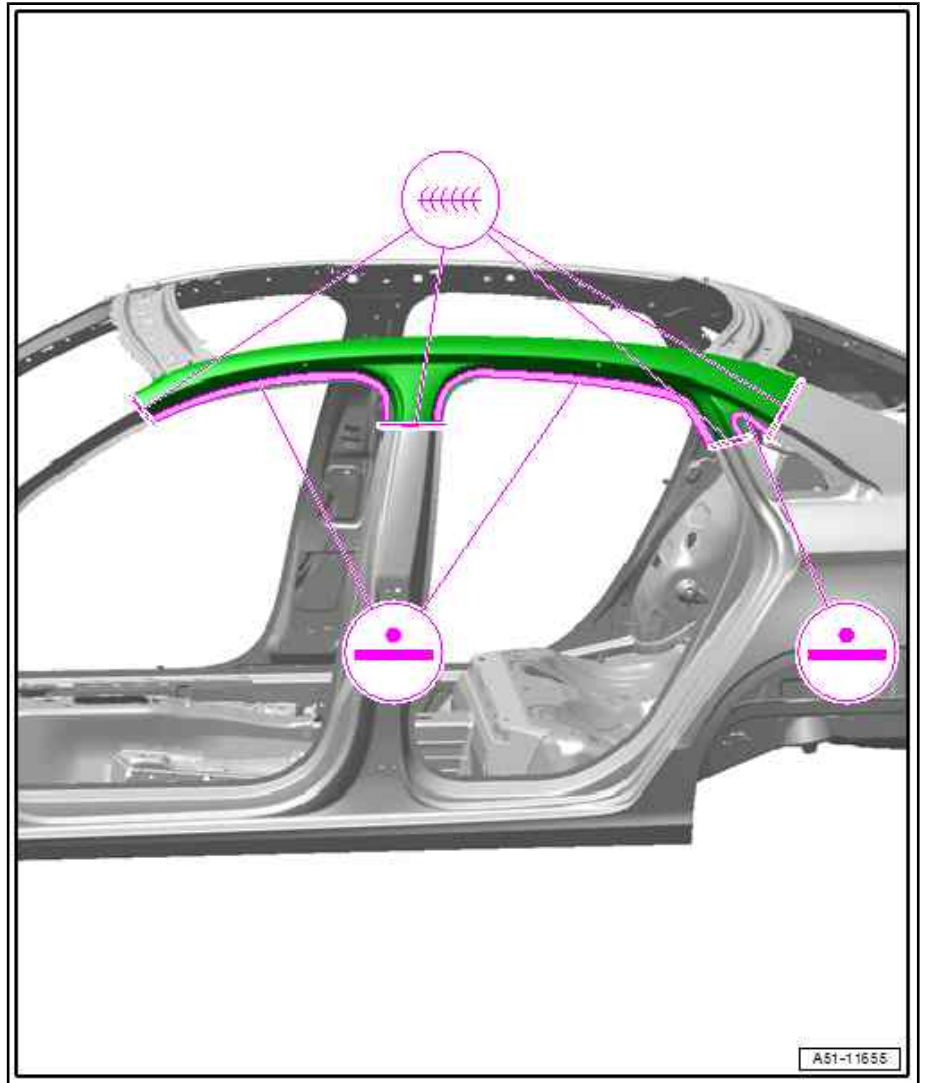
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Match up roof side member and fix in position.
- Weld in roof side member using resistance spot welder : RP spot weld seam.



- Butt weld separating cuts using shielded arc welding equipment : SG continuous seam.
- Weld in roof side member using resistance spot welder : RP spot weld seam.



- Welding in roof (standard roof version) ⇒ [page 218](#)
- Welding in roof (panoramic sunroof) ⇒ [page 241](#)

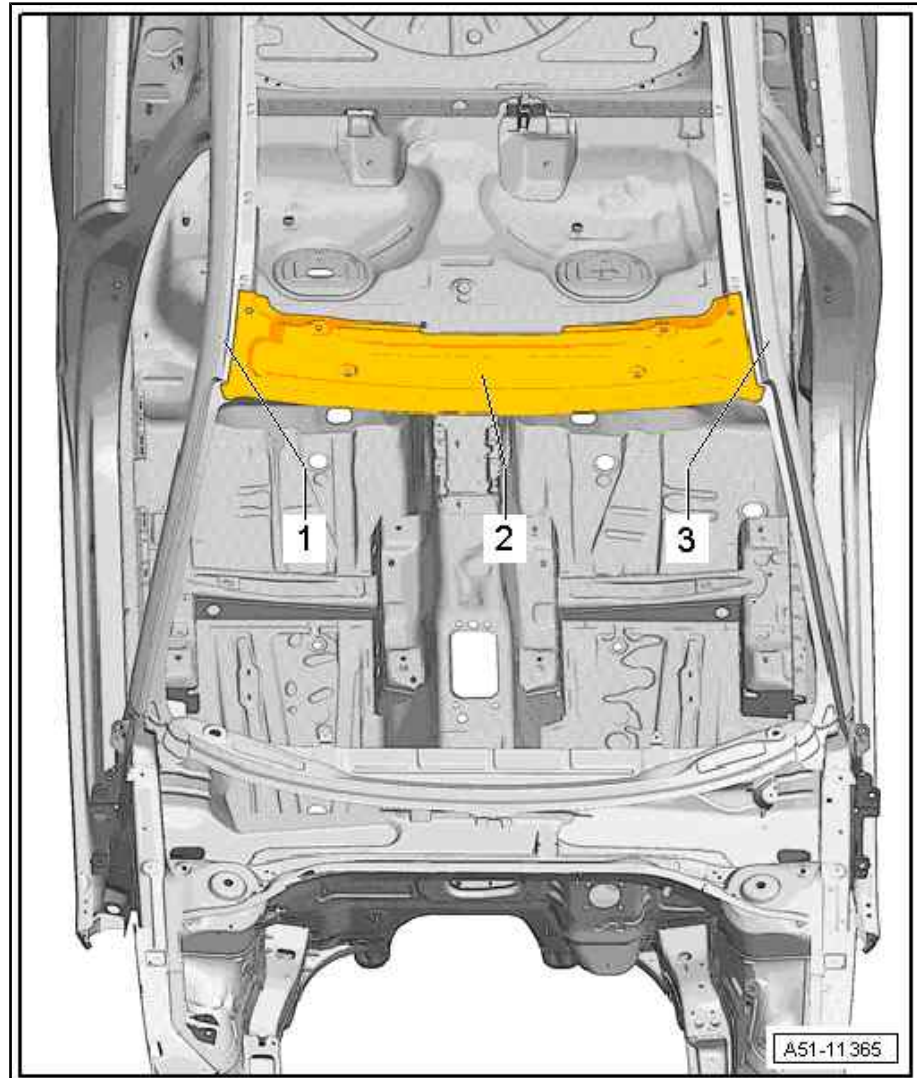


RO: 51 07 55 50

## 11 Front roof cross member - Renewal

A3 and Sportback identical

- 1 - Side frame (left-side)
- 2 - Roof cross member (front)
- 3 - Side frame (right-side)



### 11.1 Tools

Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker



**NOTICE**

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

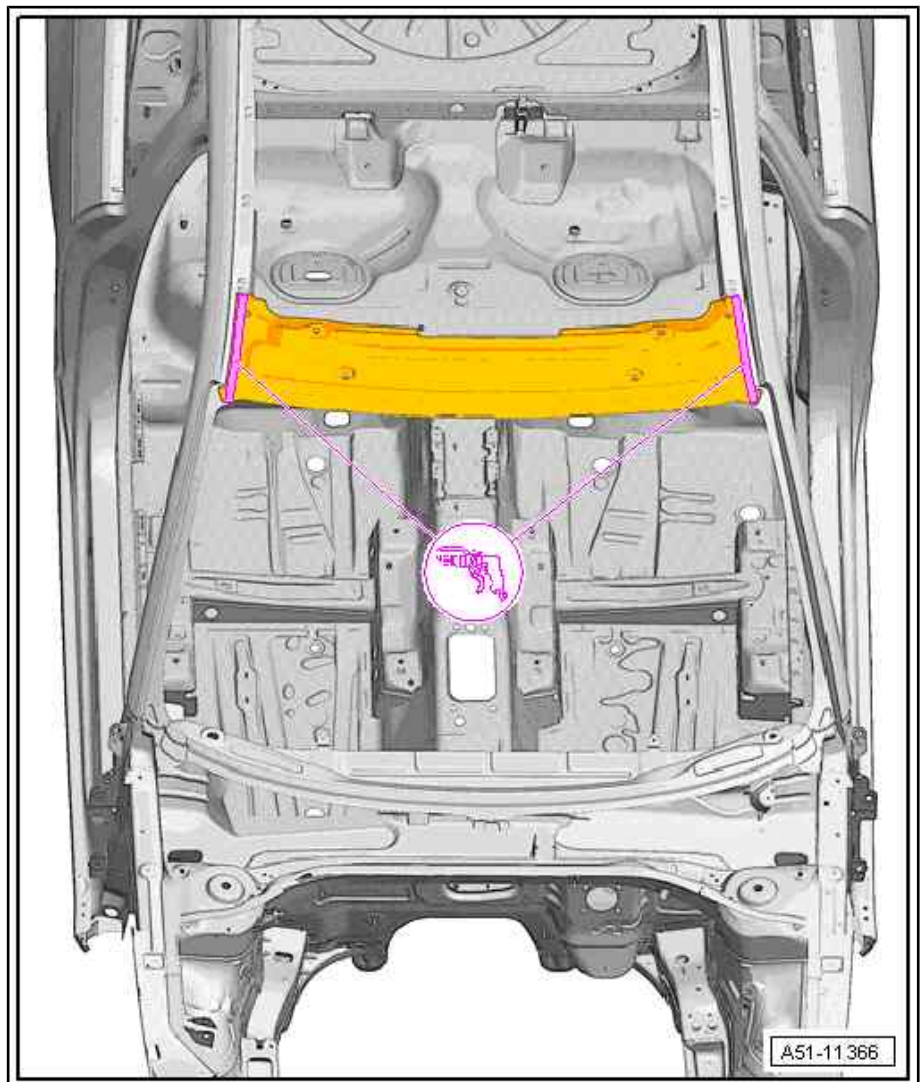


## 11.2 Procedure

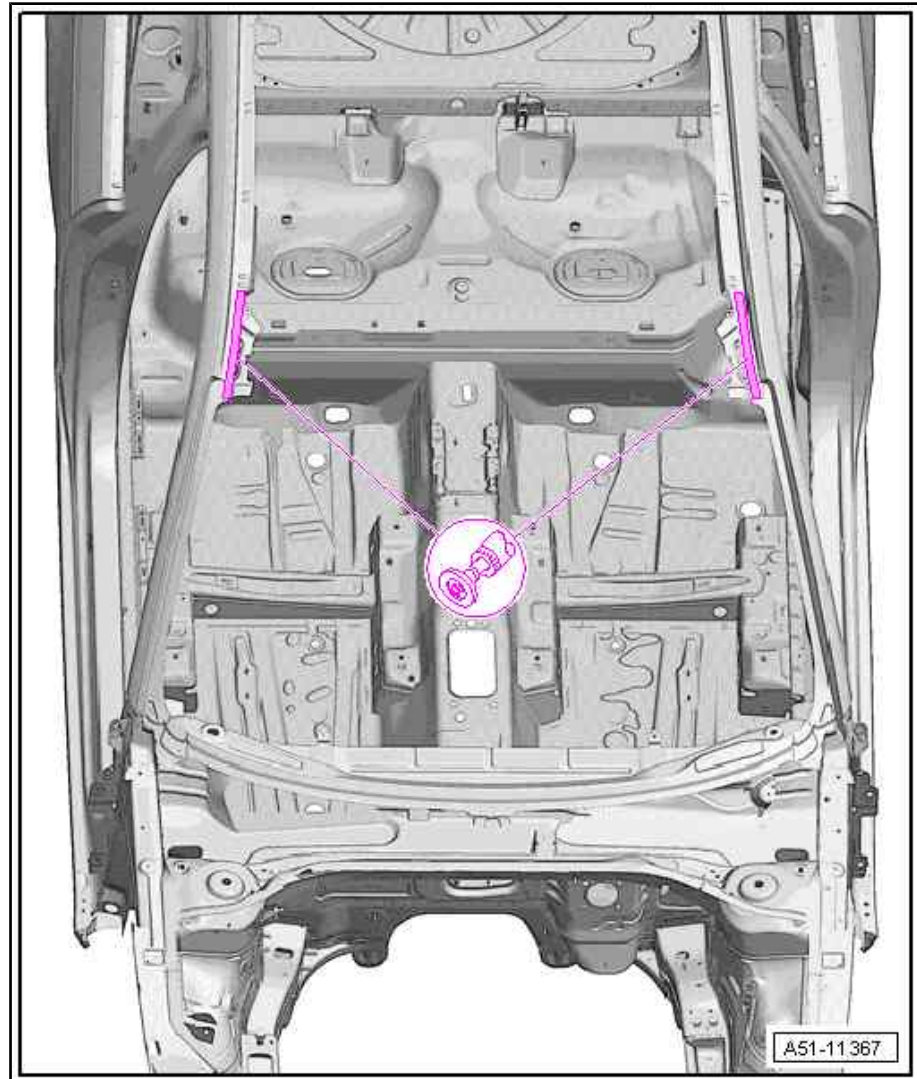
- Removing standard roof ⇒ [page 128](#)
- Removing roof (vehicle with panoramic sunroof) ⇒ [page 151](#)
- Removing standard roof (Sportback) ⇒ [page 173](#)
- Removing roof (vehicle with panoramic sunroof - Sportback) ⇒ [page 196](#)

### Cutting locations

- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.



### Replacement part

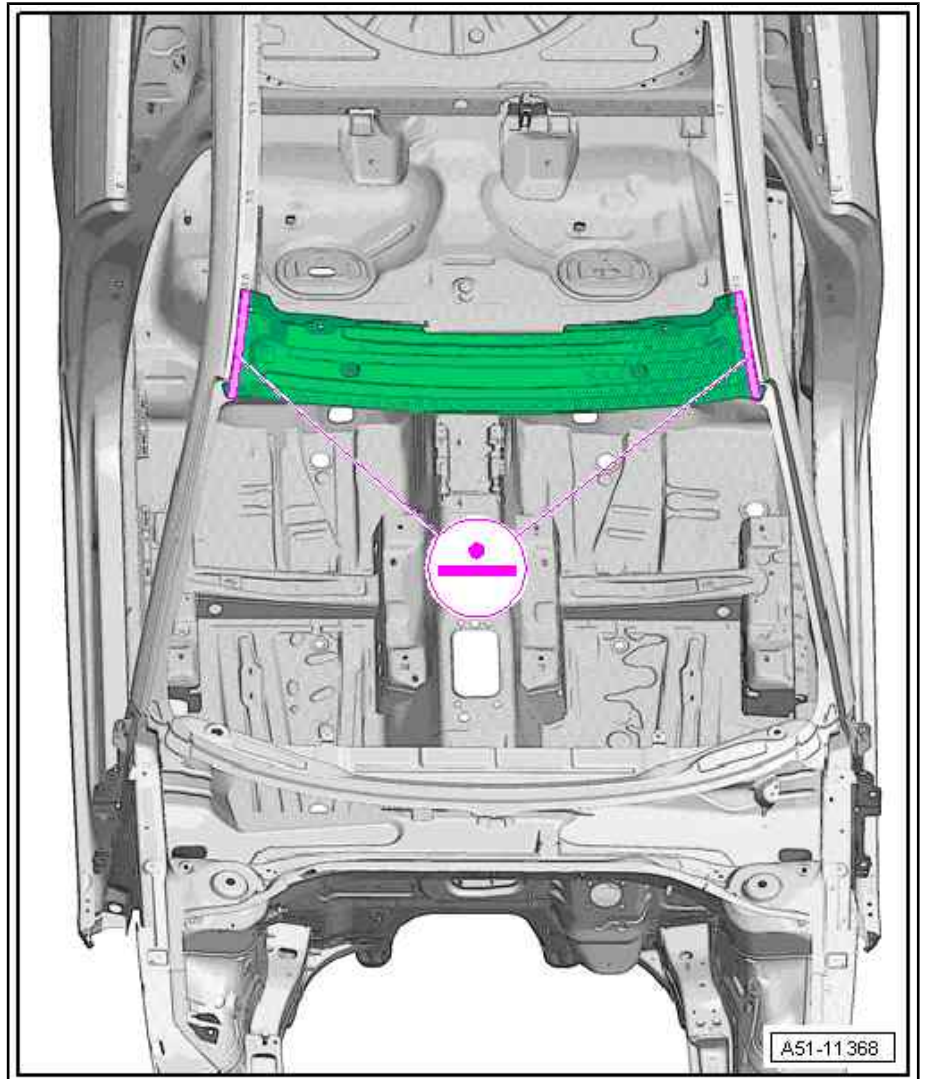
- ◆ Roof cross member

#### NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

### Welding in

- Match up and fix new part in position.
- Weld in new part using resistance spot welder : RP spot weld seam.



- Welding in standard roof (A3) ⇒ [page 128](#)
- Welding in roof (vehicle with panoramic sunroof) ⇒ [page 151](#)
- Welding in standard roof (Sportback) ⇒ [page 173](#)
- Welding in roof (vehicle with panoramic sunroof - Sportback) ⇒ [page 196](#)

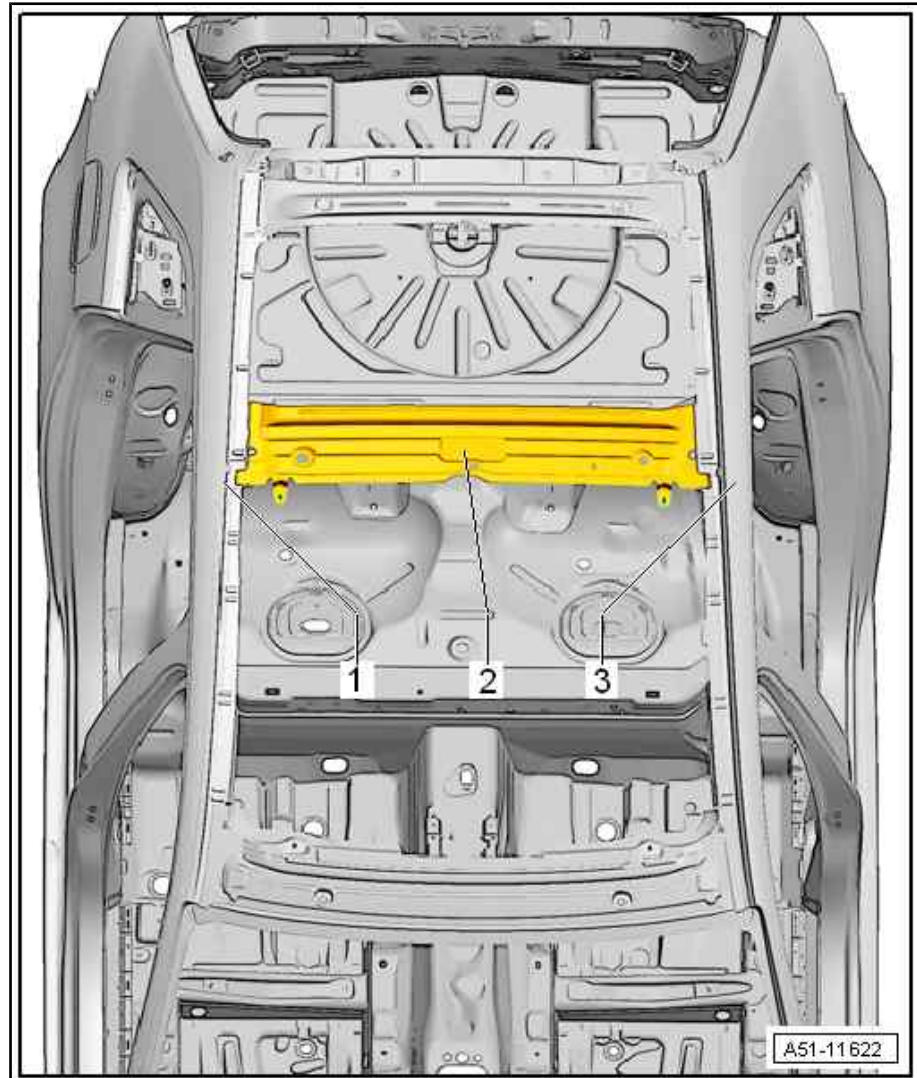


RO: 51 07 55 50

## 12 Centre roof cross member - Renewal

A3 and Sportback identical

- 1 - Side frame (left-side)
- 2 - Roof cross member (front)
- 3 - Side frame (right-side)



### 12.1 Tools

Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker



**NOTICE**

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

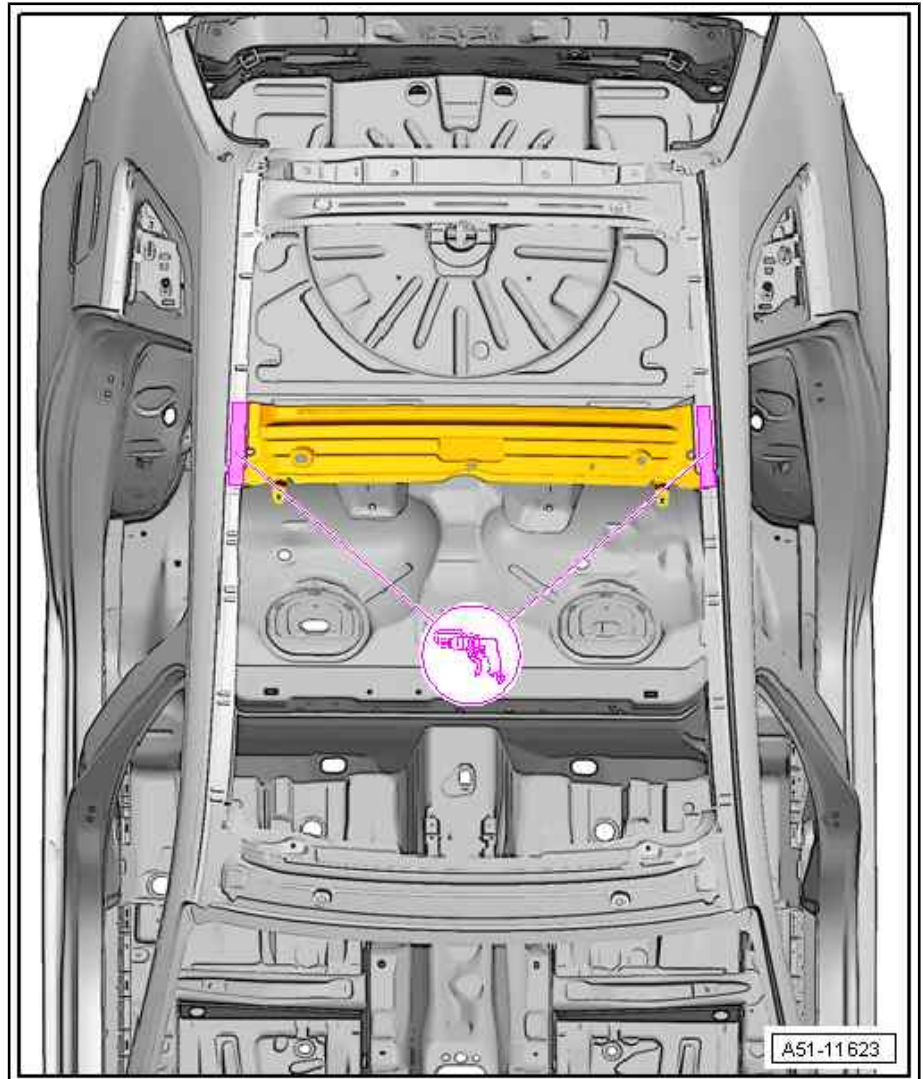


## 12.2 Procedure

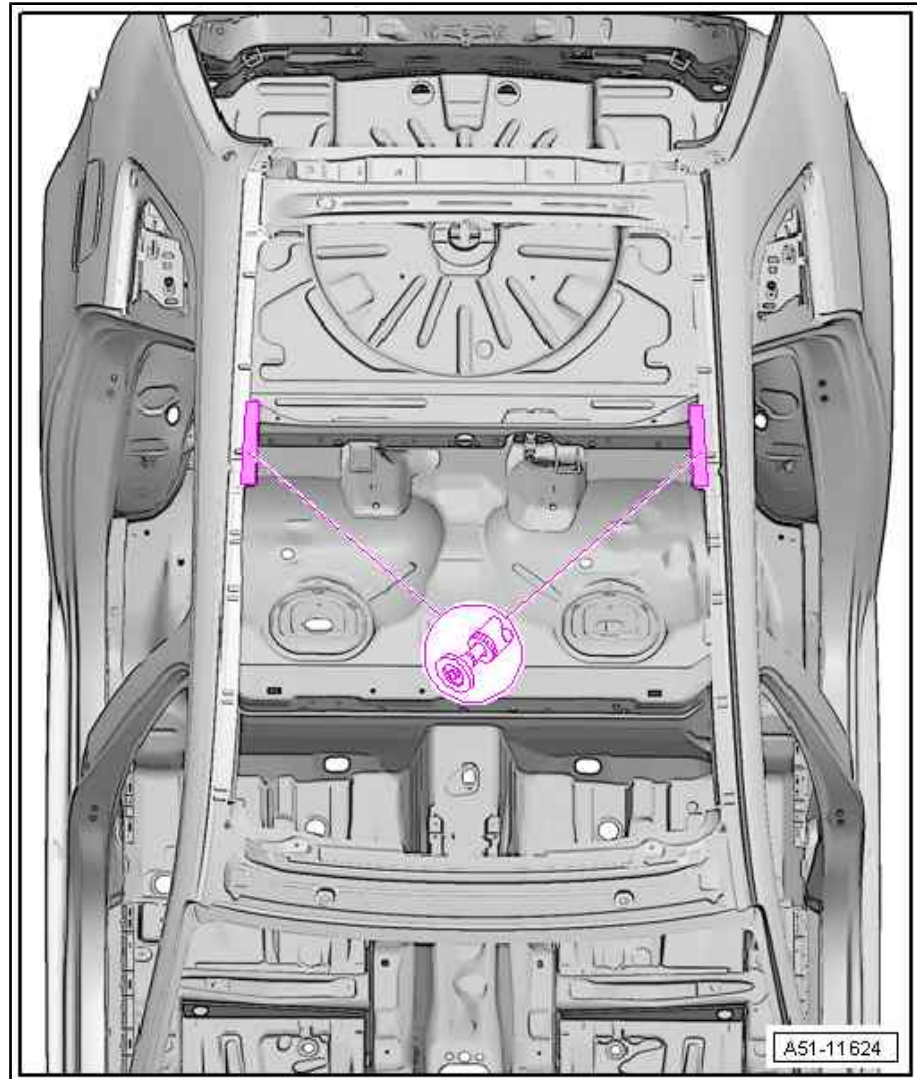
- Removing standard roof ⇒ [page 128](#)
- Removing roof (vehicle with panoramic sunroof) ⇒ [page 151](#)
- Removing roof (vehicle with panoramic sunroof - Sportback) ⇒ [page 196](#)

### Cutting locations

- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.



### Replacement part

- ◆ Roof cross member

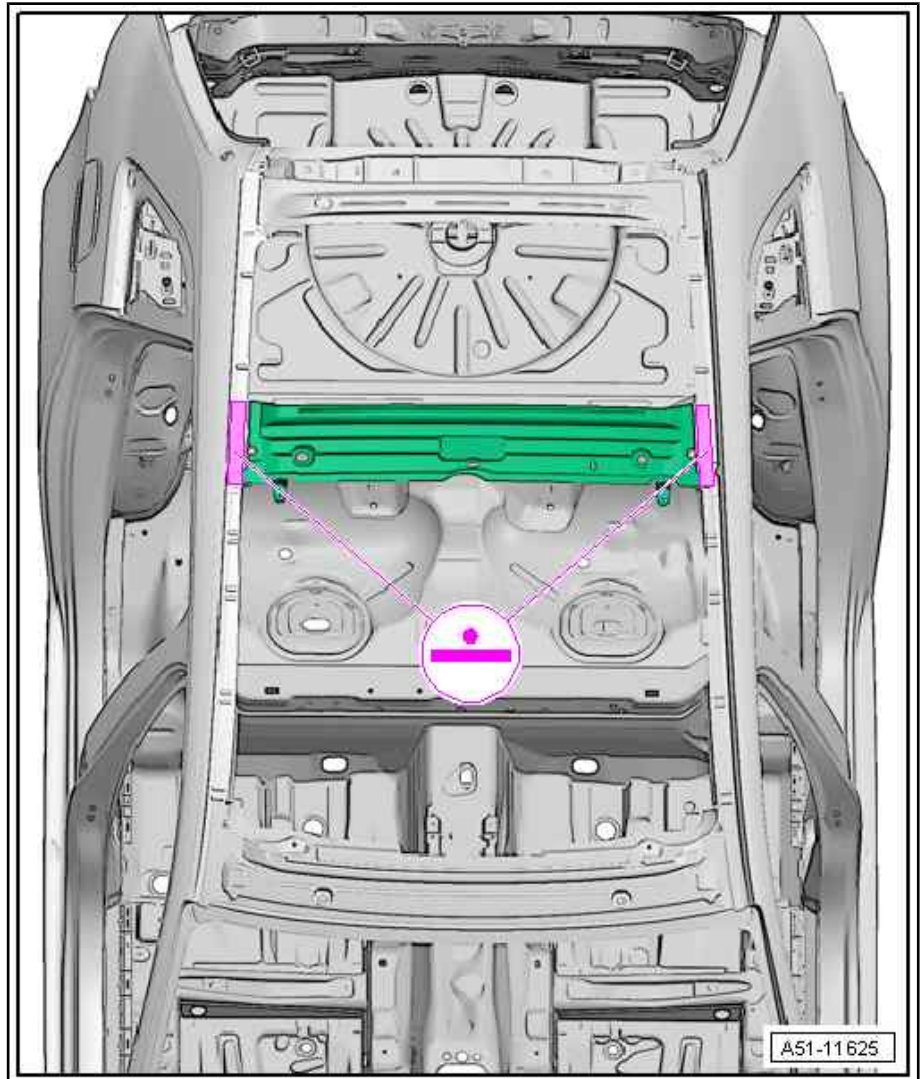


#### NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

### Welding in

- Match up and fix new part in position.
- Weld in new part using resistance spot welder : RP spot weld seam.



- Welding in standard roof (A3) ⇒ [page 128](#)
- Welding in standard roof (Sportback) ⇒ [page 173](#)
- Welding in roof (vehicle with panoramic sunroof - Sportback)  
⇒ [page 196](#)

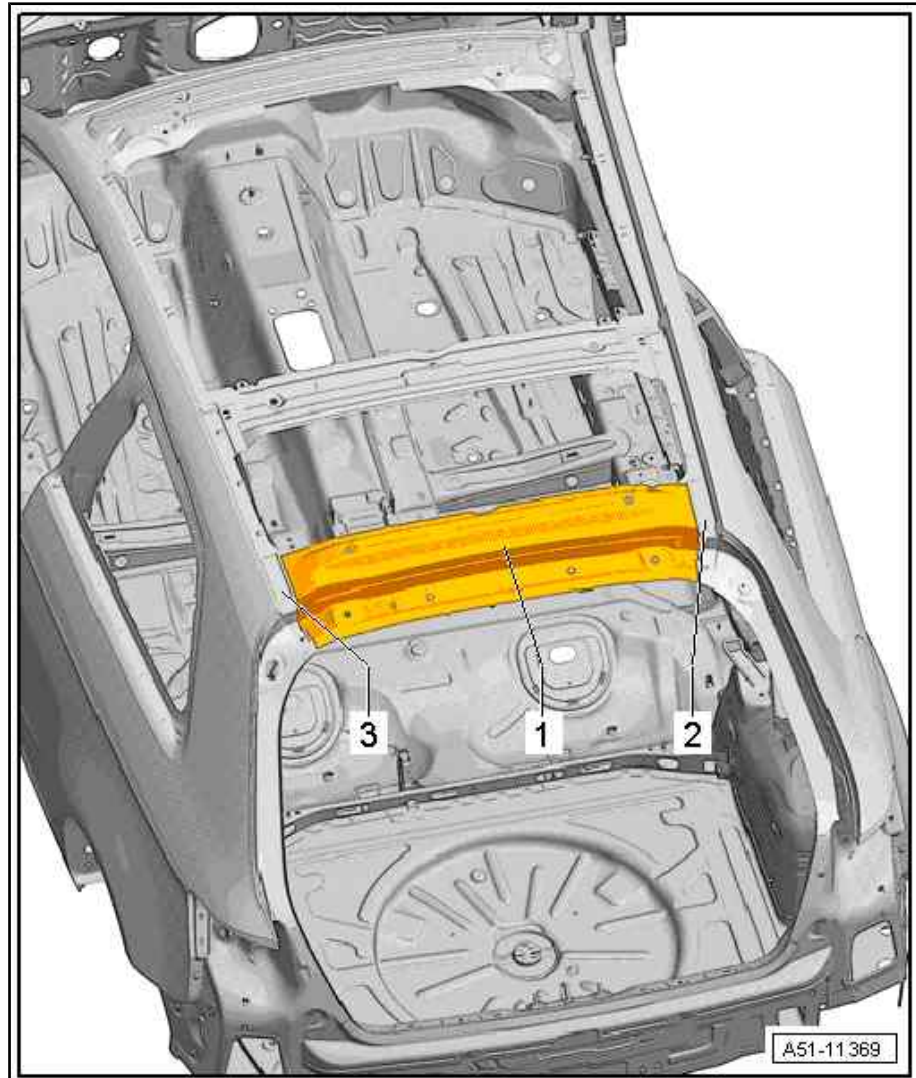


RO: 51 09 55 50

## 13 Rear roof cross member - Renewal

A3 and Sportback identical

- 1 - Roof cross member
- 2 - Right roof frame connection
- 3 - Left roof frame connection



### 13.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker



#### NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

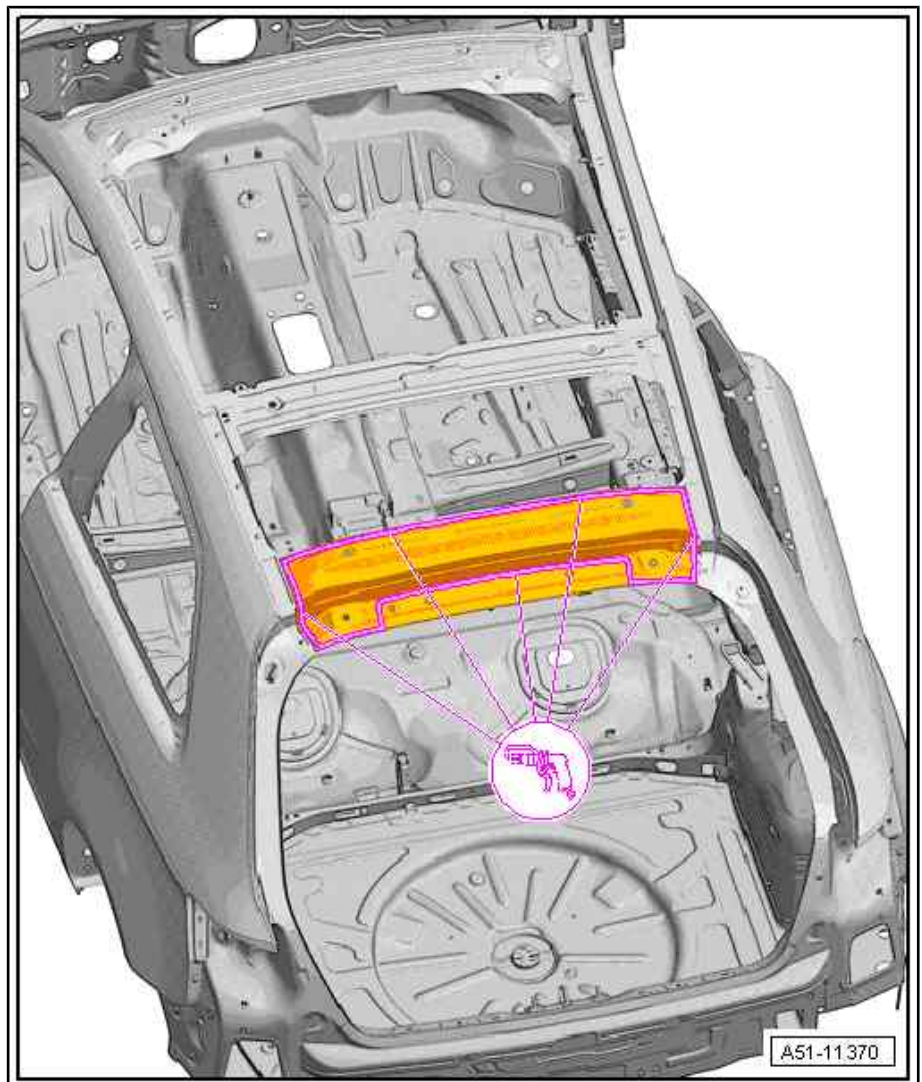


## 13.2 Procedure

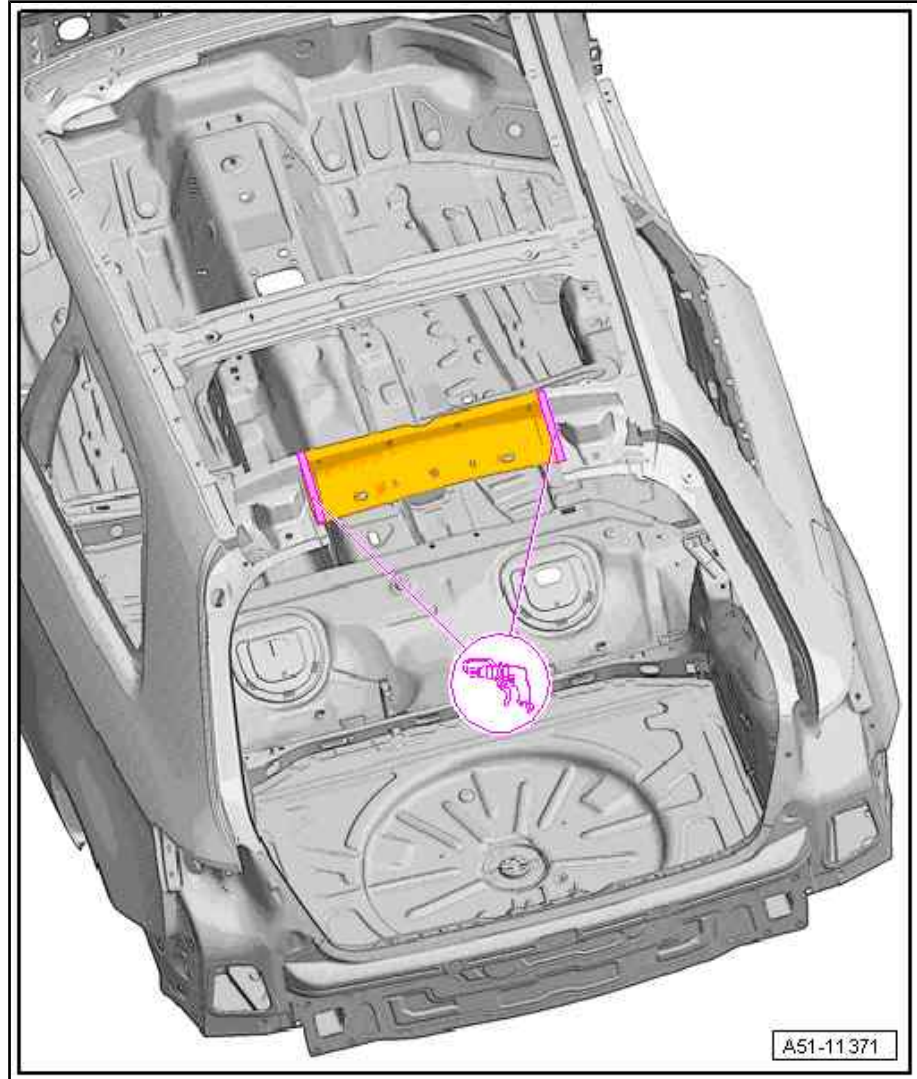
- Removing standard roof ⇒ [page 128](#)
- Removing roof (vehicle with panoramic sunroof) ⇒ [page 151](#)
- Removing standard roof (Sportback) ⇒ [page 173](#)
- Removing roof (vehicle with panoramic sunroof - Sportback) ⇒ [page 196](#)

### Cutting locations

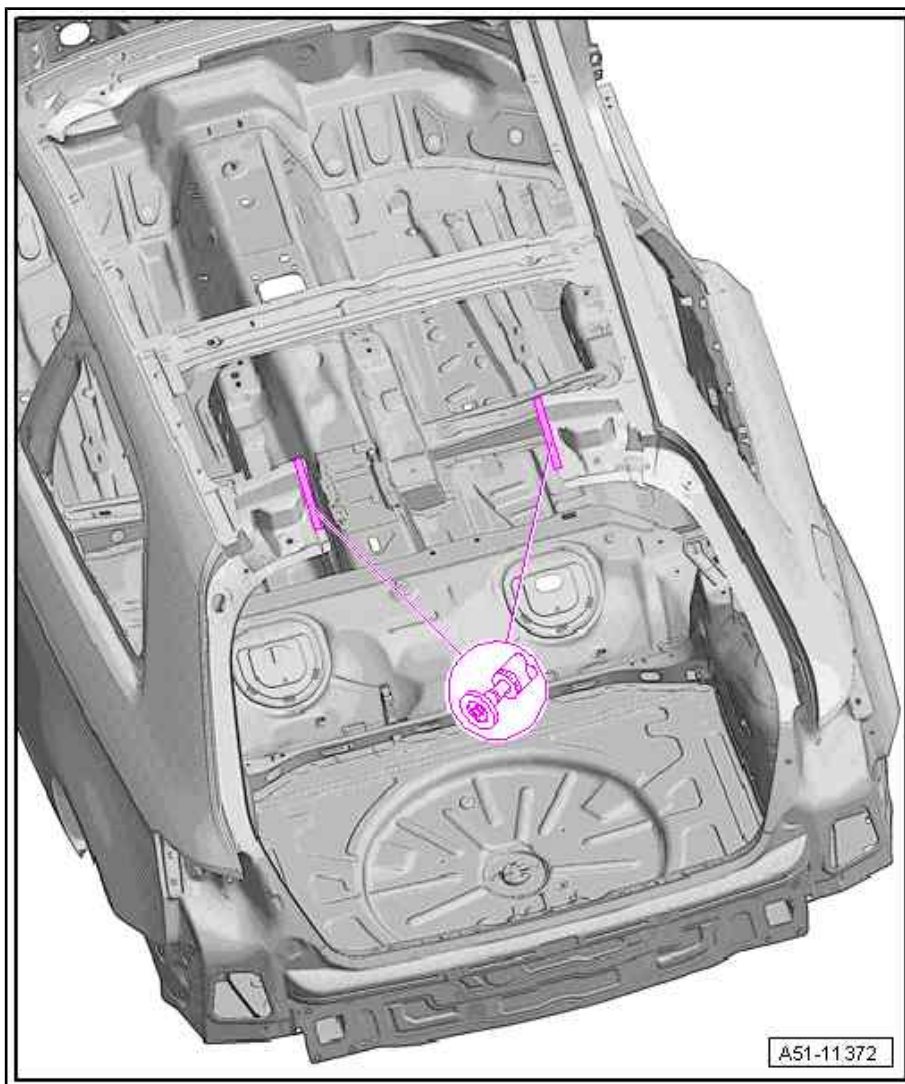
- Separate original joint using spot weld breaker .



- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.



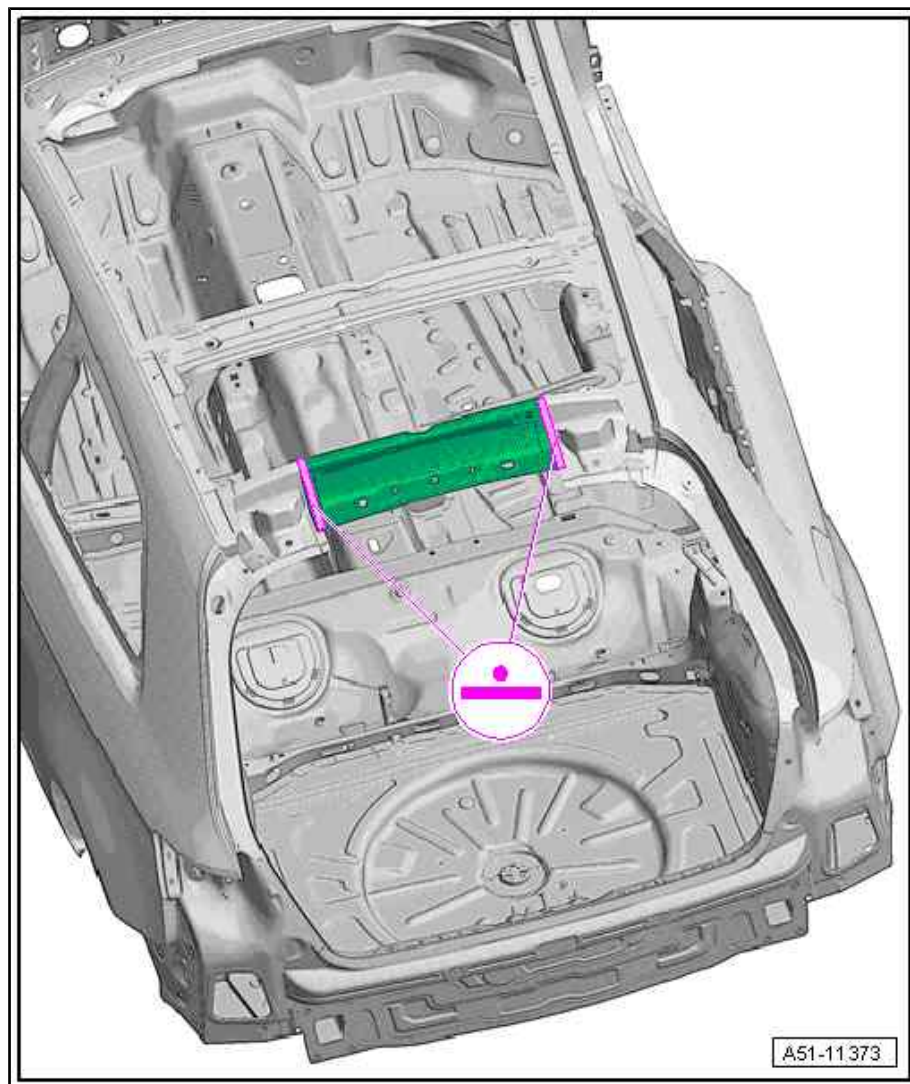
- ◆ Upper rear roof cross member
- ◆ Lower rear roof cross member

**!** NOTICE

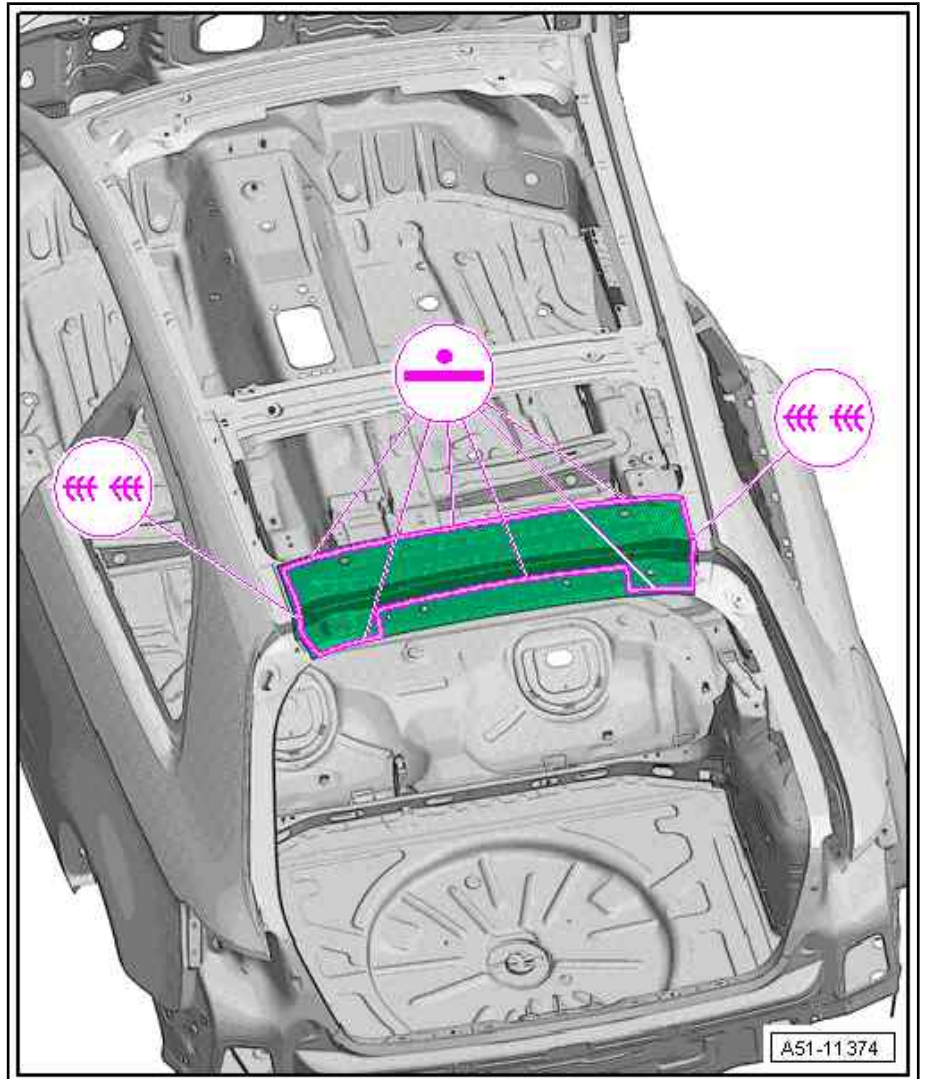
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Match up and fix new part in position.
- Weld in new part using resistance spot welder : RP spot weld seam.



- Match up upper rear roof frame and fix in position.
- Check fit relative to roof.
- Weld in roof frame using resistance spot welder : RP spot weld seam.
- Weld in roof frame using shielded arc welding equipment : SG continuous seam (staggered - with gaps).



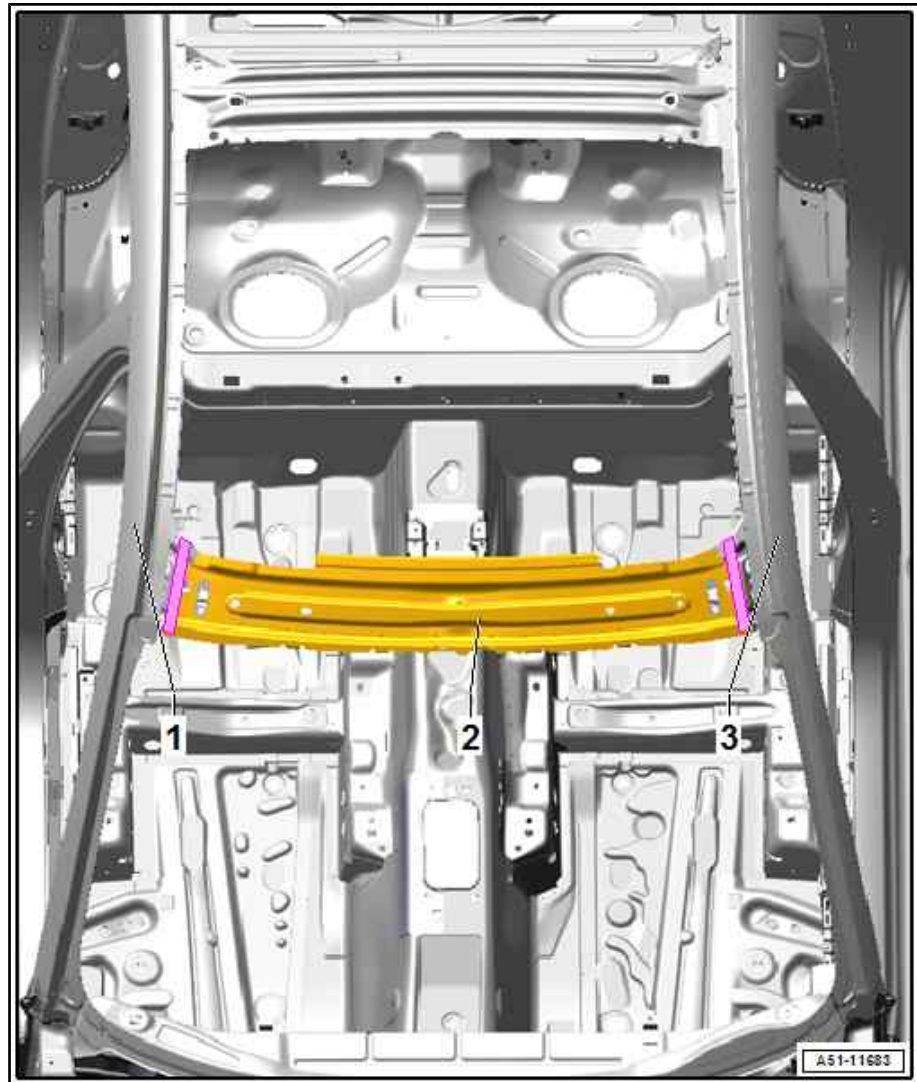
- Welding in standard roof (A3) ⇒ [page 128](#)
- Welding in roof (vehicle with panoramic sunroof) ⇒ [page 151](#)
- Welding in standard roof (Sportback) ⇒ [page 173](#)
- Welding in roof (vehicle with panoramic sunroof - Sportback) ⇒ [page 196](#)



RO: 51 07 55 50

## 14 Front roof cross member - Renewal (Saloon)

- 1 - Side frame (left-side)
- 2 - Roof cross member (front)
- 3 - Side frame (right-side)



### 14.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker



**NOTICE**

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

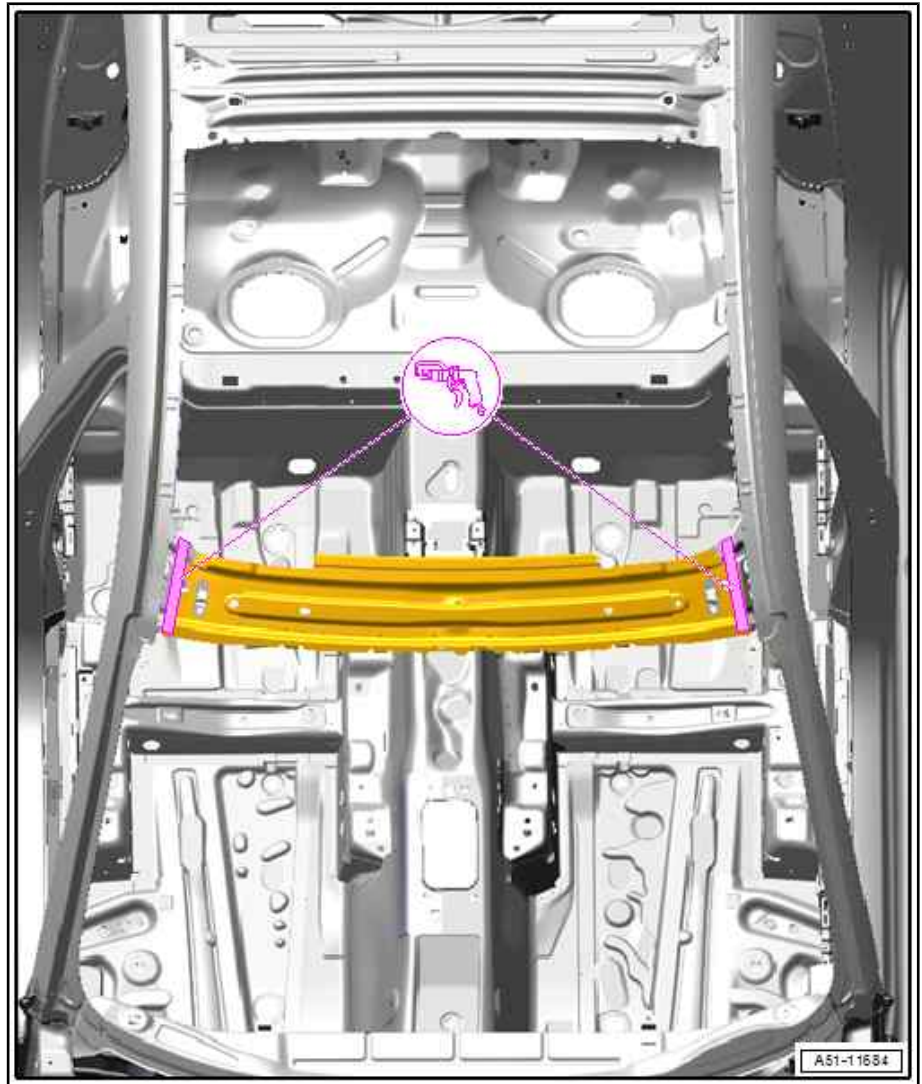


## 14.2 Procedure

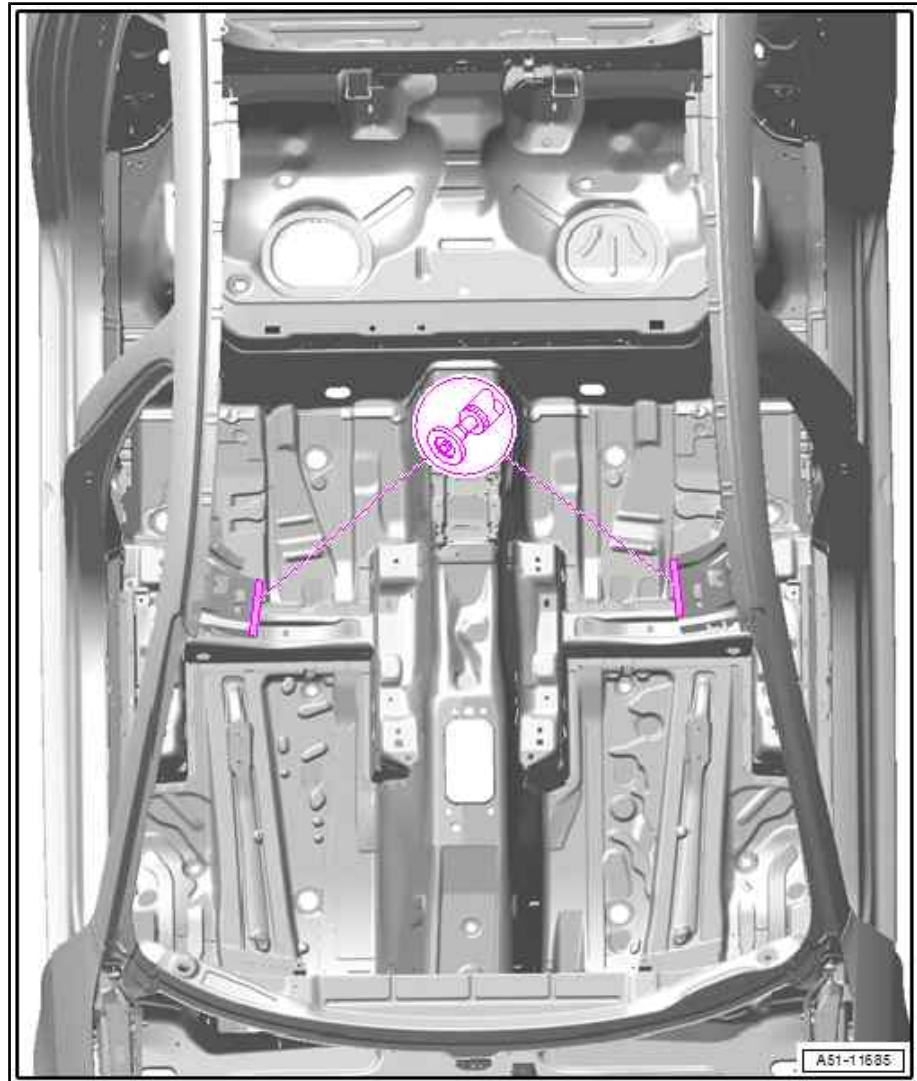
- Removing standard roof ⇒ [page 218](#)
- Removing roof (vehicle with panoramic sunroof) ⇒ [page 241](#)

### Cutting locations

- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.



### Replacement part

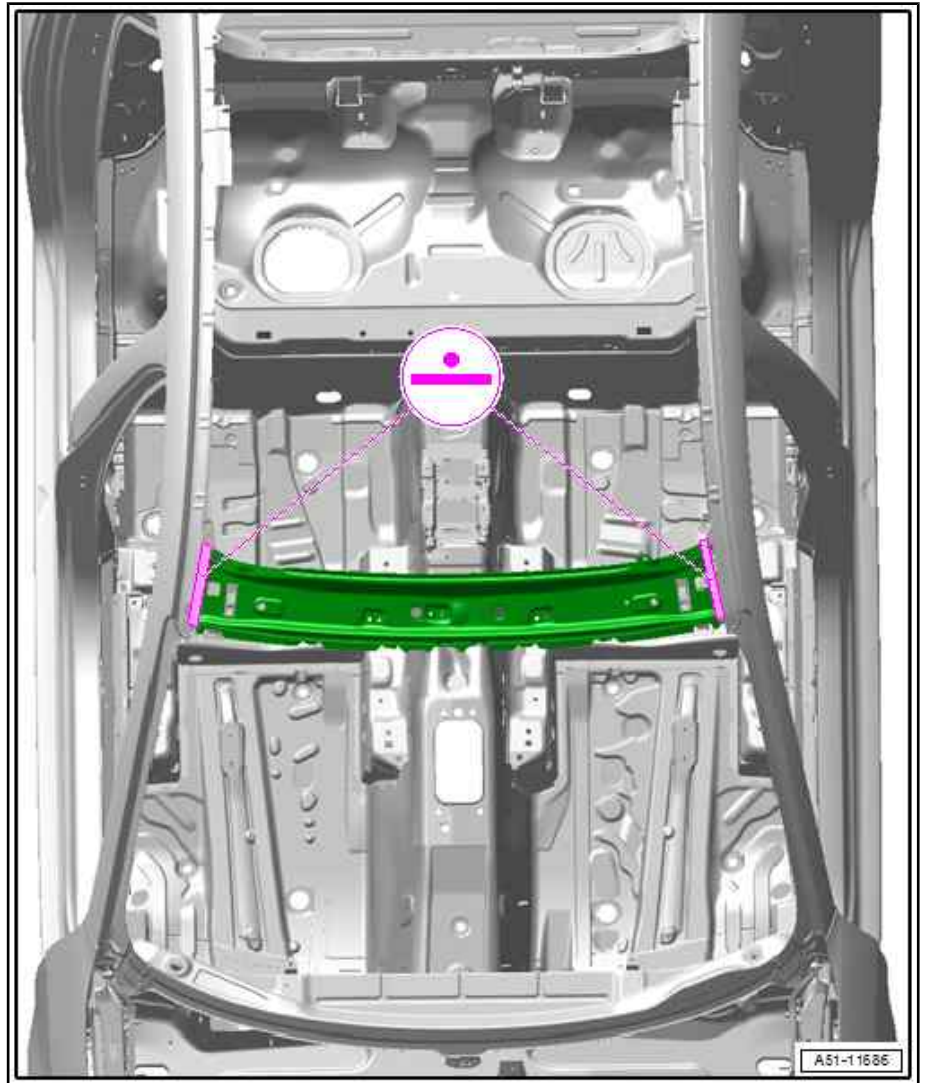
- ◆ Roof cross member

#### NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

### Welding in

- Match up and fix new part in position.
- Weld in new part using resistance spot welder : RP spot weld seam.



- Welding in standard roof (A3) ⇒ [page 218](#)
- Welding in roof (vehicle with panoramic sunroof) ⇒ [page 241](#)



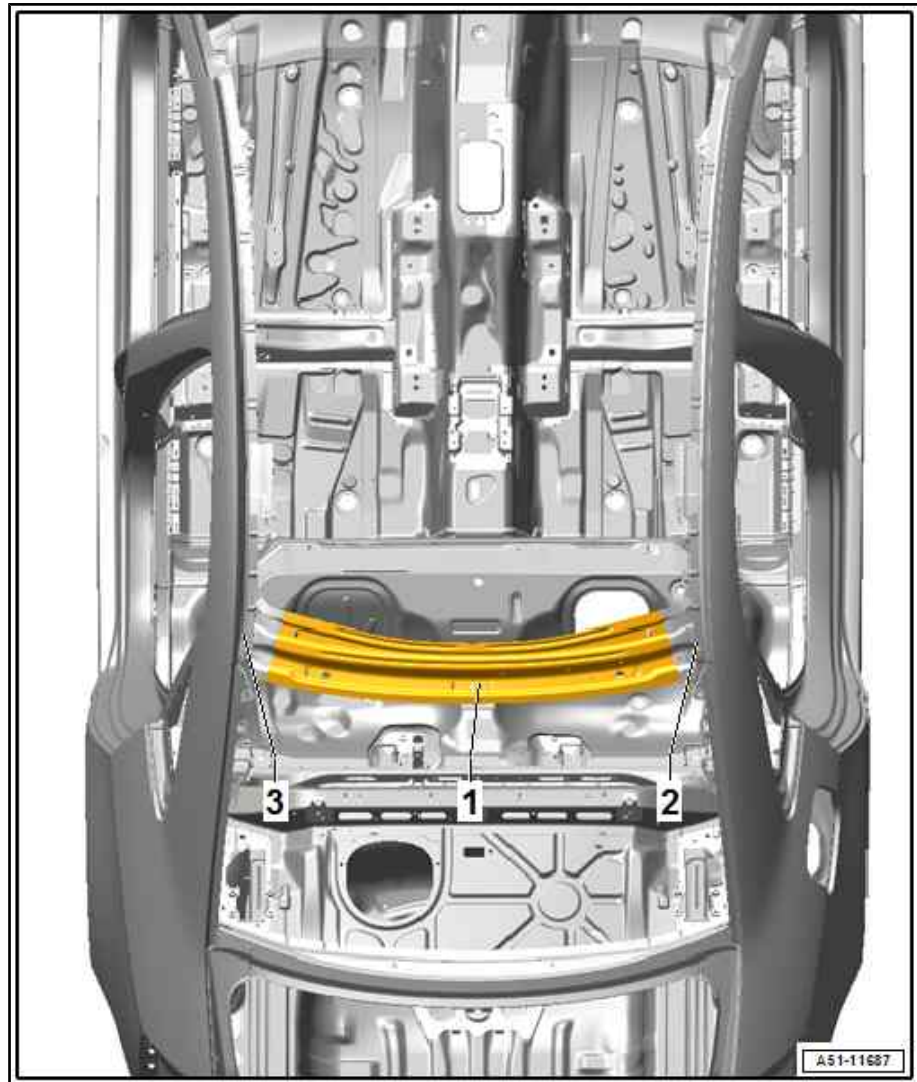
RO: 51 09 55 50

## 15 Rear roof cross member - Renewal (Saloon)

1 - Roof cross member

2 - Right roof frame connection

3 - Left roof frame connection



### 15.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker



#### NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

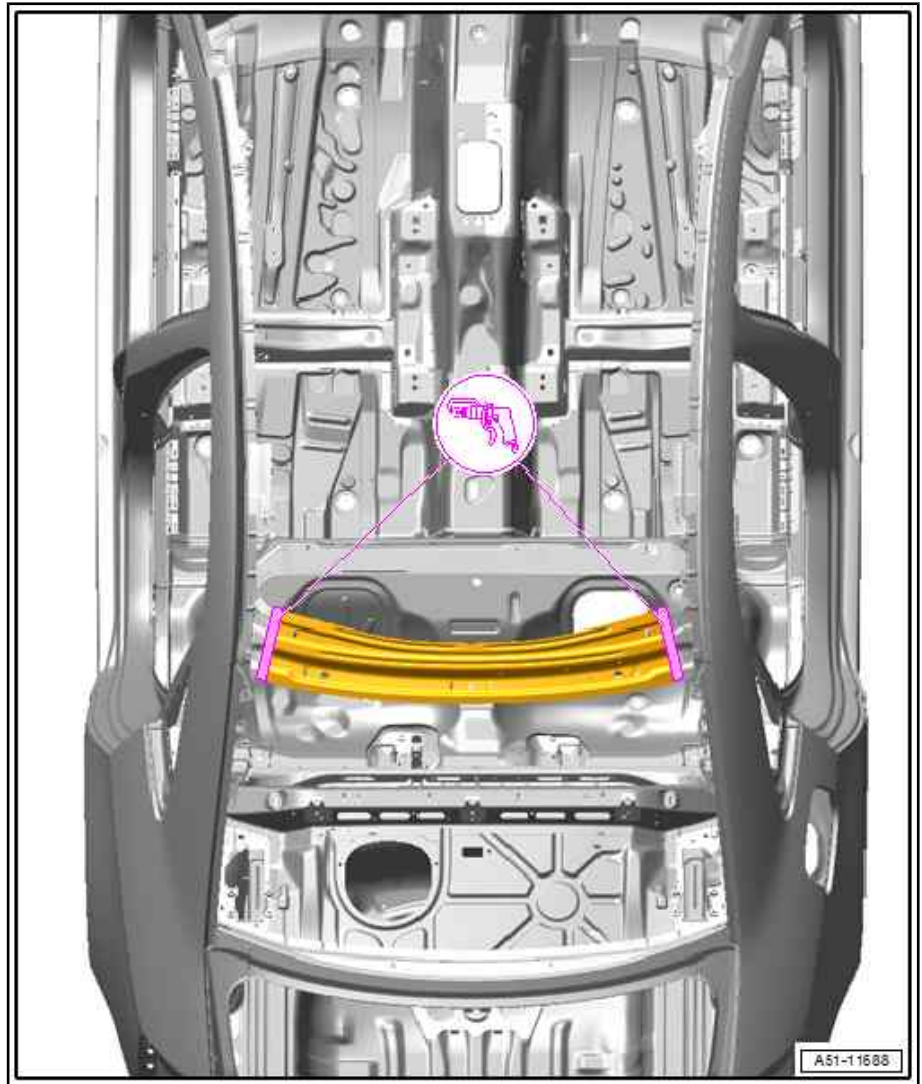


## 15.2 Procedure

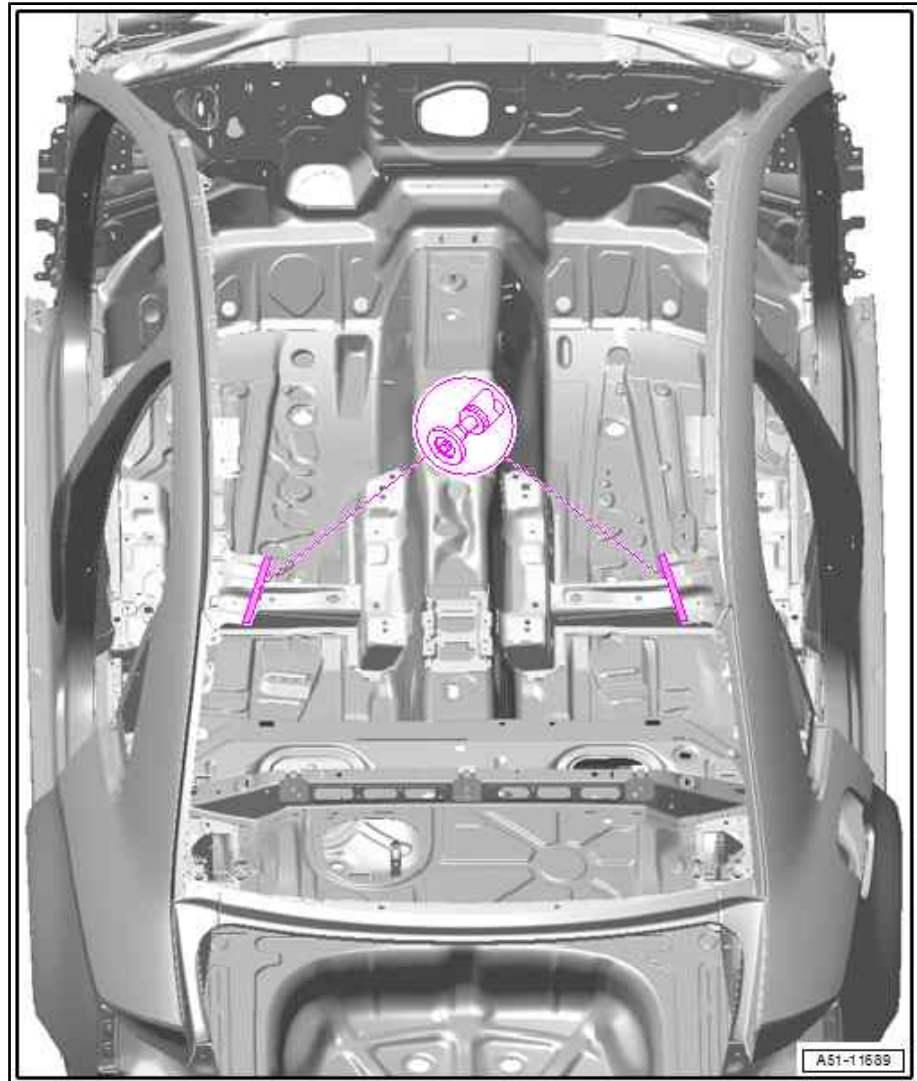
- Removing standard roof ⇒ [page 218](#)
- Removing roof (vehicle with panoramic sunroof) ⇒ [page 241](#)

### Cutting locations

- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.



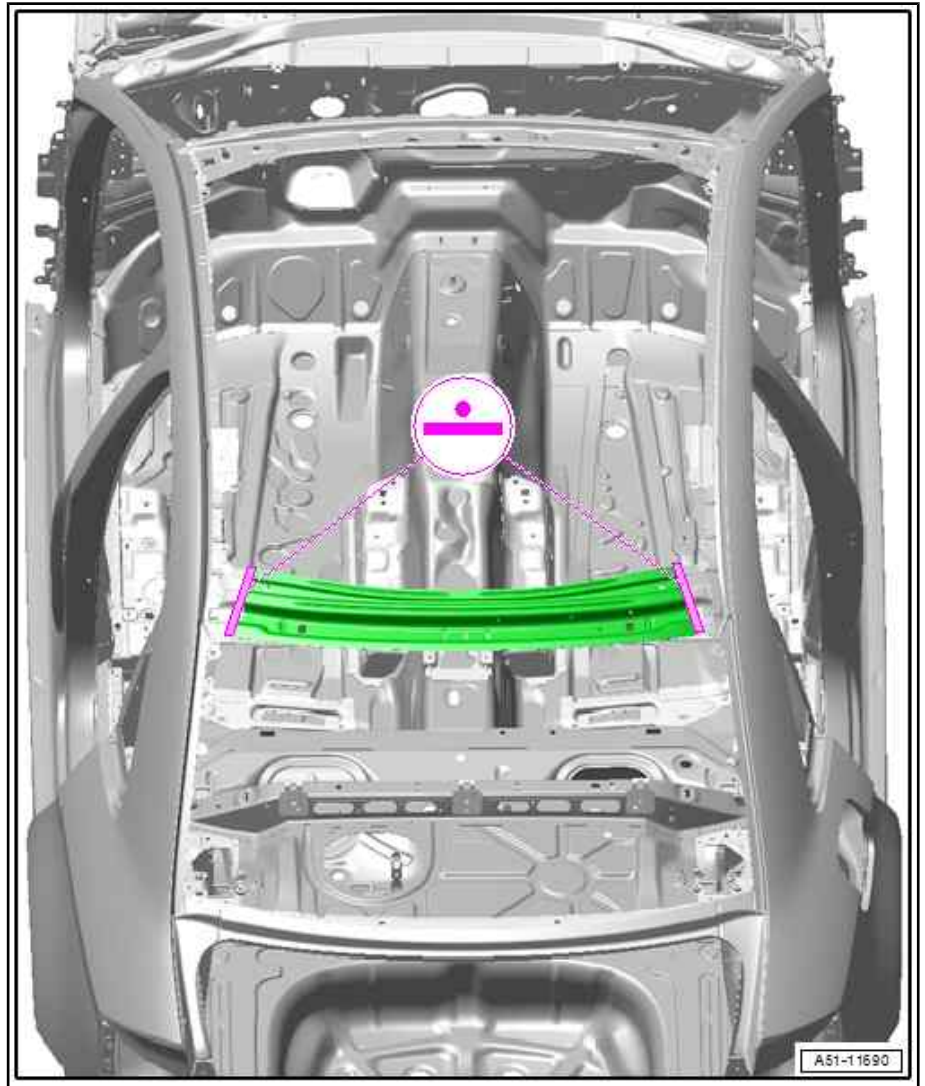
◆ Upper rear roof cross member

**!** NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Match up and fix new part in position.
- Weld in new part using resistance spot welder : RP spot weld seam.



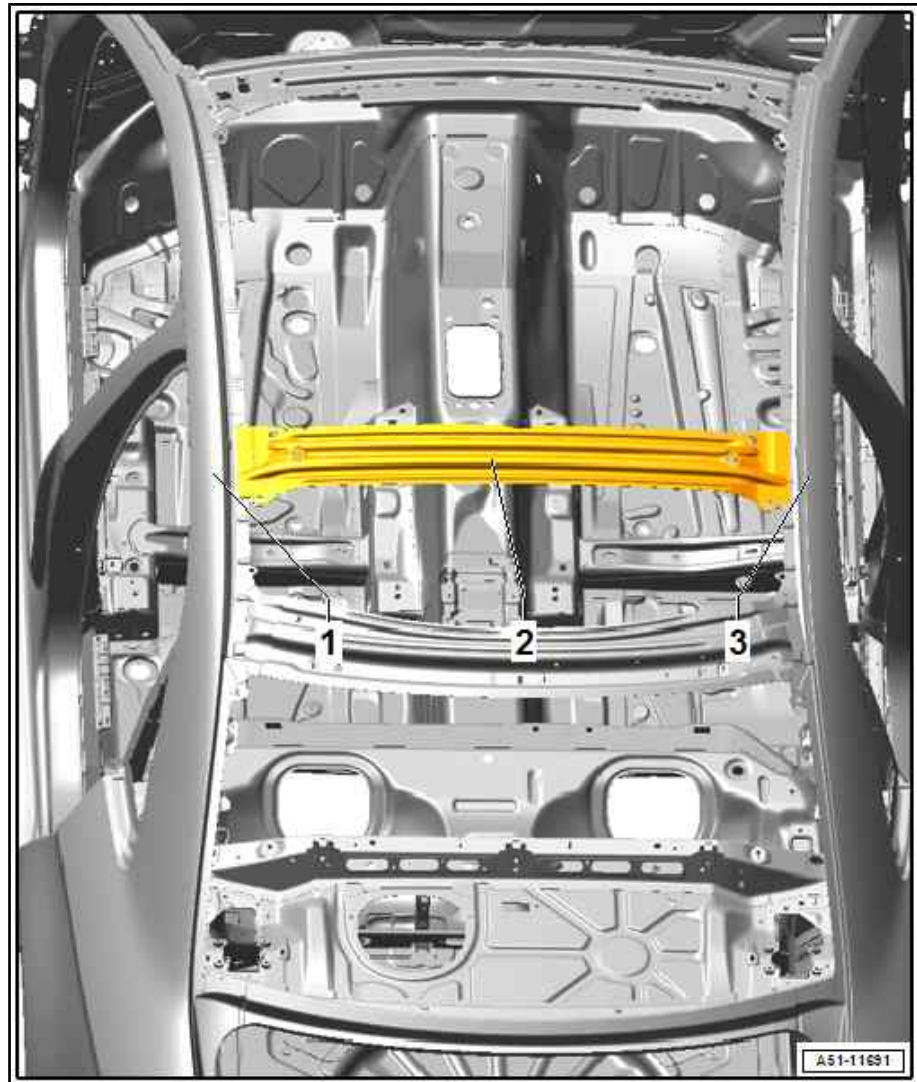
- Welding in standard roof (A3) ⇒ [page 218](#)
- Welding in roof (vehicle with panoramic sunroof) ⇒ [page 241](#)



RO: 51 07 55 50

## 16 Centre roof cross member - Renewal (Saloon)

- 1 - Side frame (left-side)
- 2 - Roof cross member (front)
- 3 - Side frame (right-side)



### 16.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker



#### NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

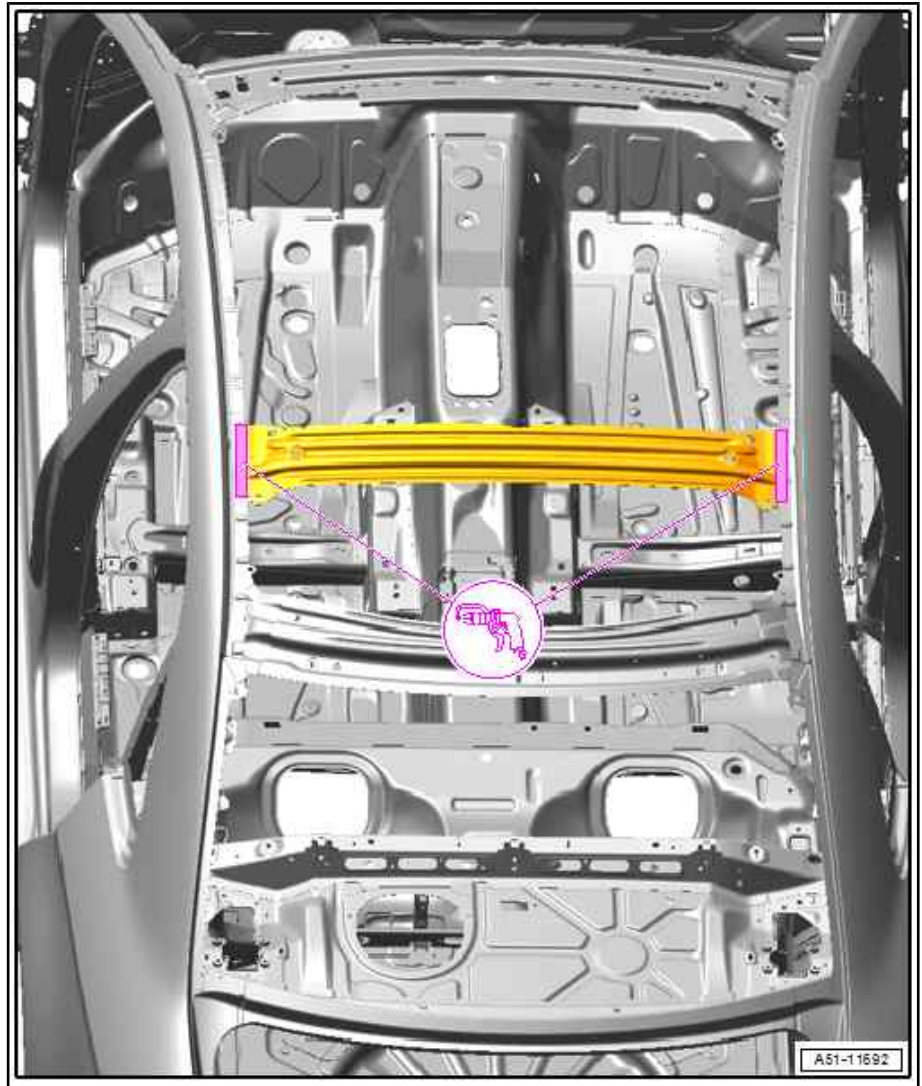


## 16.2 Procedure

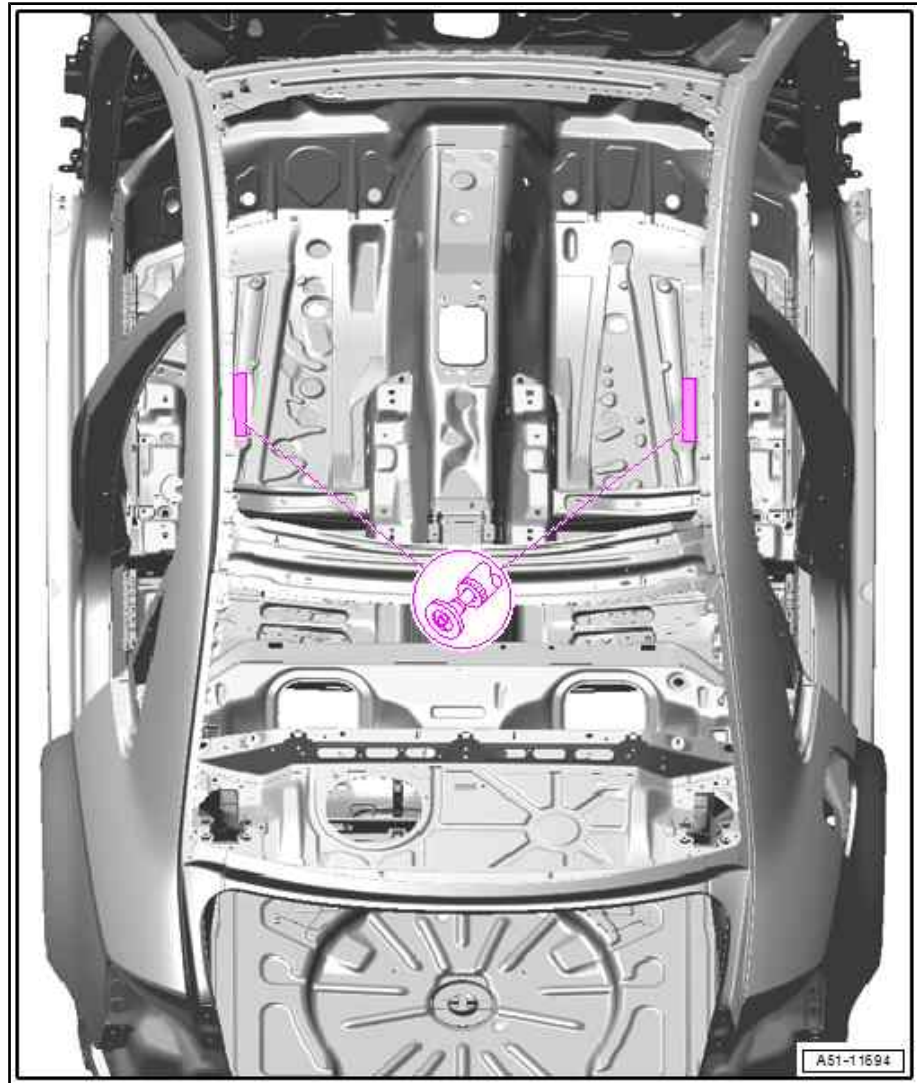
- Removing roof (vehicle with panoramic sunroof) ⇒ [page 241](#)

### Cutting locations

- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.



### Replacement part

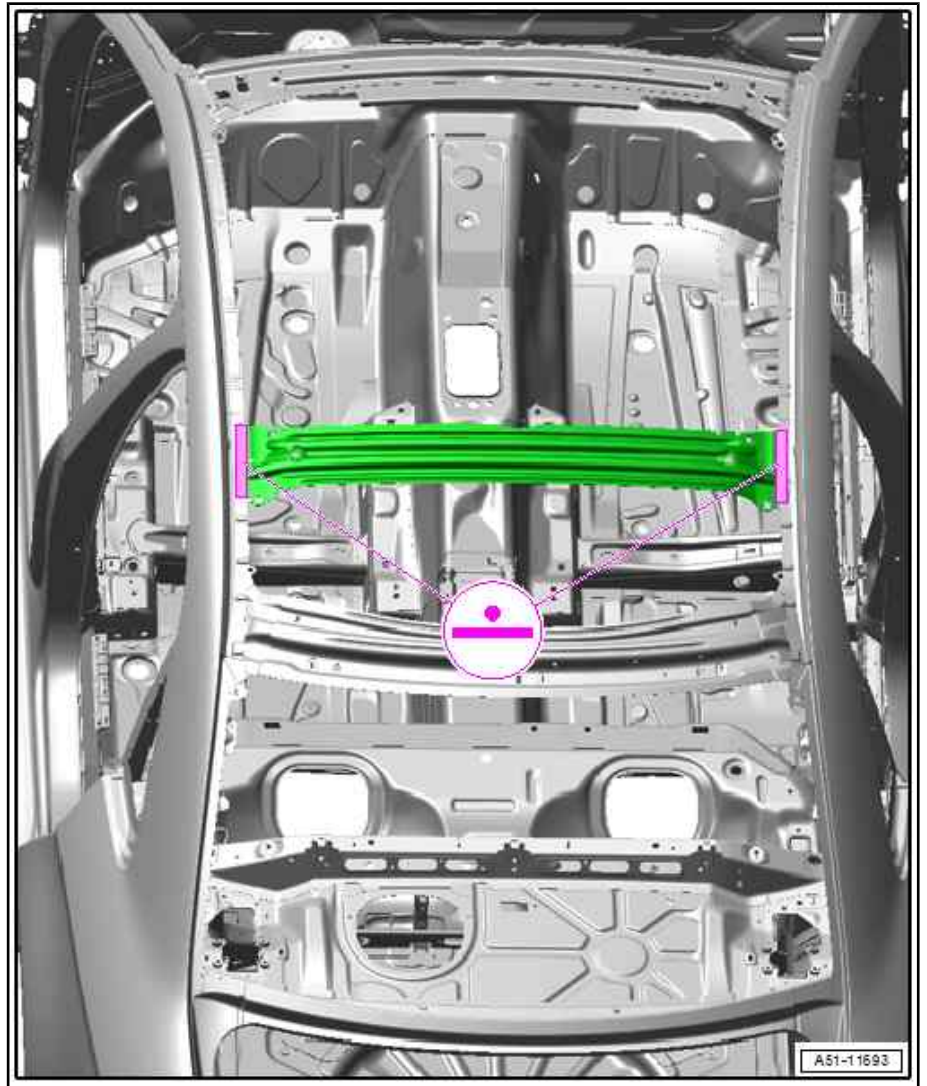
- ◆ Centre roof cross member

#### NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

### Welding in

- Match up and fix new part in position.
- Weld in new part using resistance spot welder : RP spot weld seam.



- Welding in roof (vehicle with panoramic sunroof) ⇒ [page 241](#)



RO: 51 37 55 00

## 17 Outer A-pillar - Renewal

A3, Sportback and Saloon identical

1 - Outer A-pillar

2 - Upper separating cut

3 - Separating cut in side member

4 - Separating cut for partial renewal

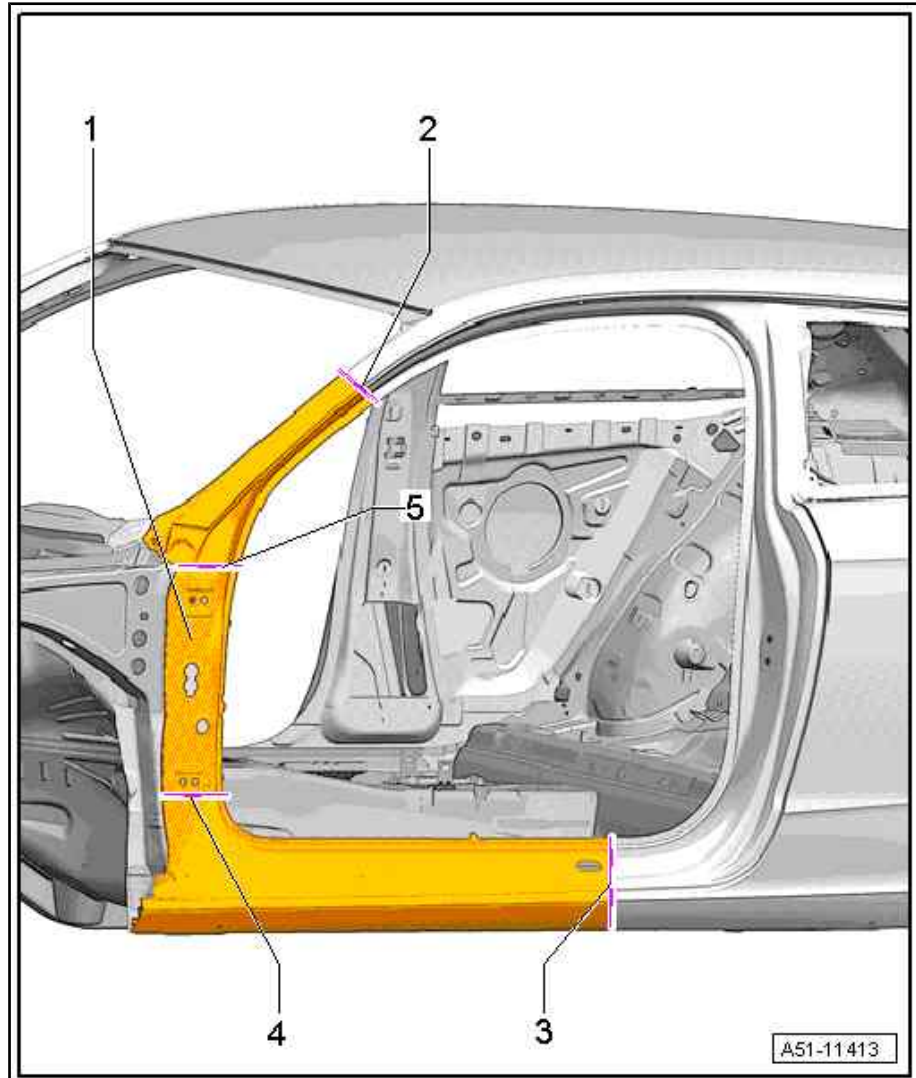
Partial renewal

*Partial renewal of the A-pillar is possible using this separating cut.*

5 - Separating cut for partial renewal

Partial renewal

*Partial renewal of the A-pillar is possible using this separating cut.*



### 17.1 Tools

Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker



**NOTICE**

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .



## 17.2 Procedure

### Cutting locations

Permitted separating cuts on complete side panel ⇒ [page 125](#) .



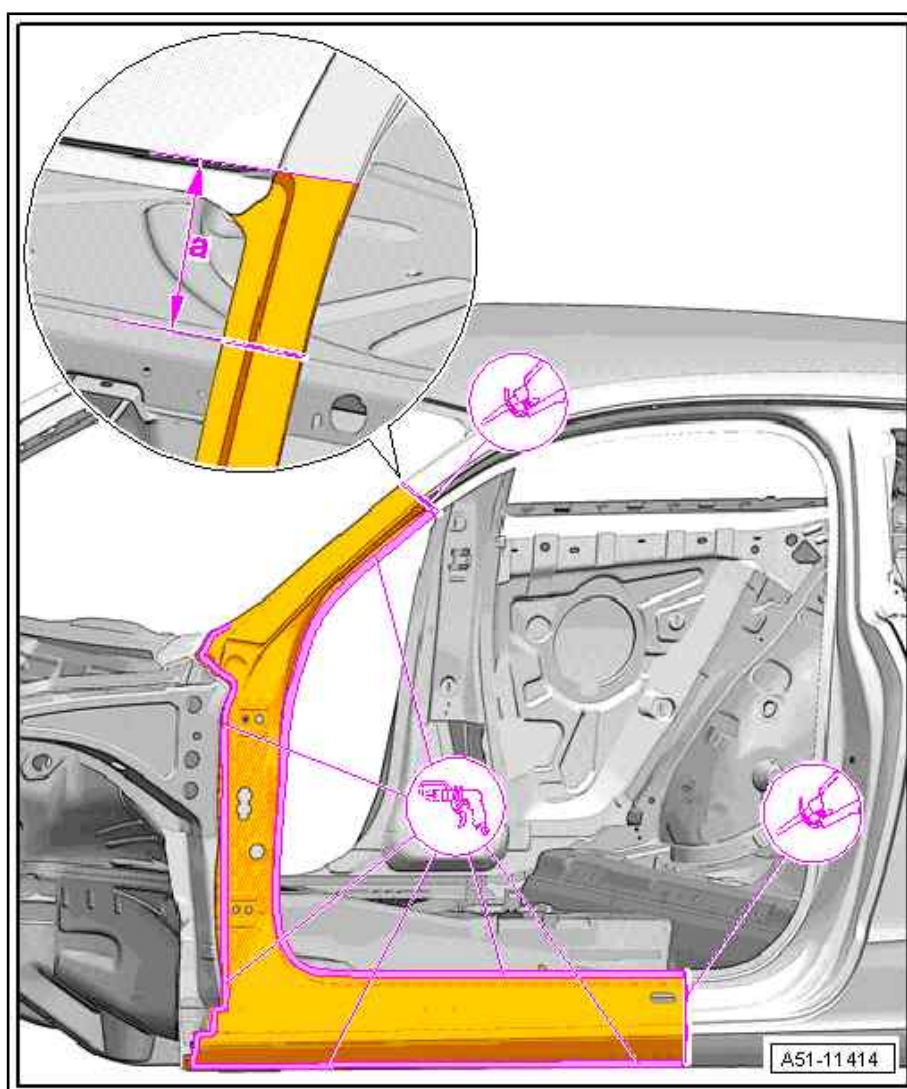
#### Note

*If the inner A-pillar is also being renewed, the separating cut -1- must be made at a distance of 130 mm -a- from the edge of the roof.*

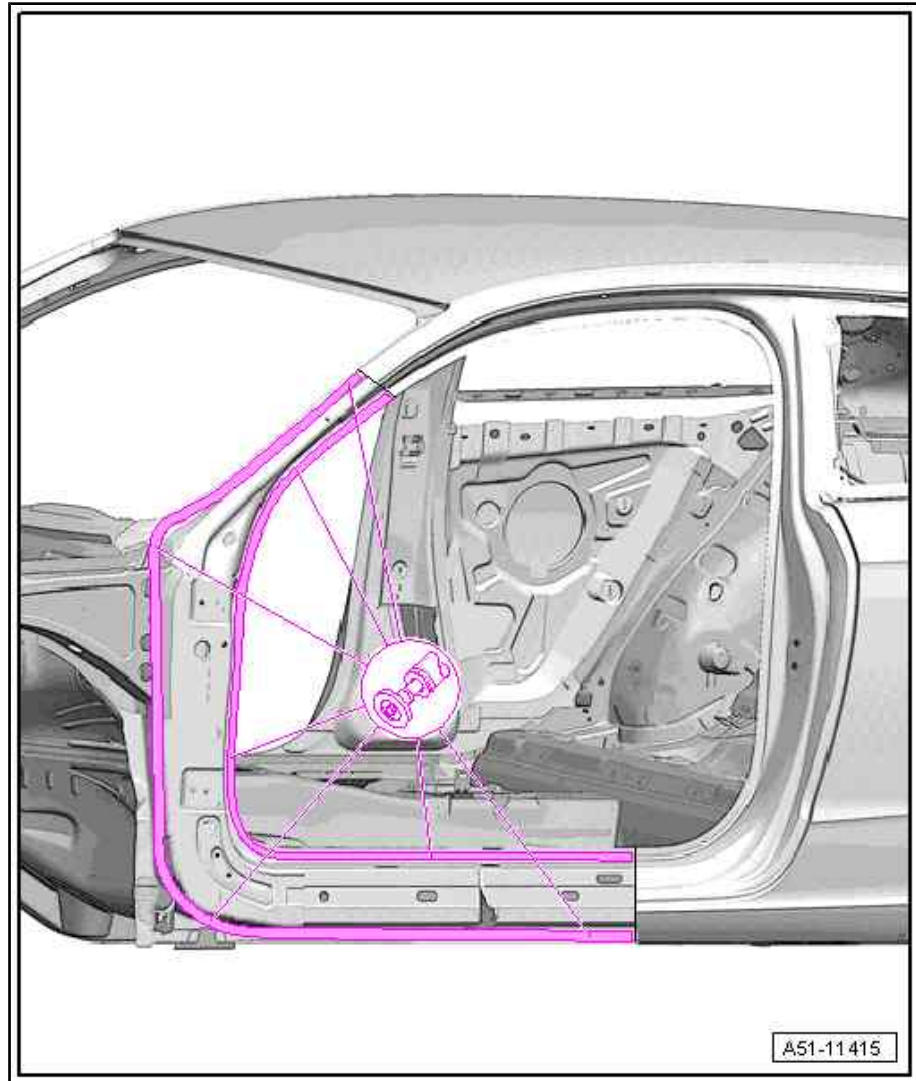
- Mark off separating cut on outer A-pillar according to dimension -a- and make cut using body saw .

#### Dimension -a- = 130 mm

- Make separating cut at outer side member according to extent of damage using body saw .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.

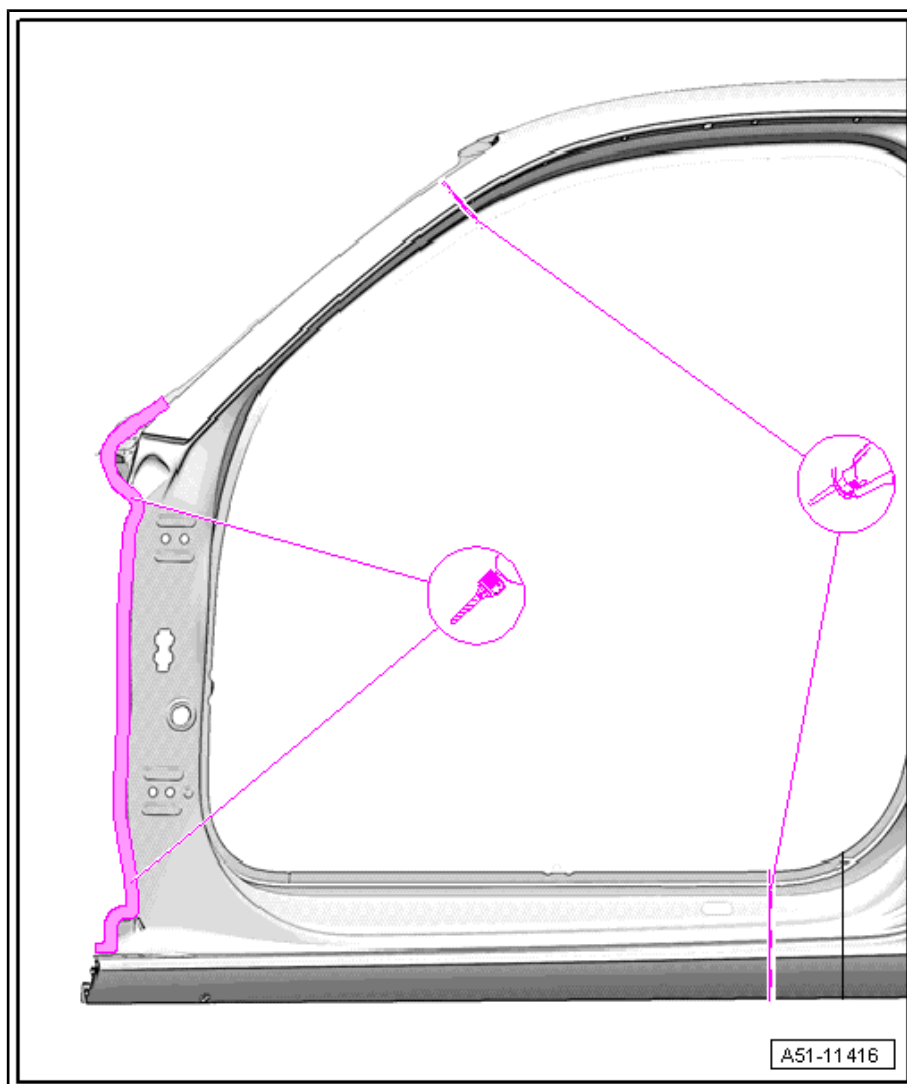


### Replacement part

- ◆ A-pillar (sub-part)

### Preparing new part

- Transfer separating cuts to new part and cut to size using body saw .
- Drill holes for SG plug weld seam, 8 mm Ø using drill .

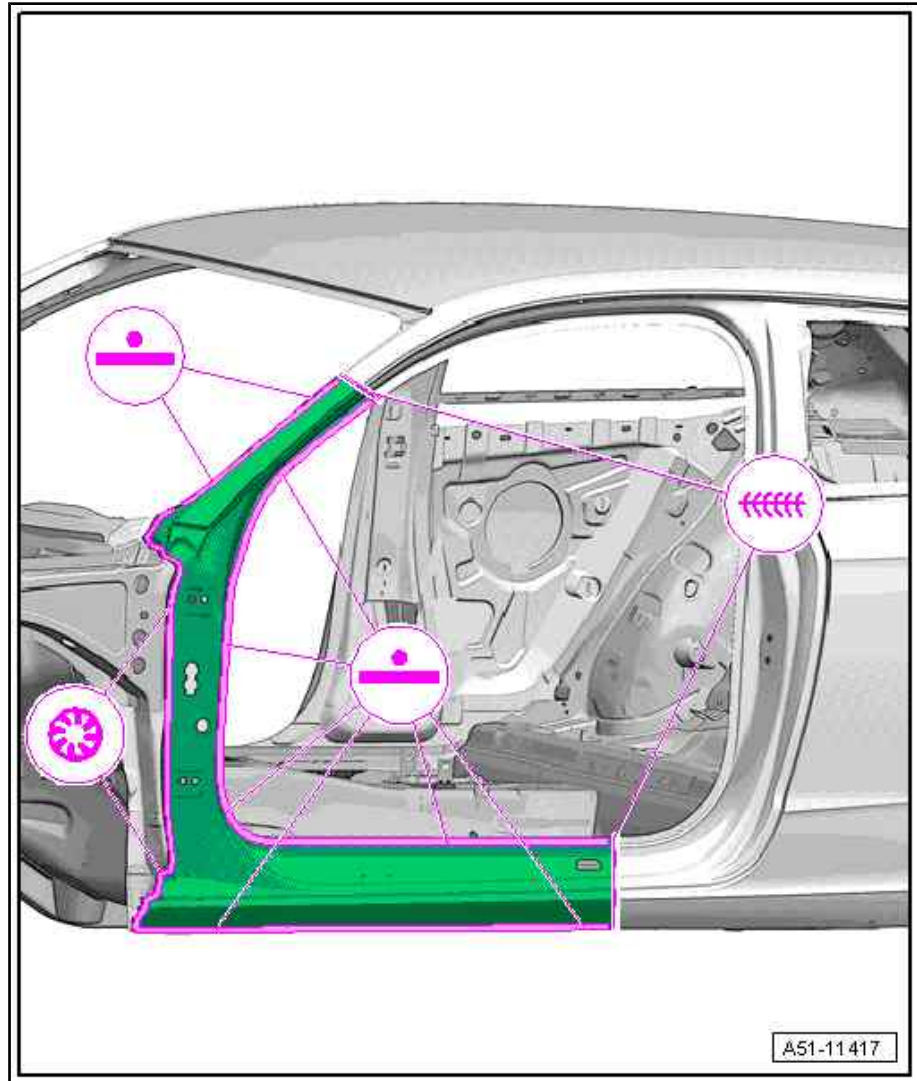


**!** NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Butt weld at separating cuts using shielded arc welding equipment : SG continuous seam.
- Weld in A-pillar using resistance spot welder : RP spot weld seam.
- Weld in A-pillar using shielded arc welding equipment : SG plug weld seam.



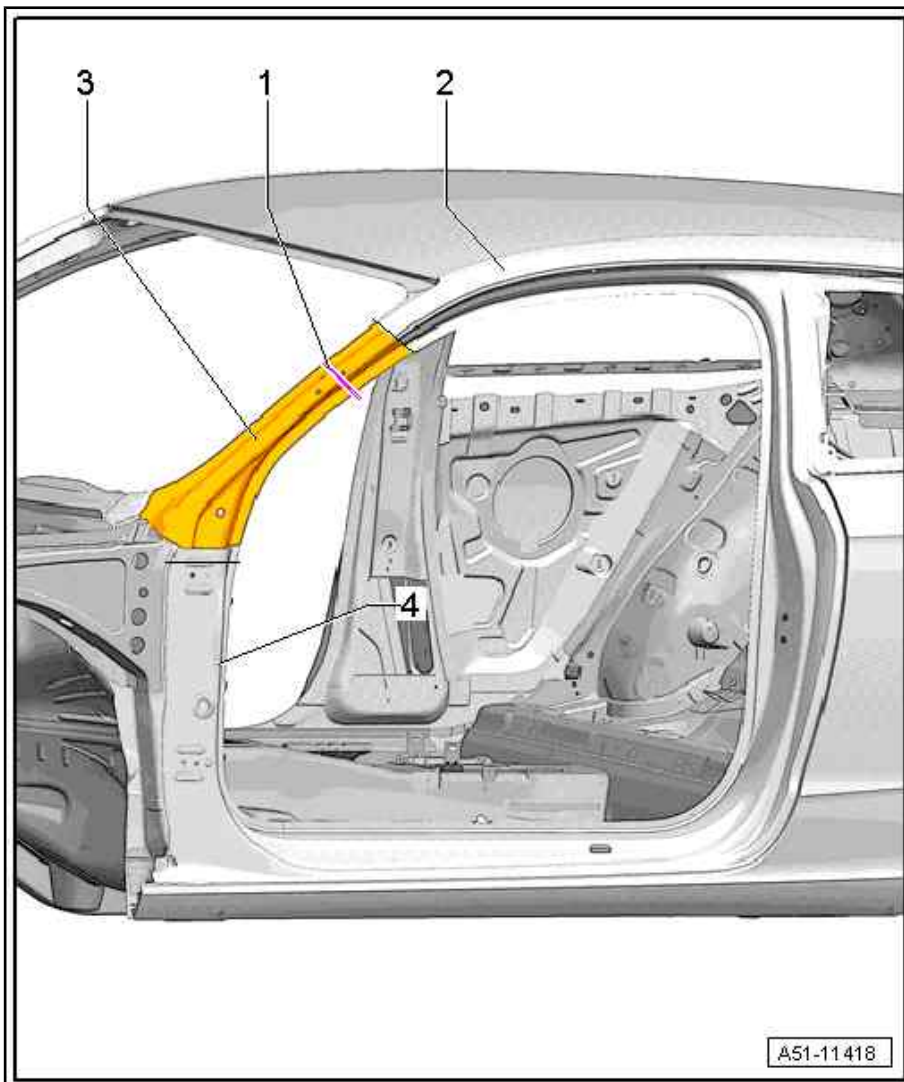


RO: 51 38 55 50

## 18 Upper inner A-pillar - Partial renewal

A3, Sportback and Saloon identical

- 1 - Separating cut, inner A-pillar
- 2 - Side panel
- 3 - Upper inner A-pillar
- 4 - Lower inner A-pillar



### 18.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker



One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .



## 18.2 Procedure

- Outer A-pillar removed ⇒ [page 310](#)

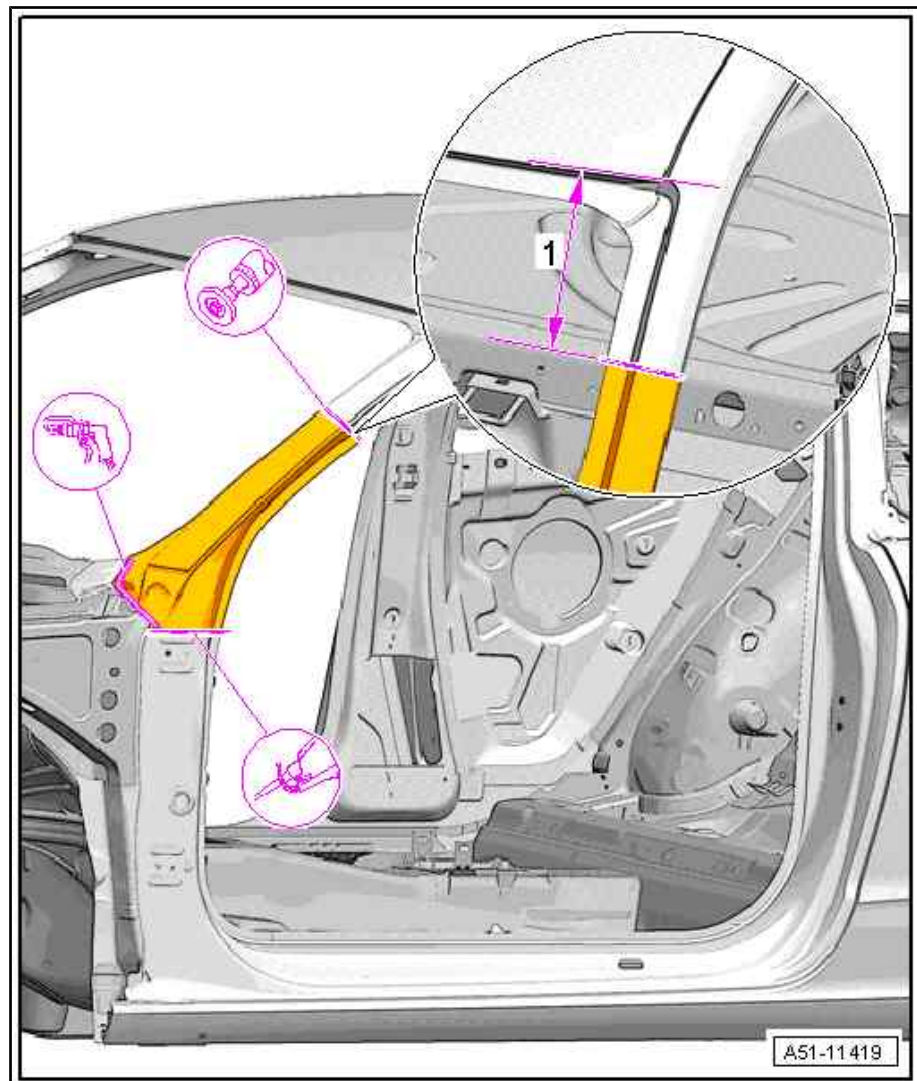
### Cutting locations

Permitted separating cuts on complete side panel ⇒ [page 125](#) .

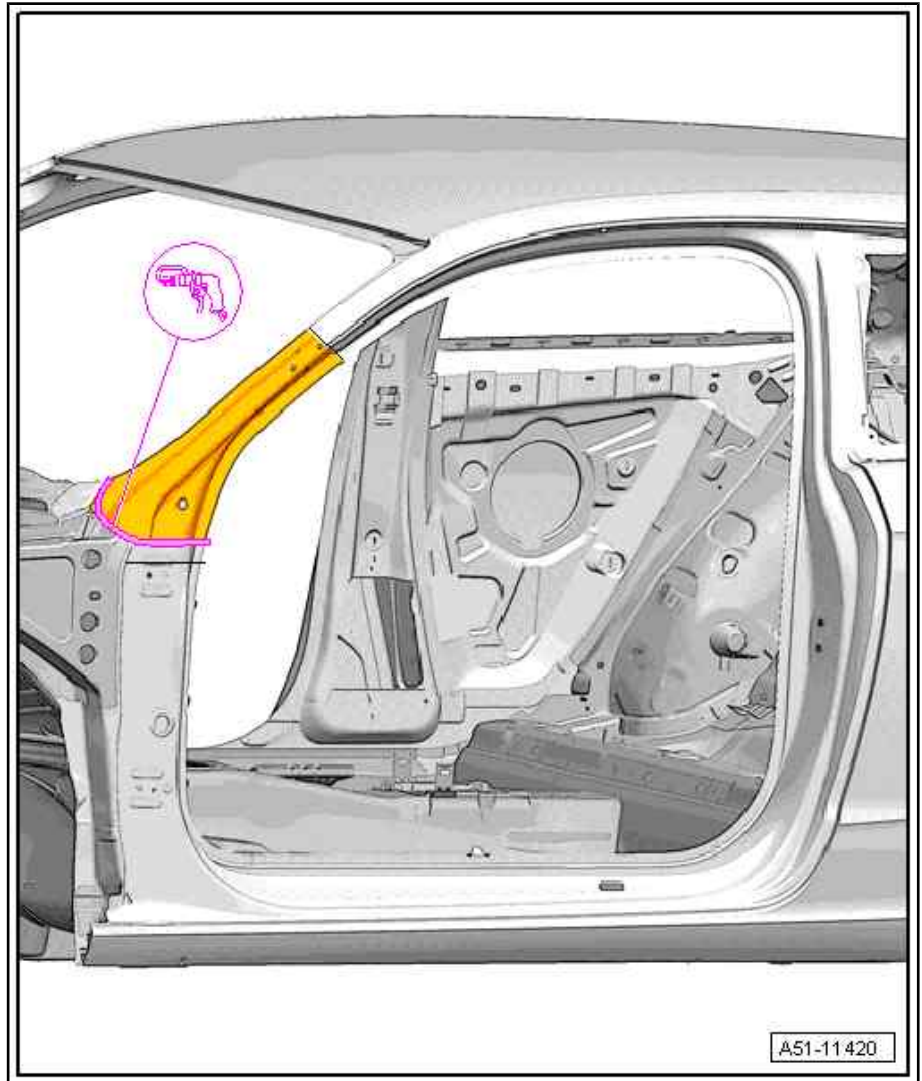
- Cut through A-pillar completely using compact angle grinder (important: keep to dimension -1- for separating cut).

### Dimension -1- = 275 mm

- Make separating cut in A-pillar using body saw .
- Drill out original joint using spot weld breaker .

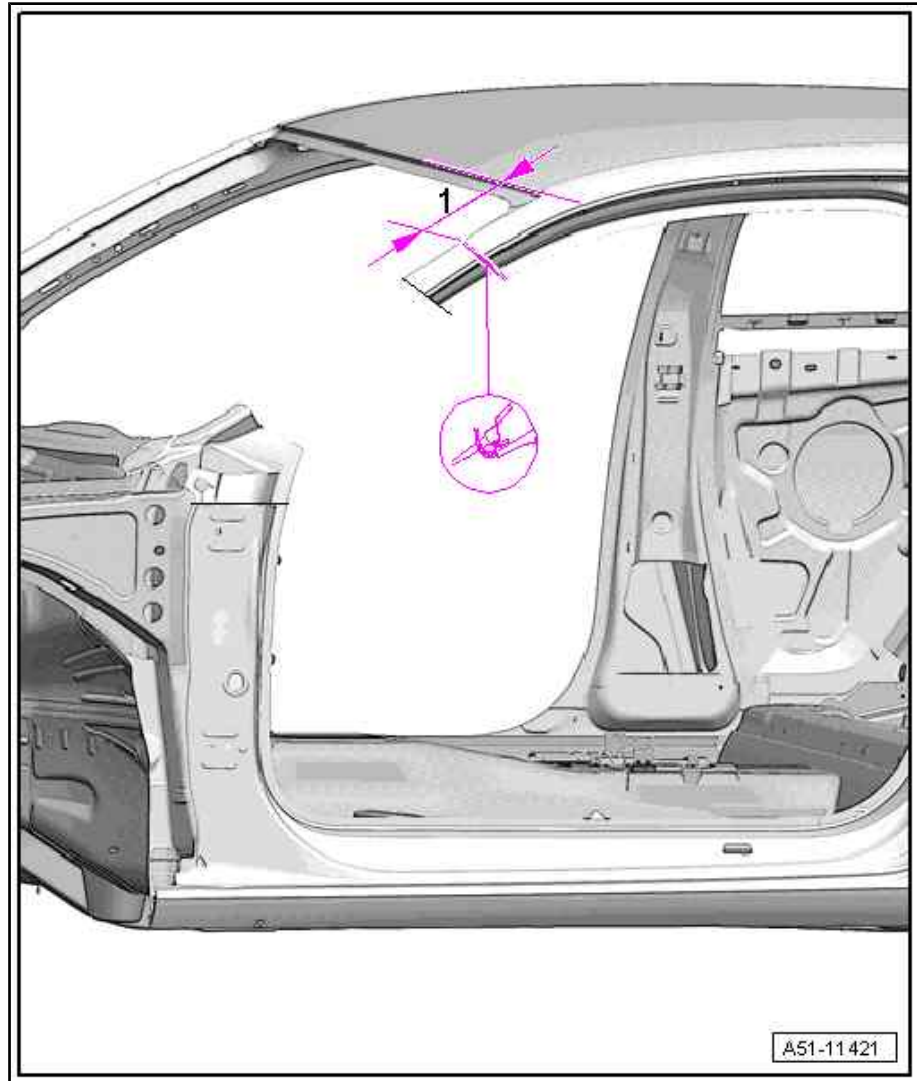


- Separate original joint using spot weld breaker .



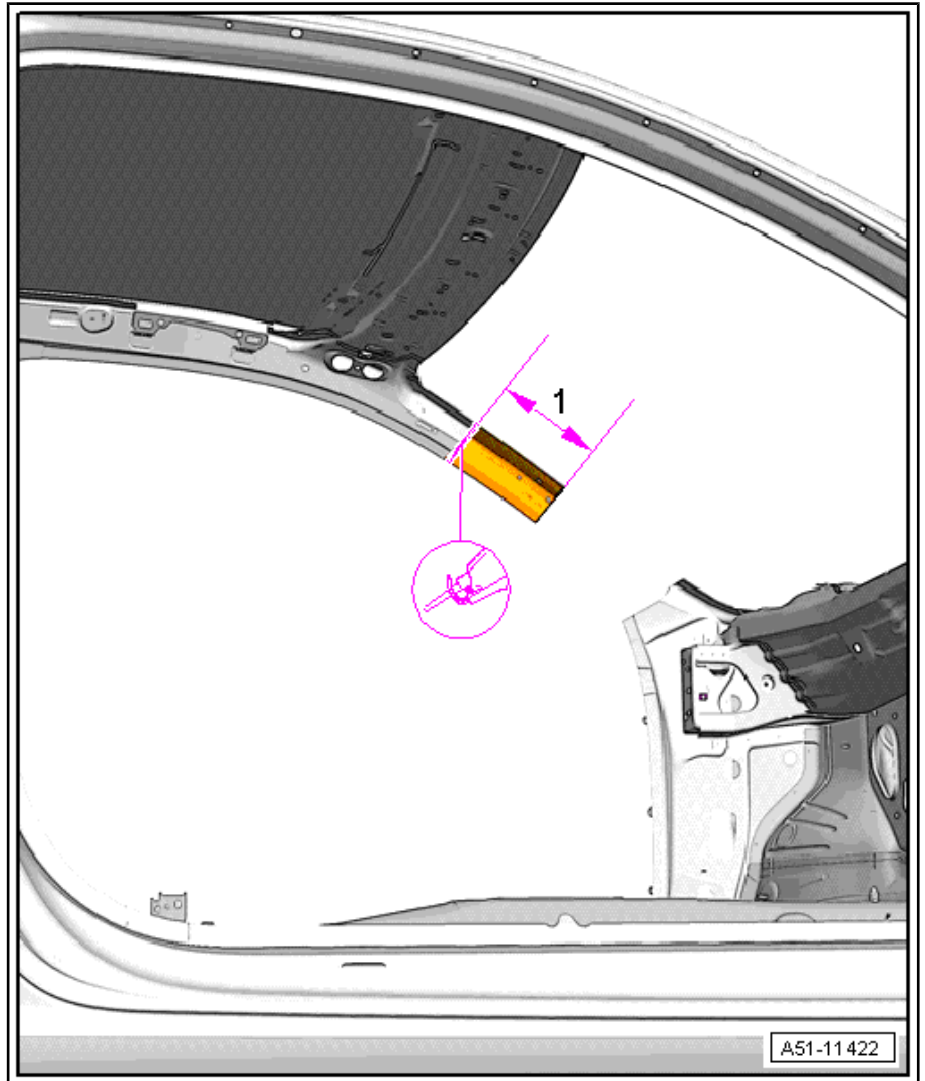
- Make separating cut on outer A-pillar according to dimension  
-1- using body saw .

**Dimension -1- = 130 mm**

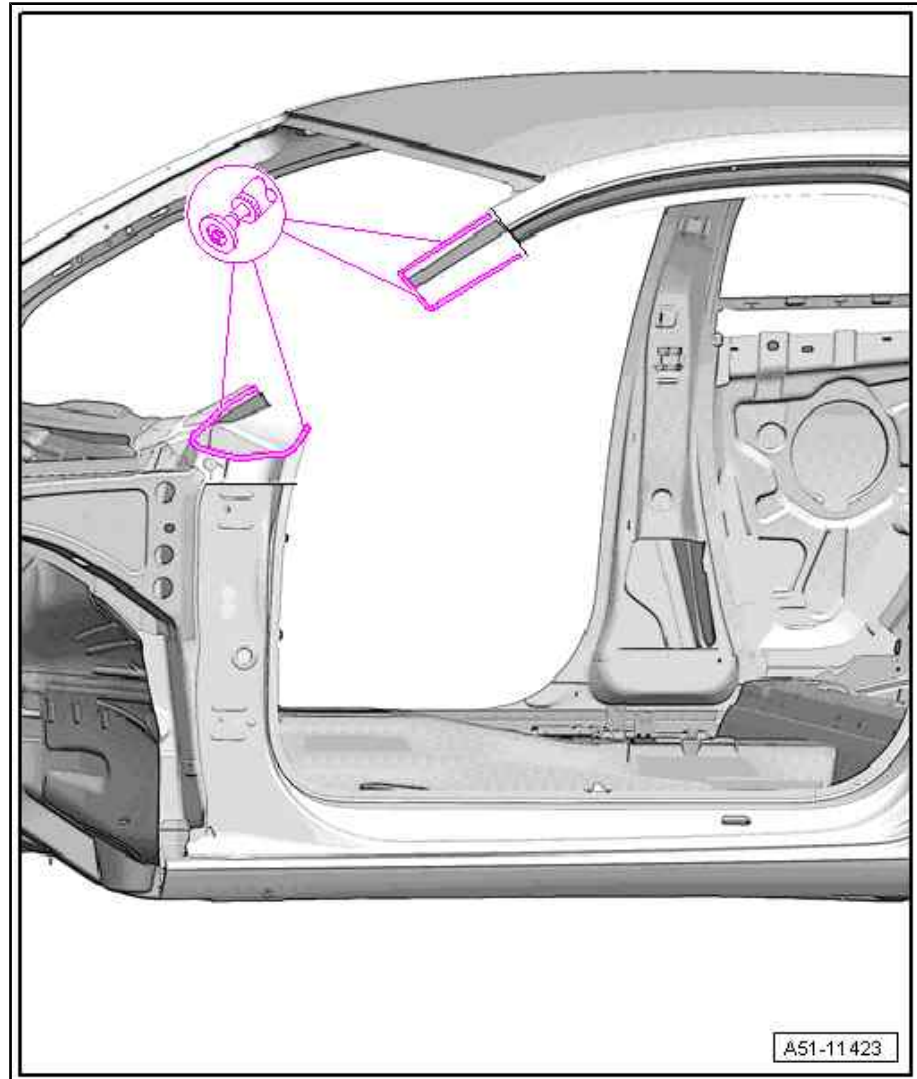


- Make separating cut on inner A-pillar according to dimension  
-1- using body saw .

**Dimension -1- = 100 mm**



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.

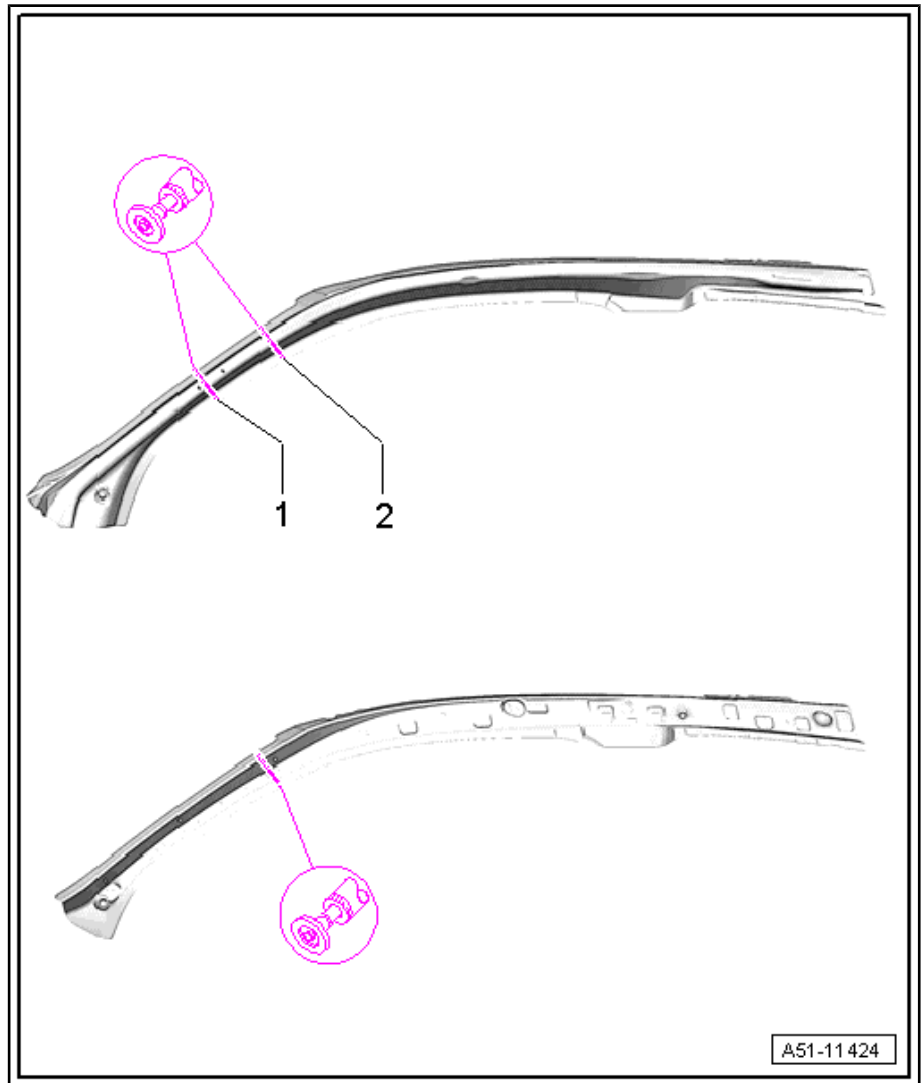


### Replacement parts

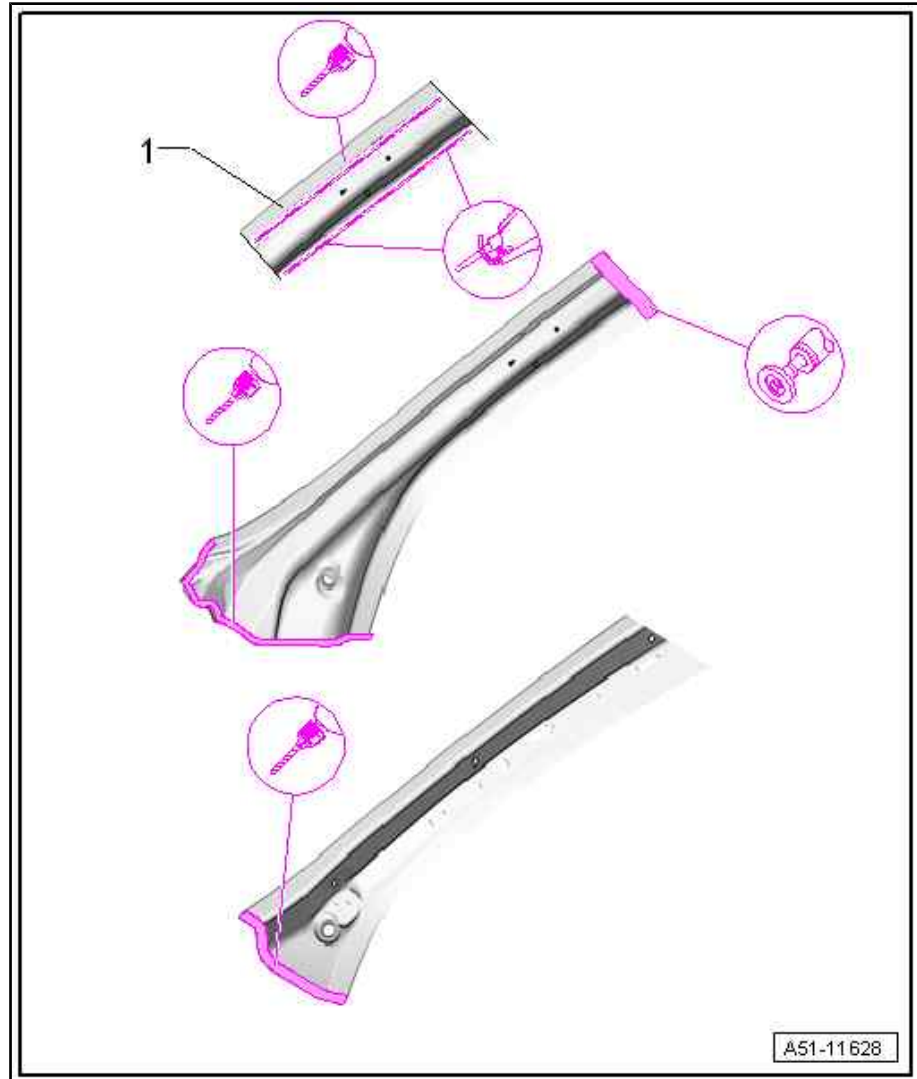
- ◆ Upper inner A-pillar
- ◆ Inner A-pillar cover plate

### Preparing new part

- Transfer separating cut for inner A-pillar -1- to new part and cut to size using compact angle grinder .
- It is important to maintain dimension -140 mm- for separating cut -2- for backing plate.



- Drill holes for SG plug weld seam, 8 mm  $\varnothing$  using drill .
- Drill 6x holes ( $\varnothing$  8 mm) for backing plate -1- using drill .
- Grind welding surfaces (outer sides only) down to bare metal.
- Grind down welding area for SG continuous weld seam using compact angle grinder .



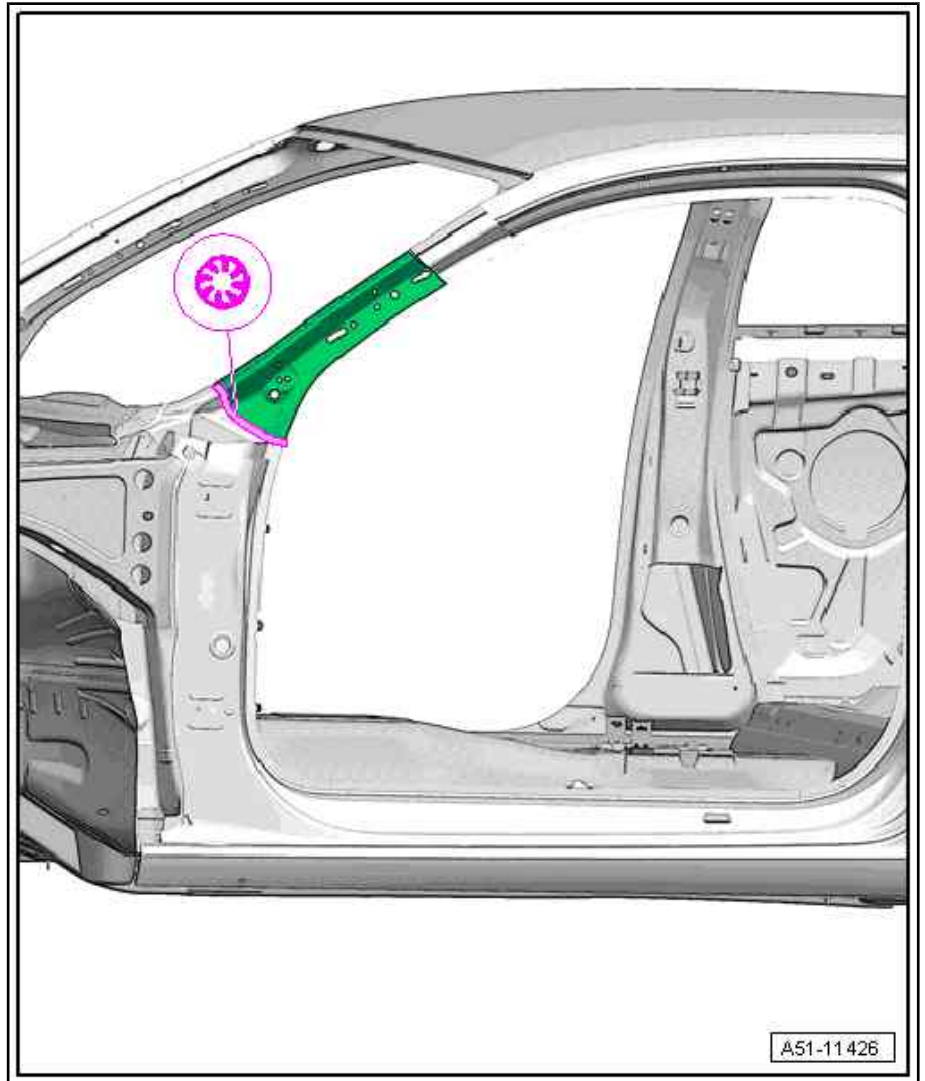
**!** NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

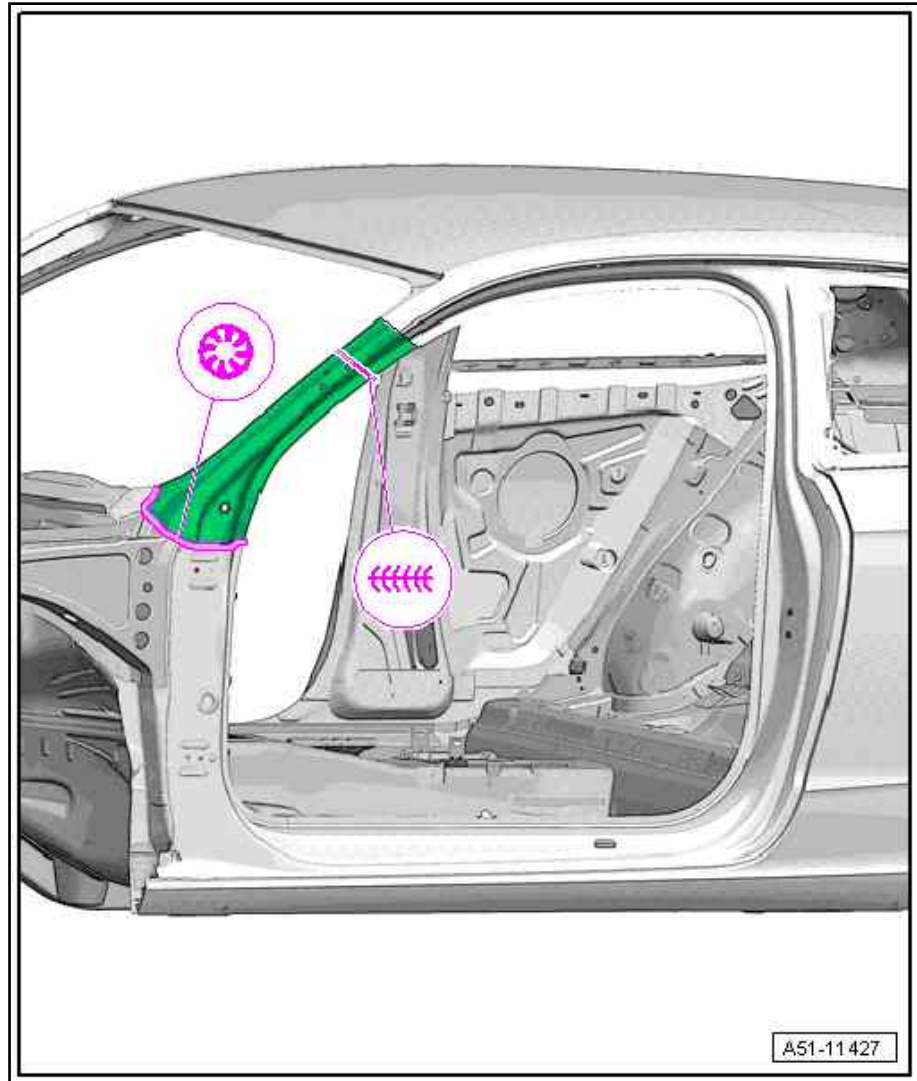
**Welding in**

Insert inner reinforcement plate and fix in position.

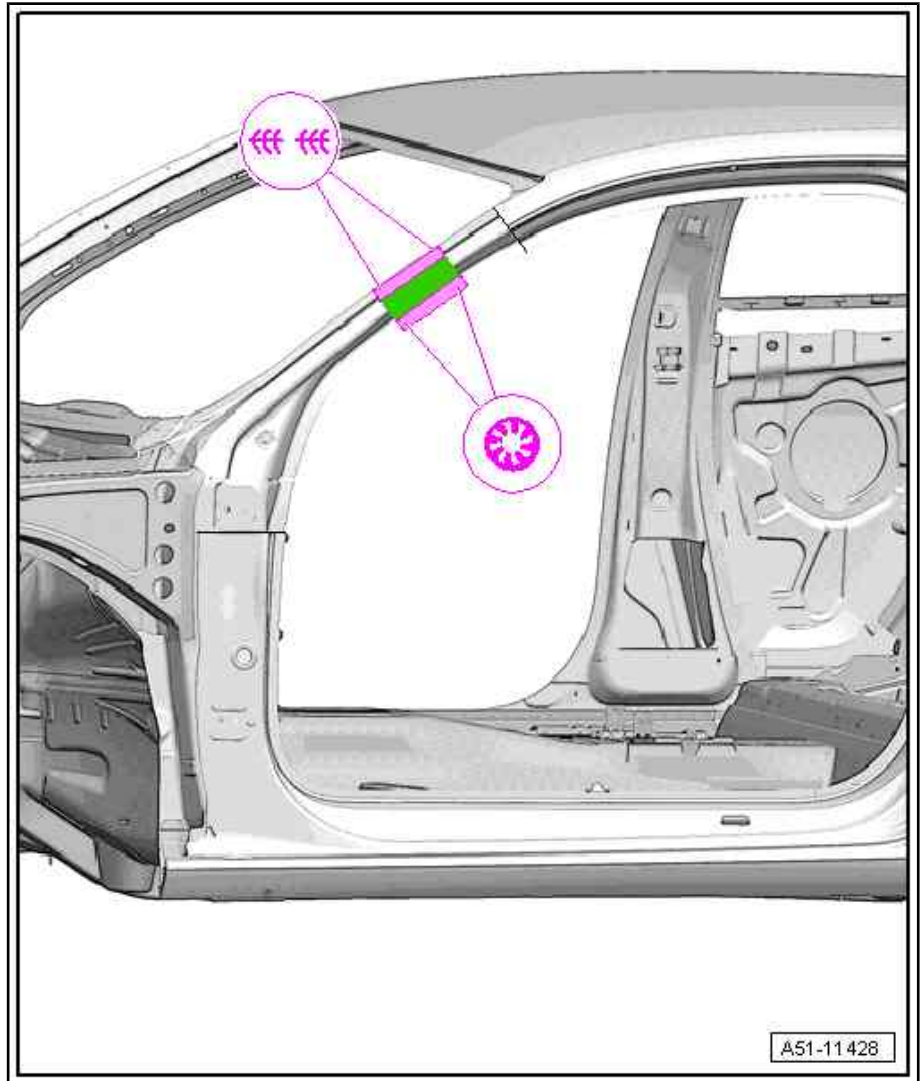
- Weld in at separating cut using shielded arc welding equipment : SG continuous seam.
- Weld in lower cover plate for inner A-pillar using shielded arc welding equipment : SG plug weld seam.



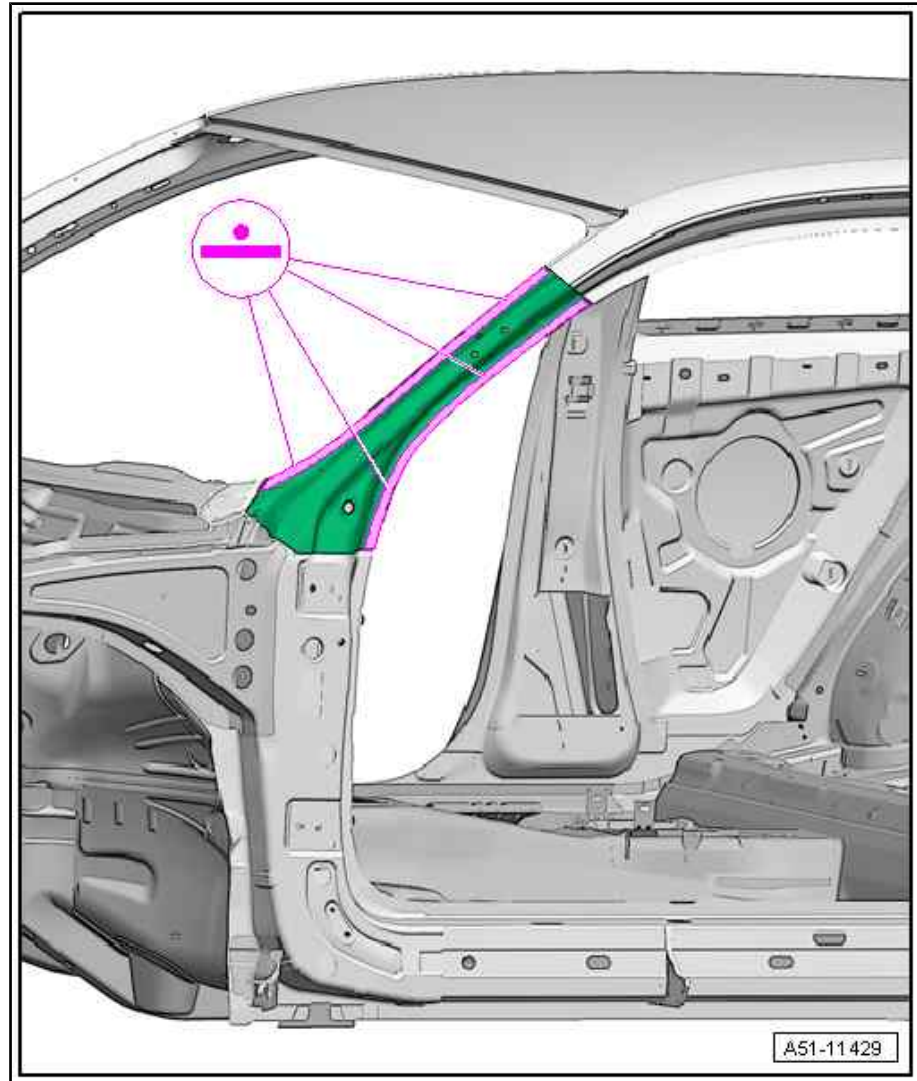
- Weld in at separating cut using shielded arc welding equipment : SG continuous seam.
- Weld in inner A-pillar using shielded arc welding equipment : SG plug weld seam.



- Weld in backing plate using shielded arc welding equipment :  
SG plug weld seam.
- Weld in backing plate using shielded arc welding equipment :  
SG continuous seam (4 x 15 mm).



- Weld in inner A-pillar using resistance spot welder : RP spot weld seam. Make spot welds with a spacing of 70 mm.



Inserting moulded foam insert ⇒ [page 18](#)

Welding in outer A-pillar ⇒ [page 310](#)



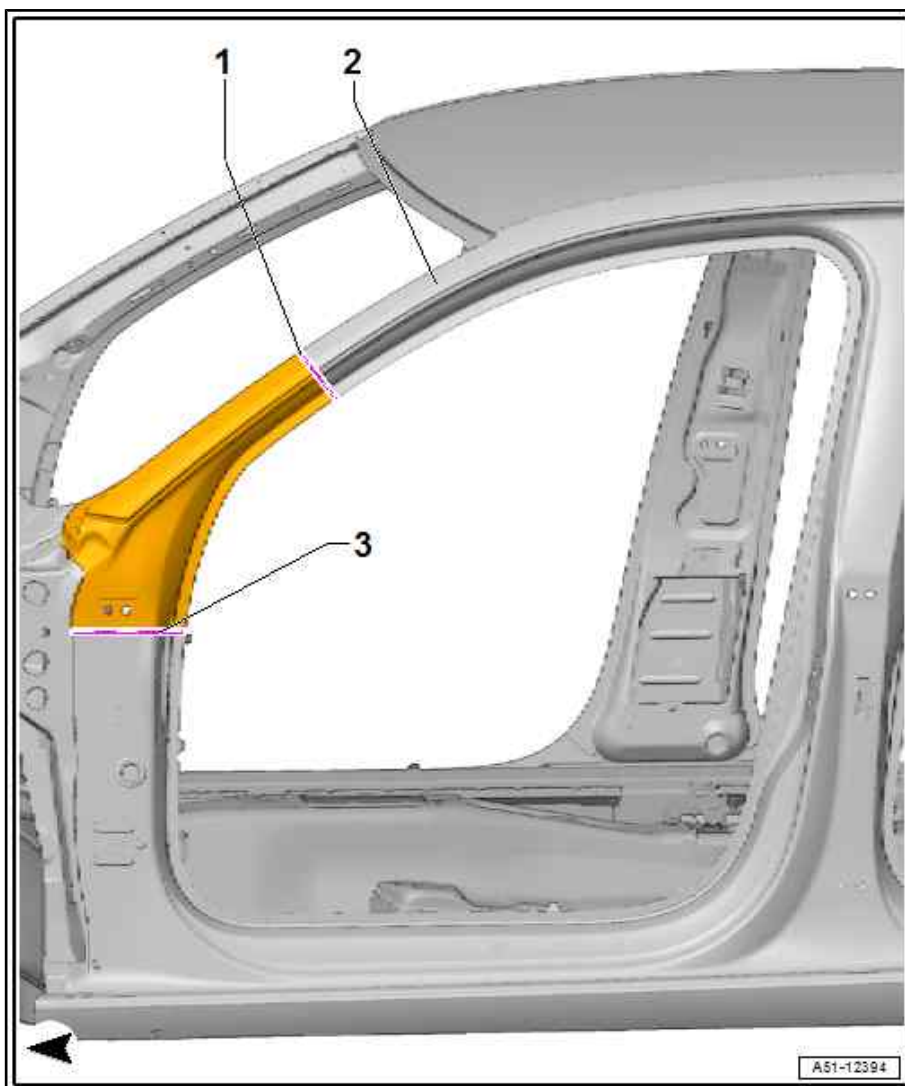
RO: 51 38 55 50

## 19 Upper inner A-pillar - Partial renewal (NAR and e-tron vehicles only)

1 - Separating cut in upper A-pillar

2 - Side panel

3 - Separating cut in A-pillar (bottom)



### 19.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker

#### NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .



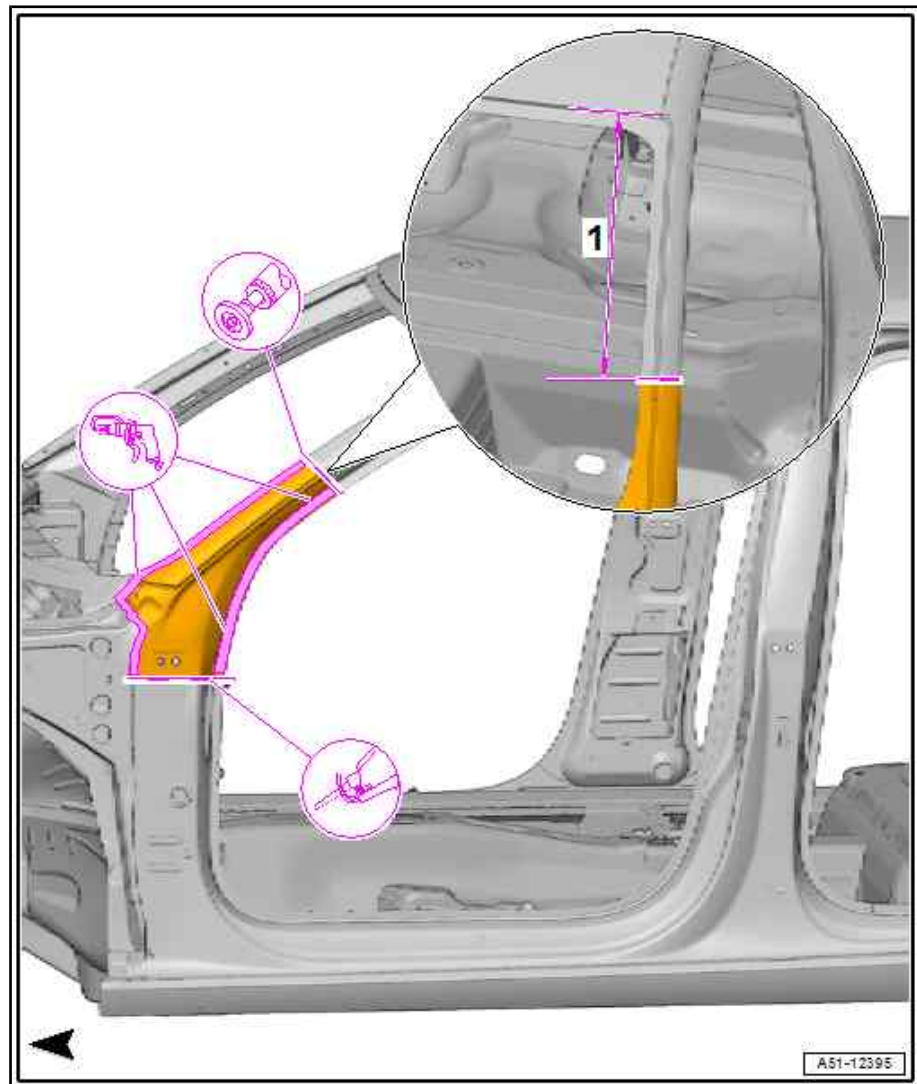
## 19.2 Procedure

### Cutting locations

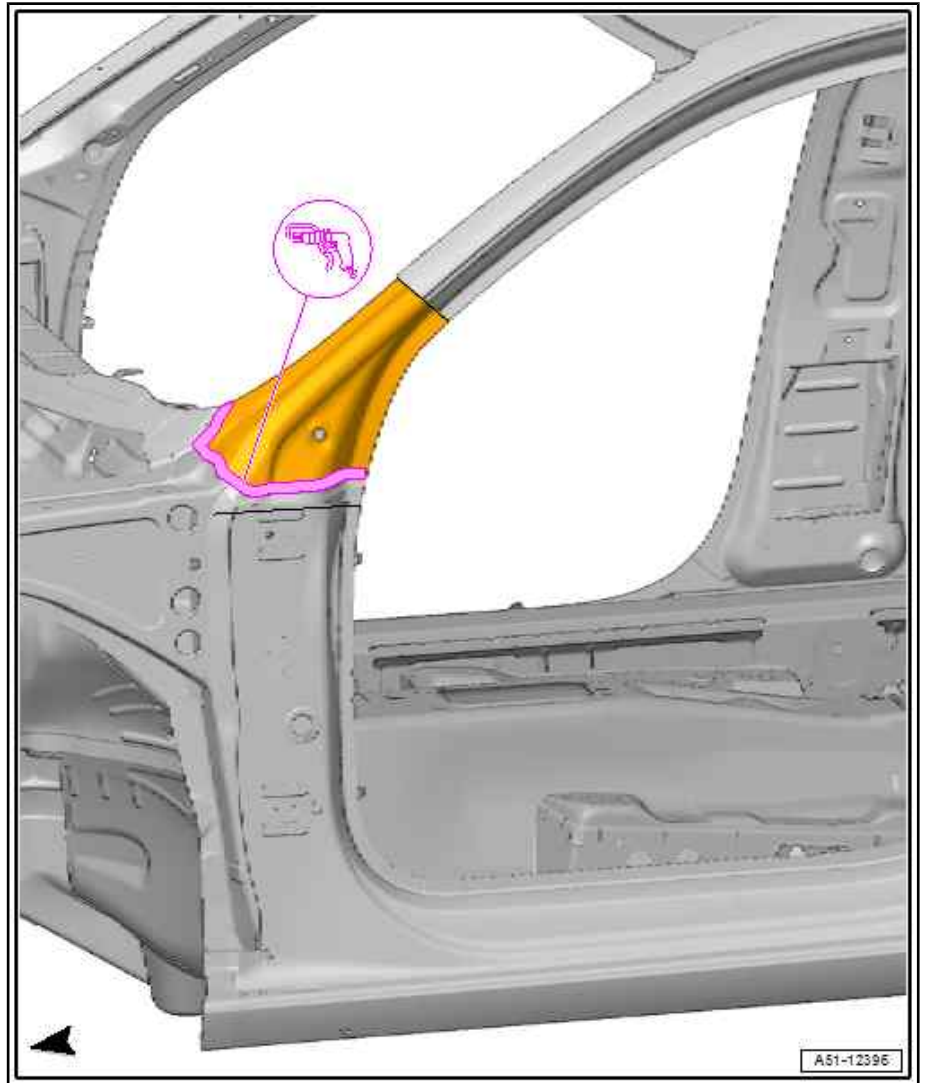
- Cut through A-pillar completely using compact angle grinder (important: keep to dimension -1- for separating cut).

### Dimension -1- = 425 mm

- Make separating cut in A-pillar using body saw .
- Drill out original joint using spot weld breaker .

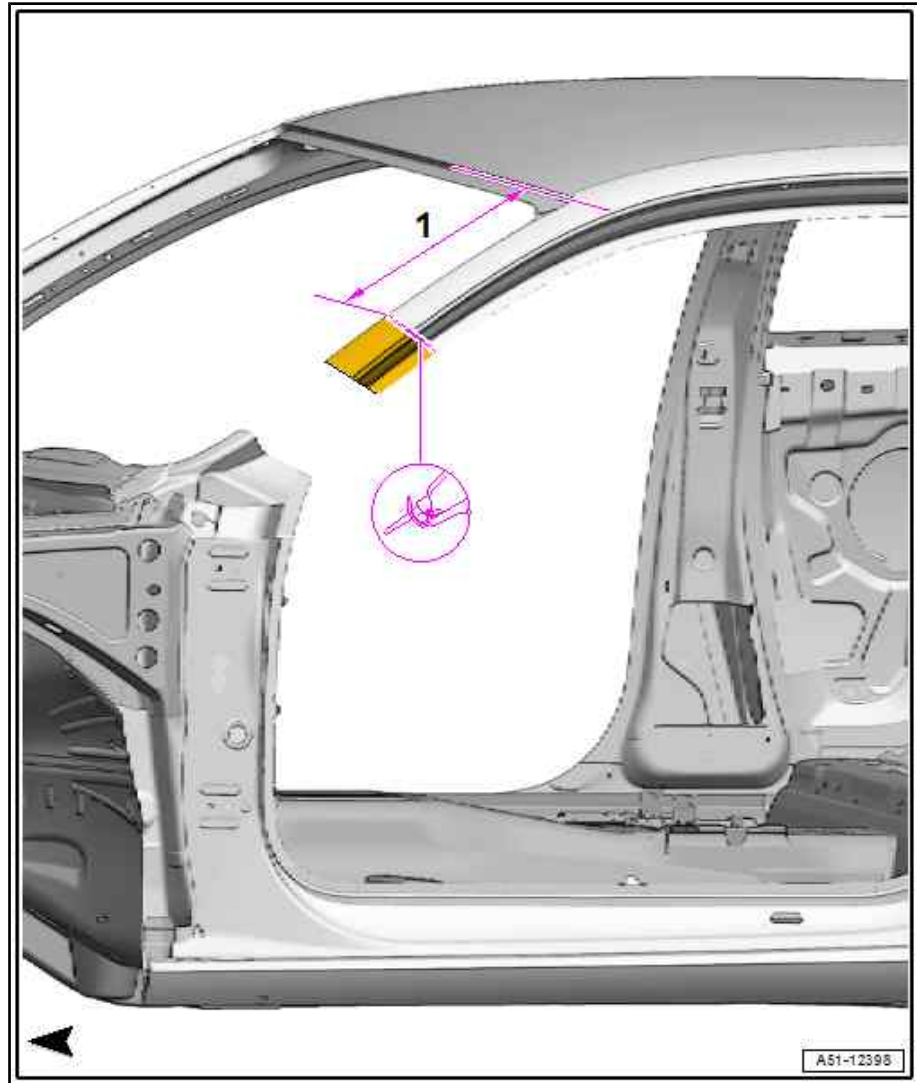


- Separate original joint using spot weld breaker .



- Make separating cut on outer A-pillar according to dimension  
-1- using body saw .

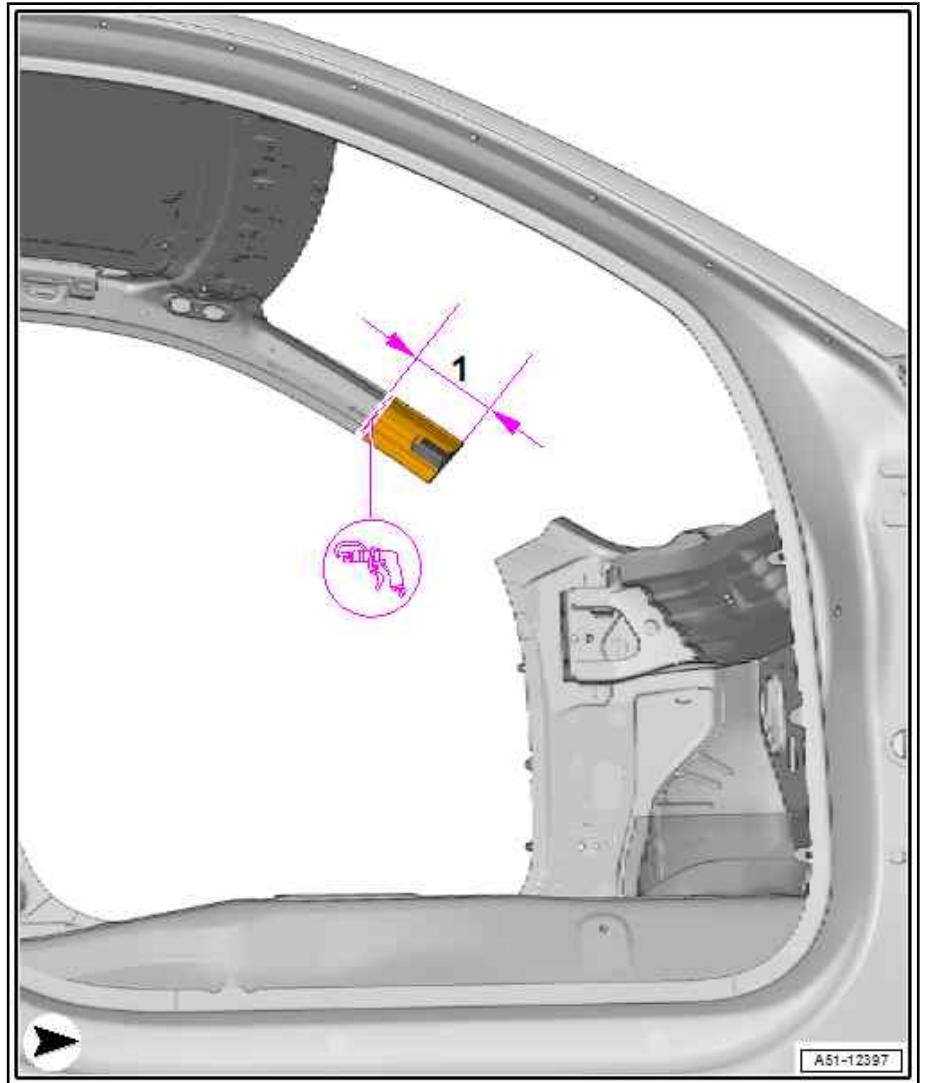
**Dimension -1- = 325 mm**



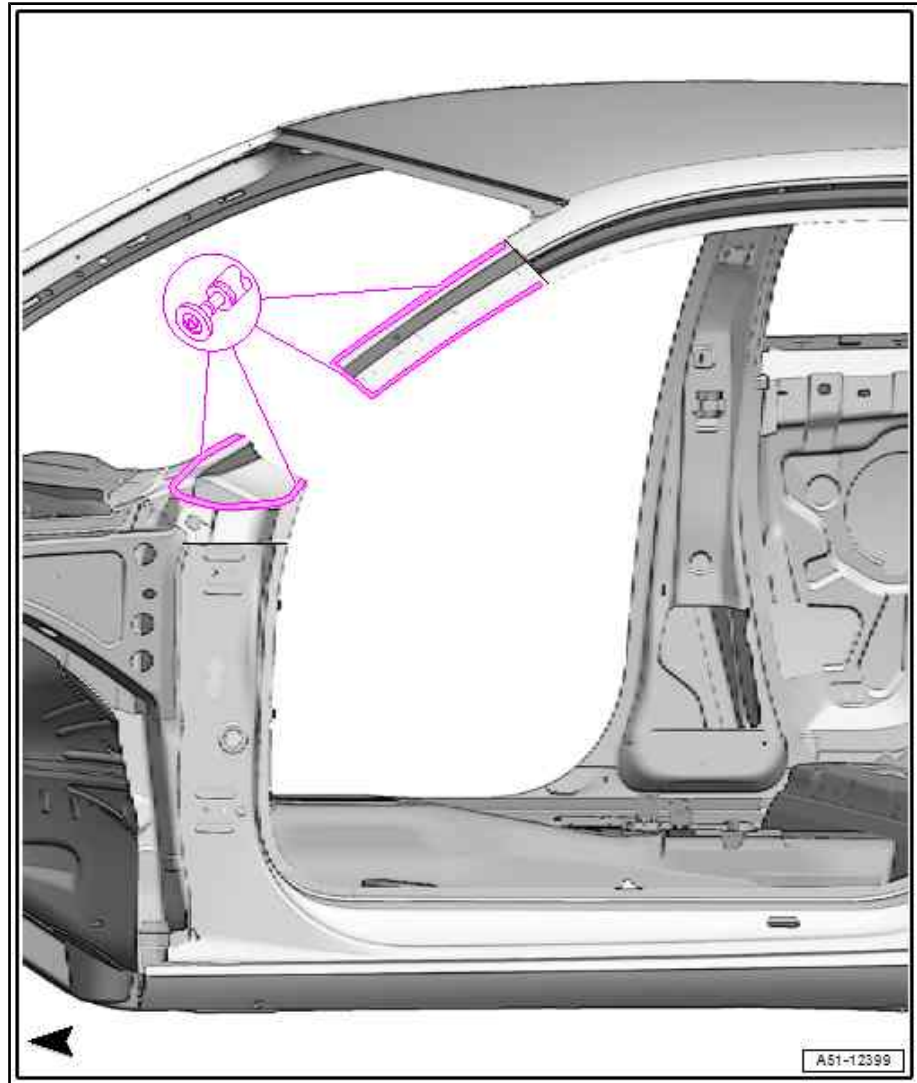
- Make separating cut on inner A-pillar according to dimension -1- using body saw .

**Dimension -1- = 200 mm**

- Drill out any material remaining from reinforcement using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.

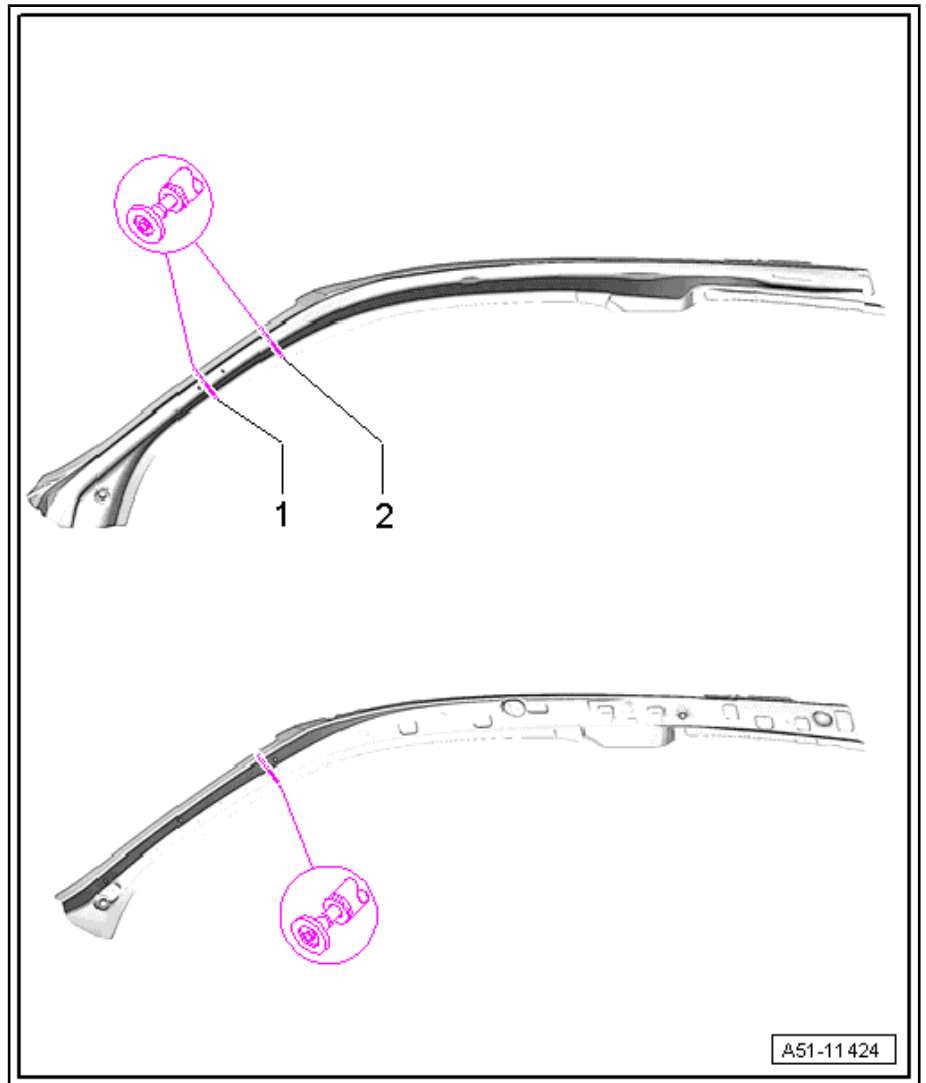


### Replacement parts

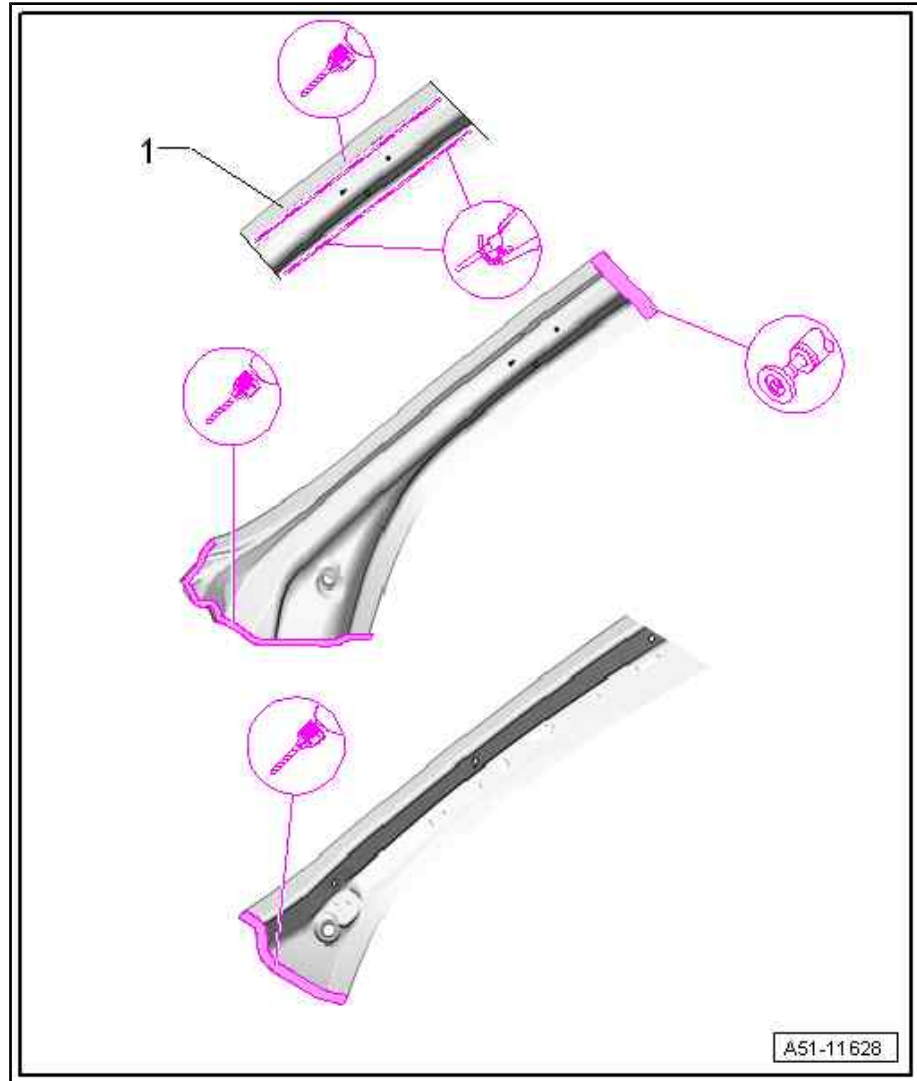
- ◆ Upper inner A-pillar
- ◆ Inner A-pillar cover plate

### Preparing new part

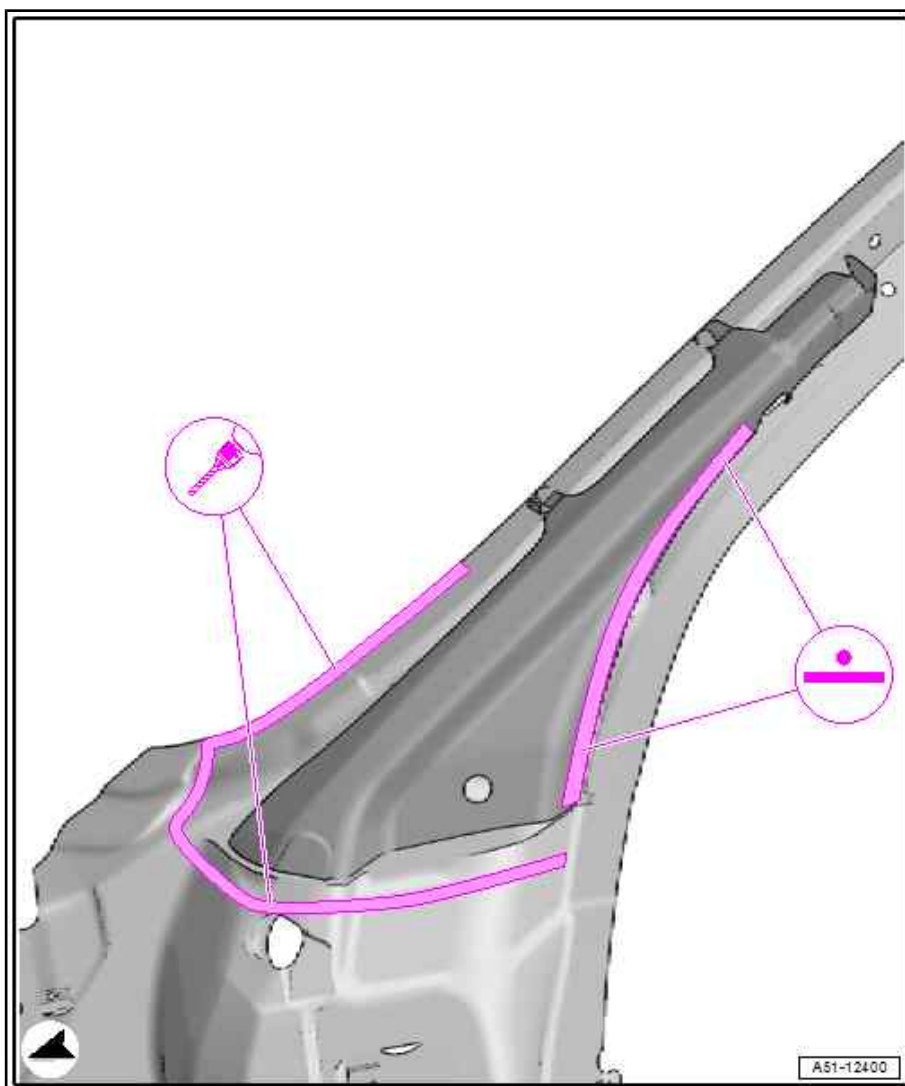
- Transfer separating cut for inner A-pillar -1- to new part and cut to size using compact angle grinder .
- It is important to maintain dimension -140 mm- for separating cut -2- for backing plate.



- Drill holes for SG plug weld seam, 8 mm  $\varnothing$  using drill .
- Drill 6x holes ( $\varnothing$  8 mm) for backing plate -1- using drill .
- Grind welding surfaces (outer sides only) down to bare metal.
- Grind down welding area for SG continuous weld seam using compact angle grinder .



- Drill holes for SG plug weld seam, 8 mm  $\varnothing$  using drill .
- Weld inner A-pillar and reinforcement using resistance spot welder : RP spot weld seam.



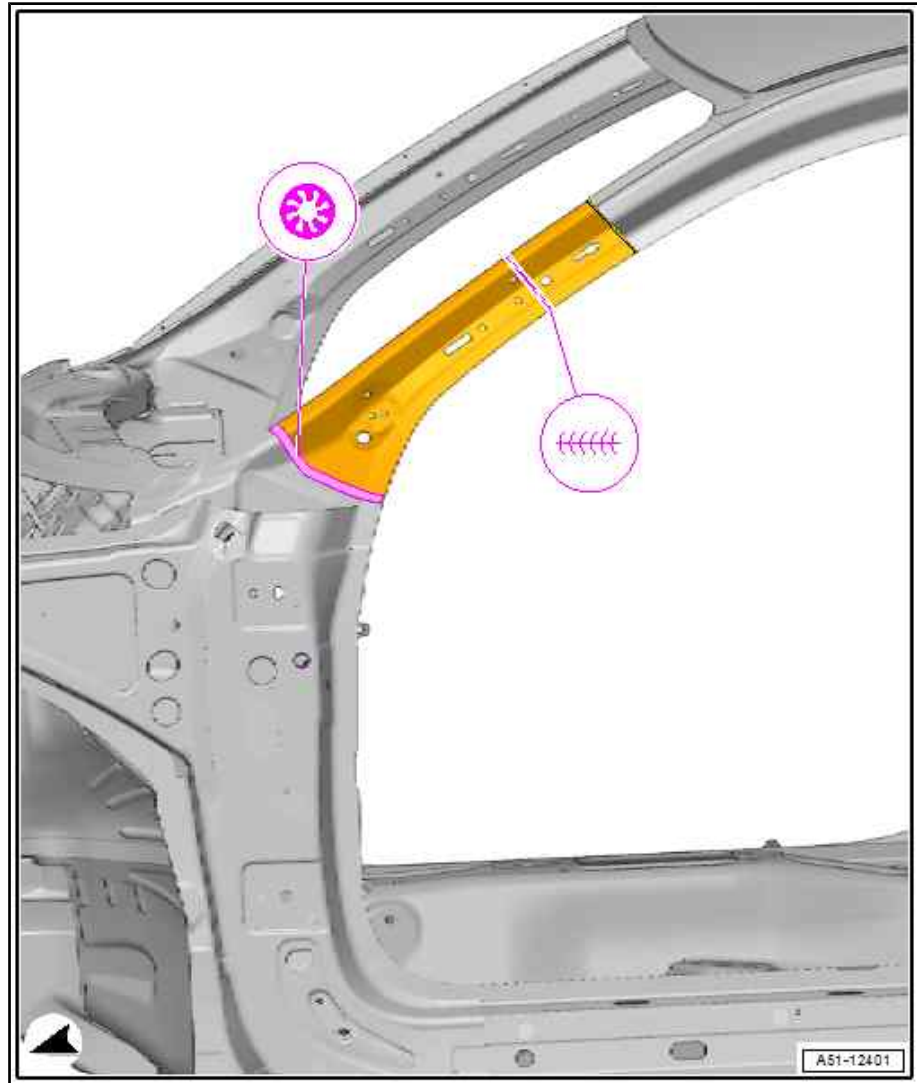
**!** NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

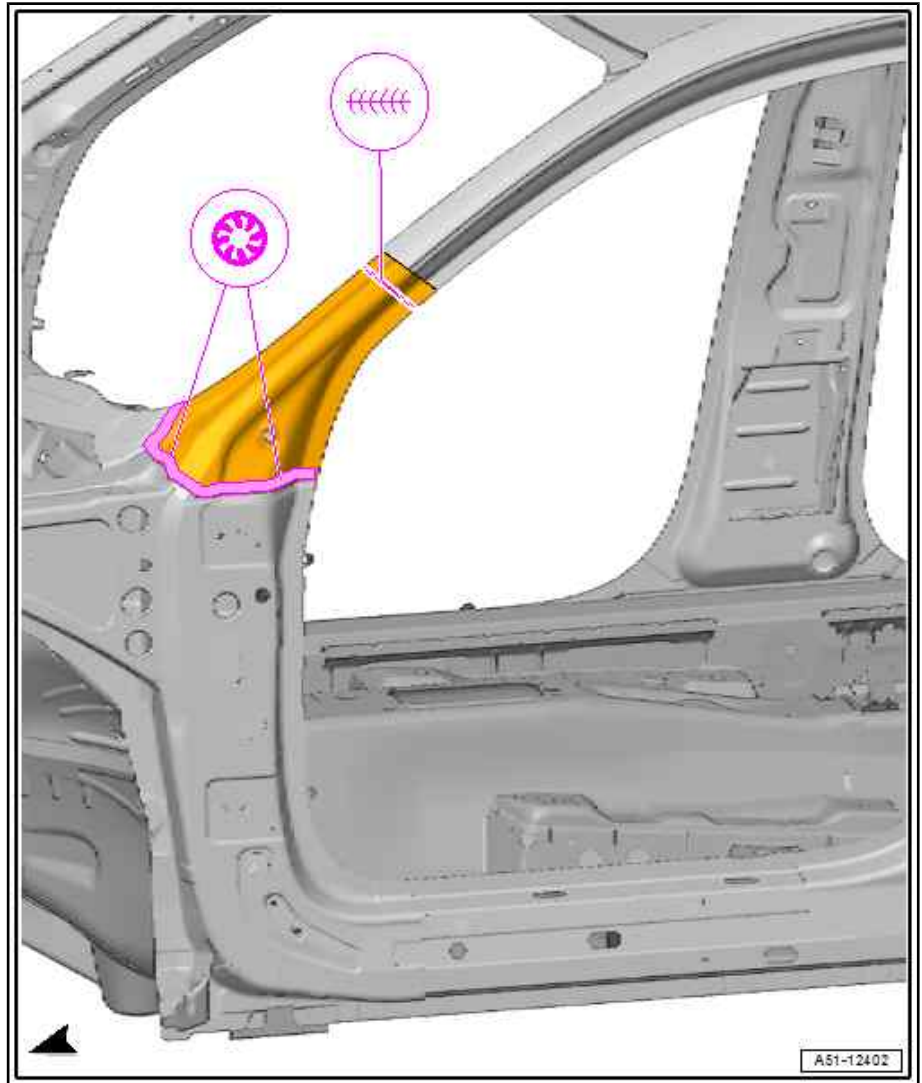
**Welding in**

Insert inner reinforcement plate and fix in position.

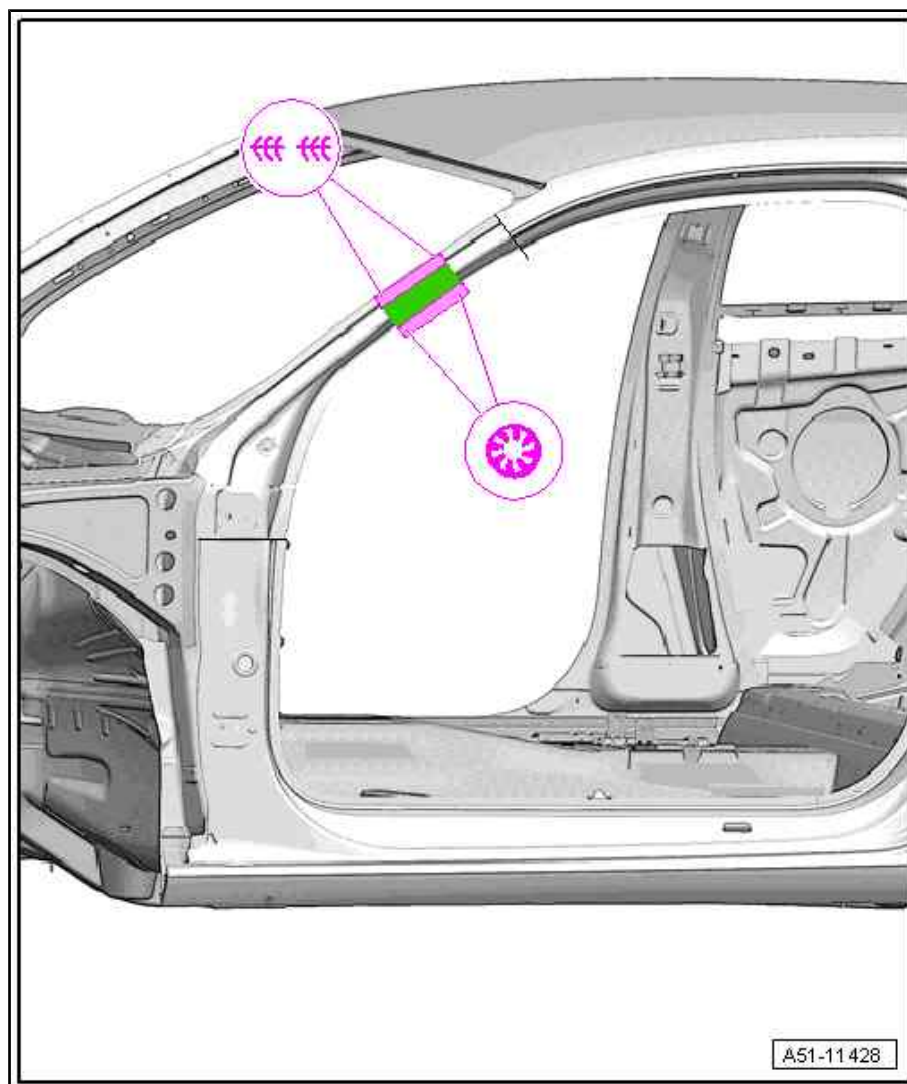
- Weld in at separating cut using shielded arc welding equipment : SG continuous seam.
- Weld in lower cover plate for inner A-pillar using shielded arc welding equipment : SG plug weld seam.



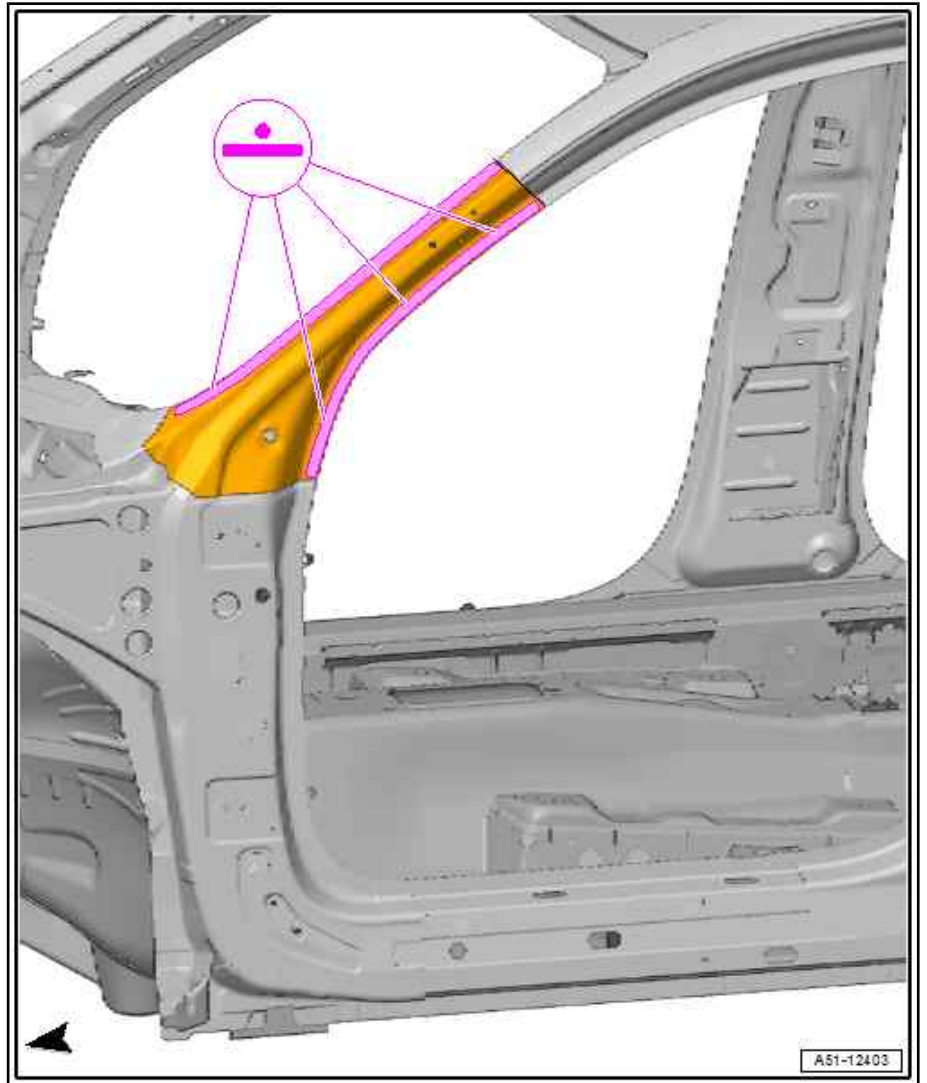
- Weld in at separating cut using shielded arc welding equipment : SG continuous seam.
- Weld in inner A-pillar using shielded arc welding equipment : SG plug weld seam.



- Weld in backing plate using shielded arc welding equipment :  
SG plug weld seam.
- Weld in backing plate using shielded arc welding equipment :  
SG continuous seam (4 x 15 mm).



- Weld in inner A-pillar using resistance spot welder : RP spot weld seam.





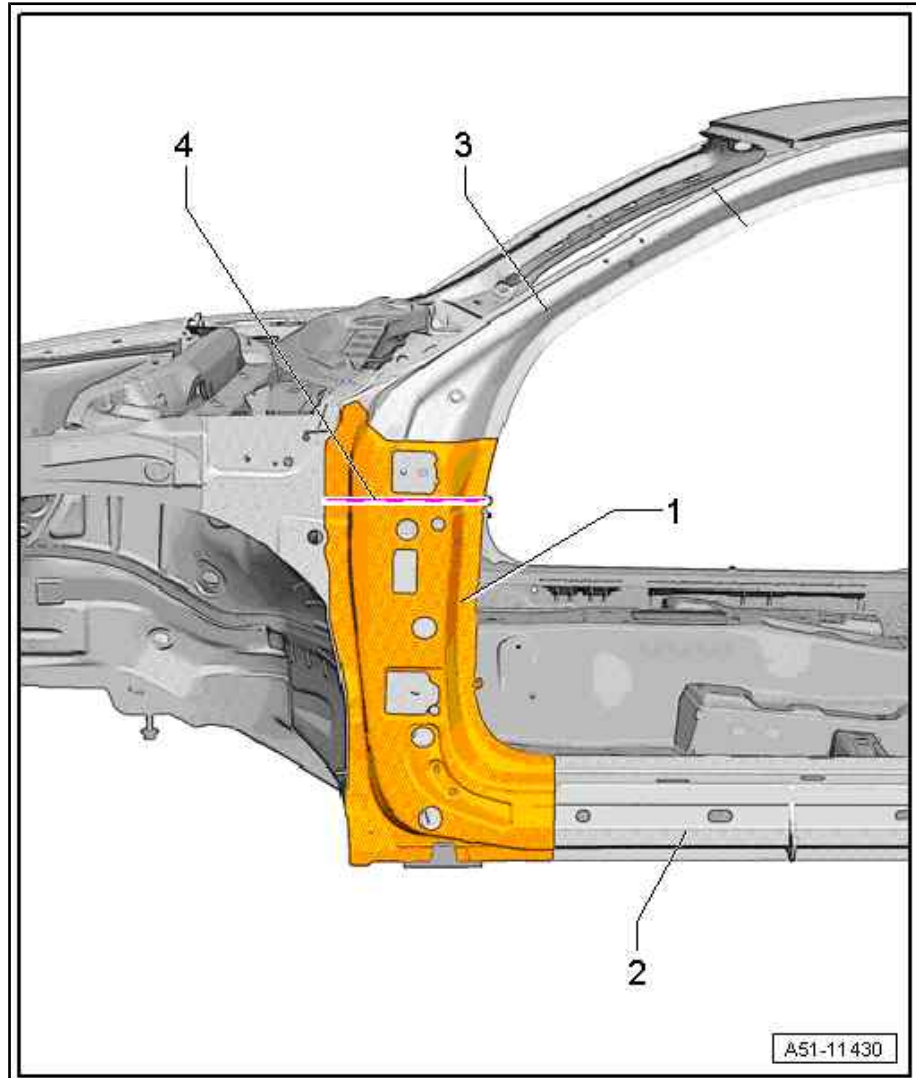
RO: 51 38 55 50

## 20 Lower inner A-pillar - Partial renewal

A3, Sportback and Saloon identical

- 1 - Lower inner A-pillar
- 2 - Inner side member
- 3 - Upper inner A-pillar
- 4 - Separating cut, lower inner A-pillar

Partial renewal  
*Partial renewal is possible with this separating cut.*



### 20.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker



**NOTICE**

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .



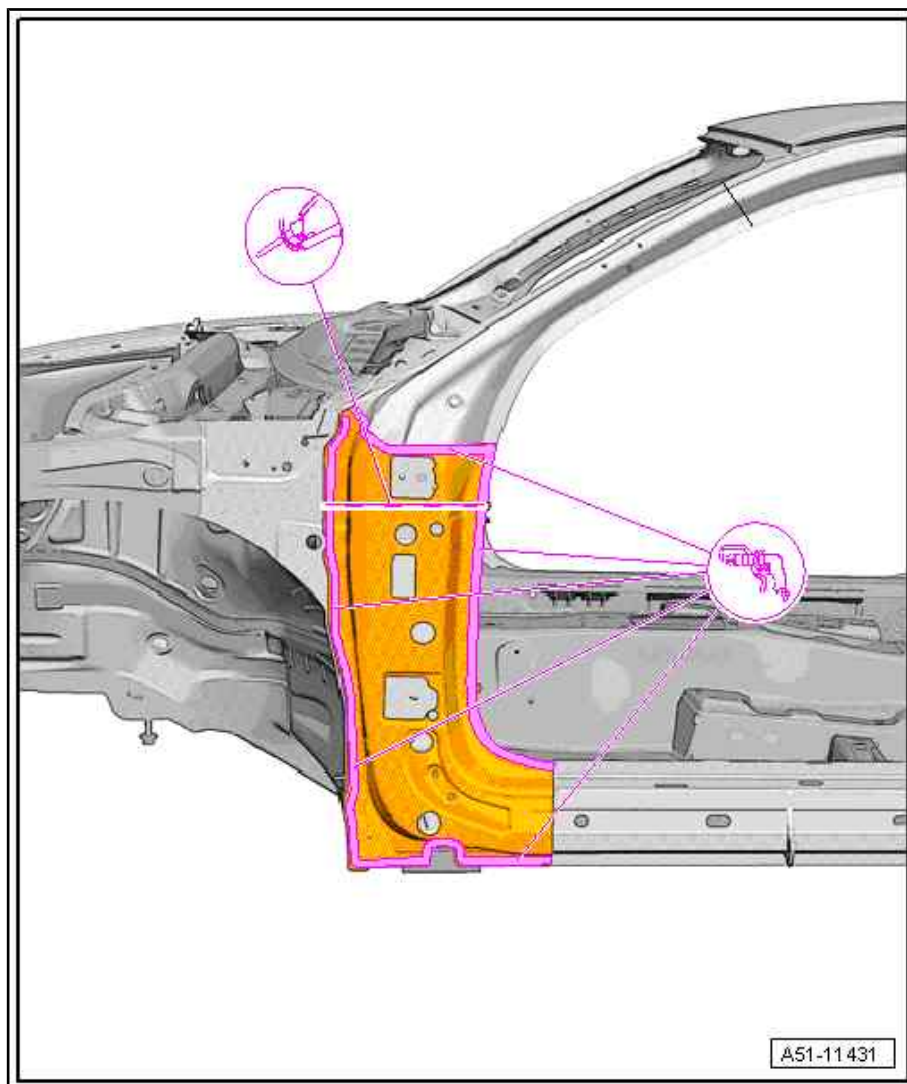
## 20.2 Procedure

- Outer A-pillar cut out ⇒ [page 310](#) .
- Upper wheel housing longitudinal member cut out ⇒ [page 69](#)

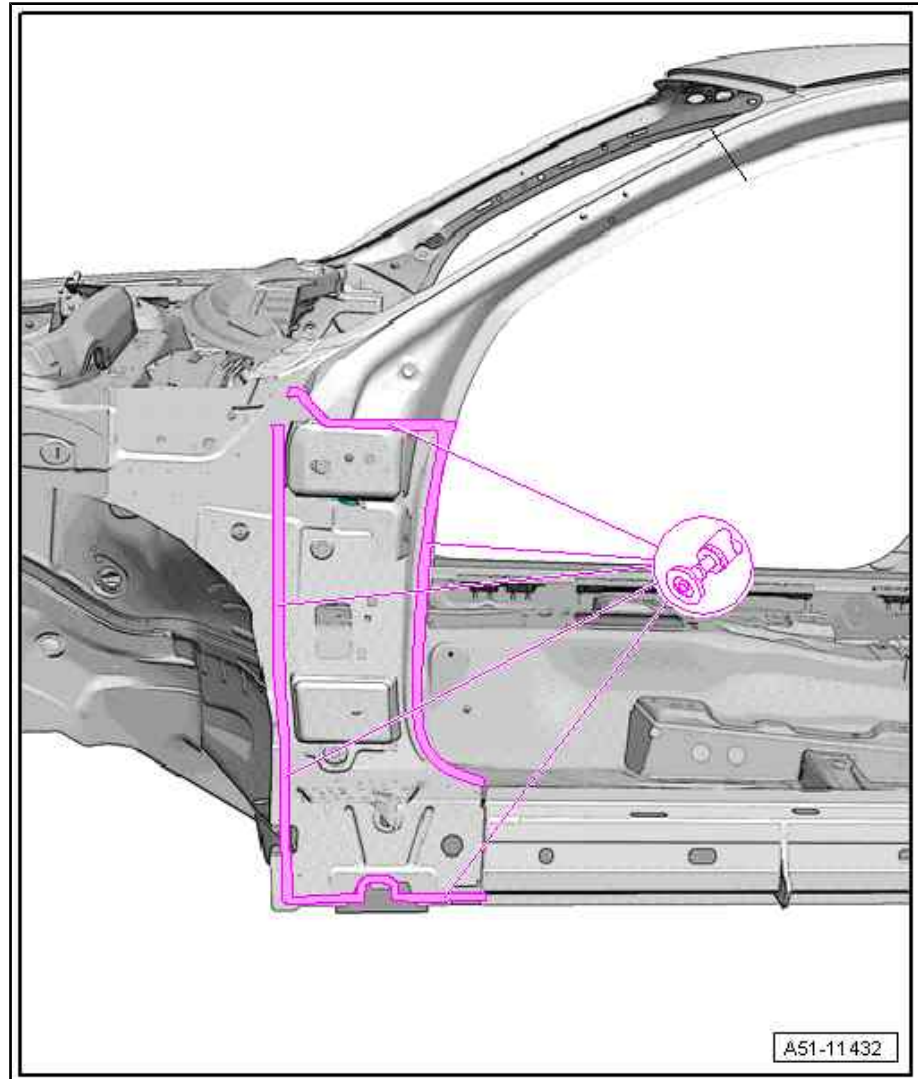
### Cutting locations

Permitted separating cuts on complete side panel ⇒ [page 125](#) .

- Drill out original joint using spot weld breaker .
- Make separating cut in inner A-pillar using body saw .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces (outer sides only) down to bare metal.

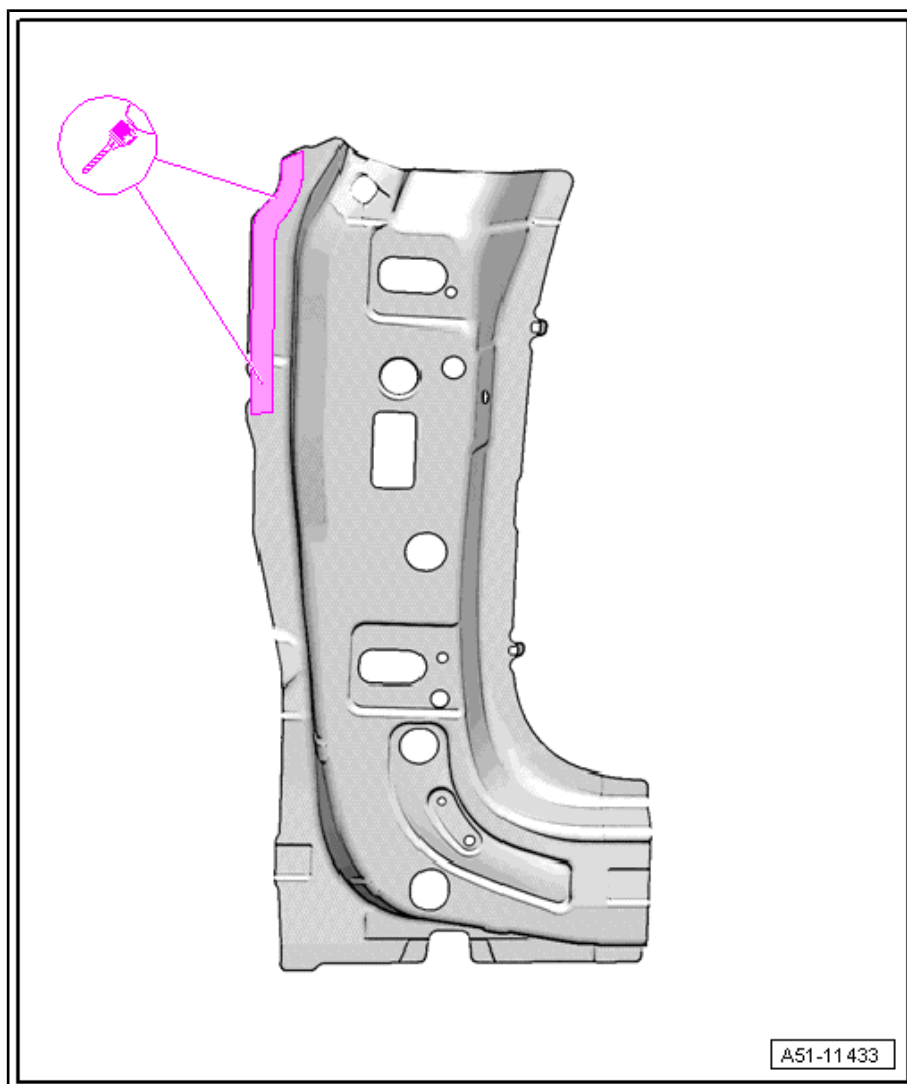


### Replacement part

- ◆ Lower inner A-pillar

### Preparing new part

- Drill holes for SG plug weld seam, 8 mm  $\varnothing$  using drill .
- Prepare flanges on new part for welding.
- Grind welding surfaces (outer sides only) down to bare metal.

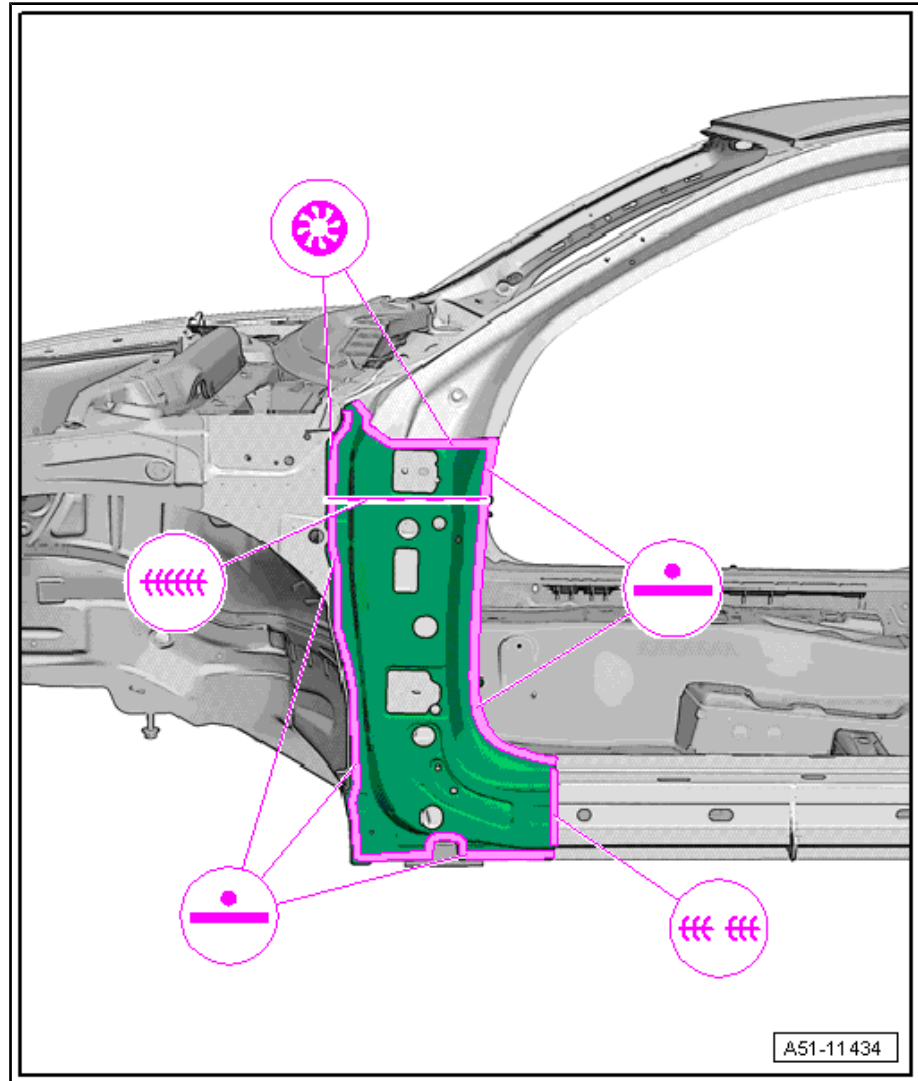


**!** NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Weld in inner A-pillar using shielded arc welding equipment : SG plug weld seam.
- Weld in inner A-pillar using shielded arc welding equipment : SG continuous seam (staggered - with gaps).
- Weld in inner A-pillar using resistance spot welder : RP spot weld seam.
- Weld in inner A-pillar at separating cut using shielded arc welding equipment : SG continuous seam.



- Welding in outer A-pillar ⇒ [page 310](#)
- Welding in upper wheel housing longitudinal member  
⇒ [page 69](#)

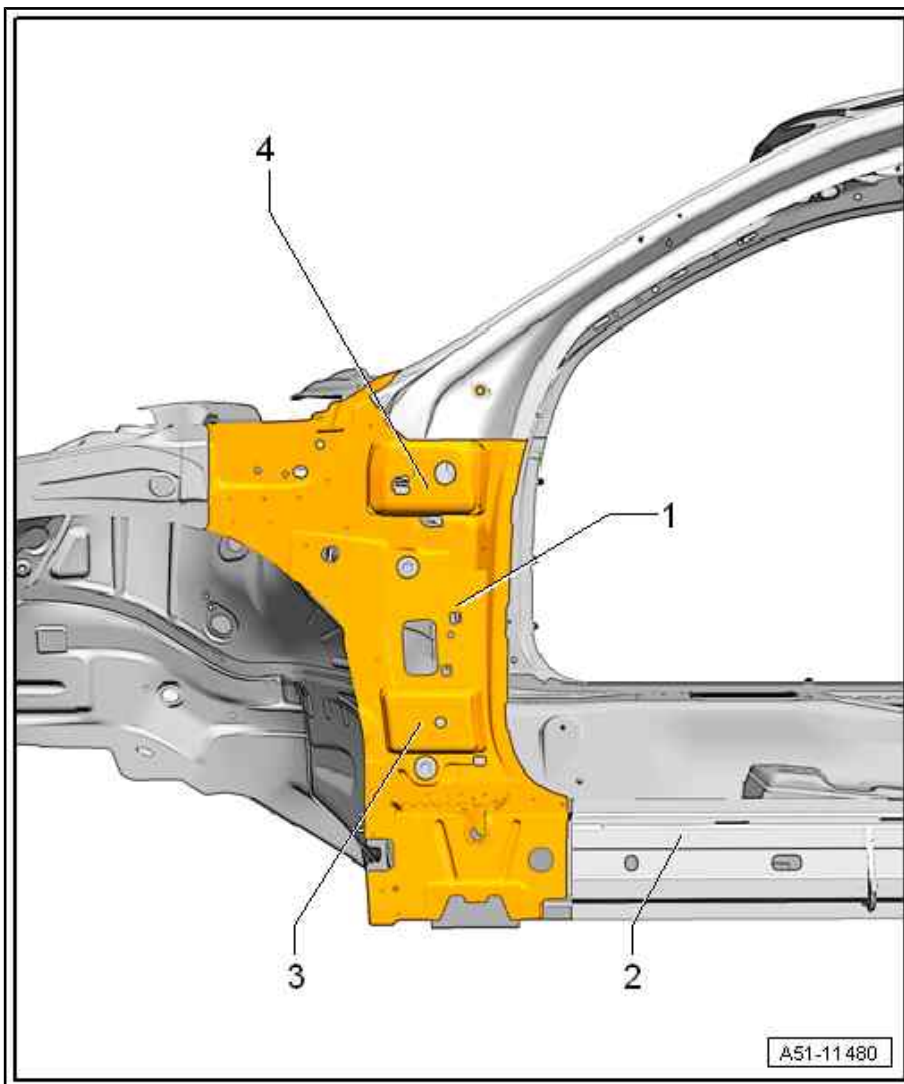


RO: 51 38 55 50

## 21 Inner A-pillar reinforcement - Renewal

A3, Sportback and Saloon identical

- 1 - Inner A-pillar reinforcement
- 2 - Inner side member
- 3 - Lower hinge reinforcement
- 4 - Upper hinge reinforcement



### 21.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker



**!** NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

## 21.2 Procedure

- Outer A-pillar cut out ⇒ [page 310](#) .
- Lower inner A-pillar cut out ⇒ [page 340](#)
- Upper inner A-pillar (part section) cut out ⇒ [page 315](#)
- Upper wheel housing longitudinal member cut out ⇒ [page 69](#)

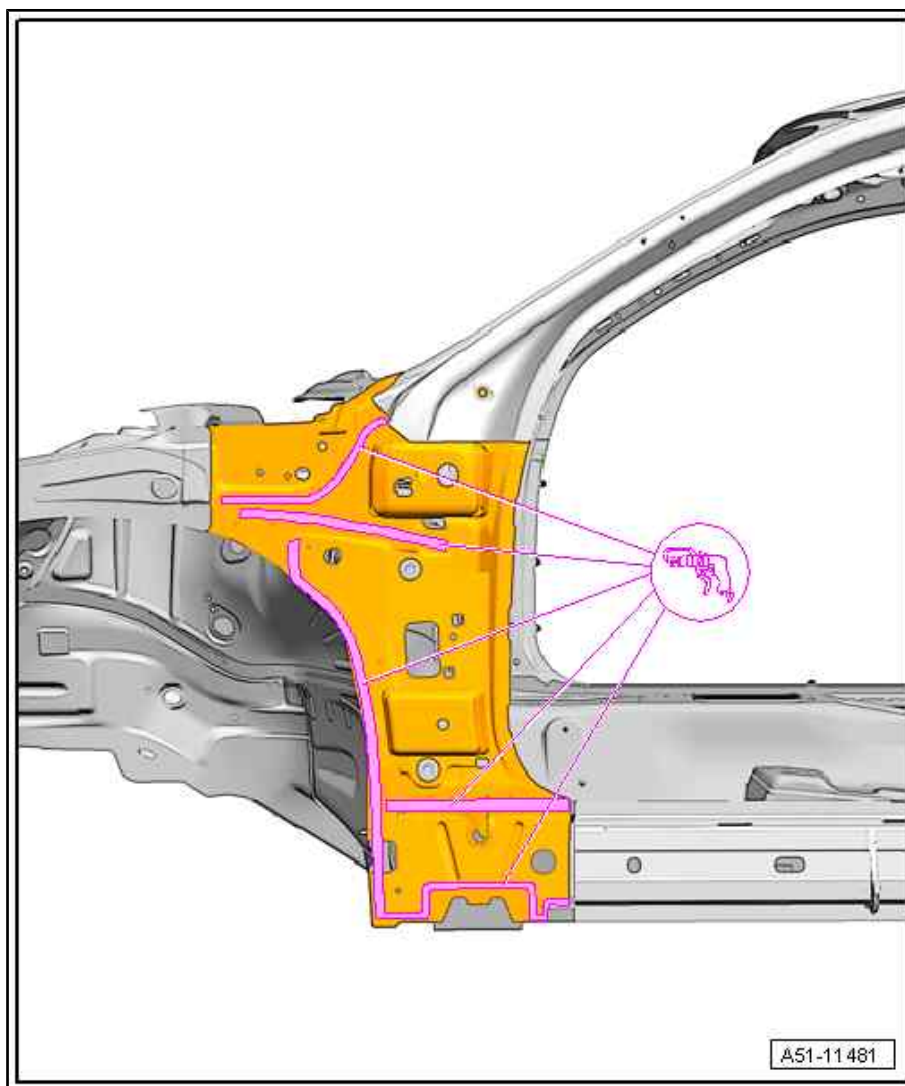


**Note**

*The inner A-pillar reinforcement is made of ultra-high strength steel (hot-formed).*

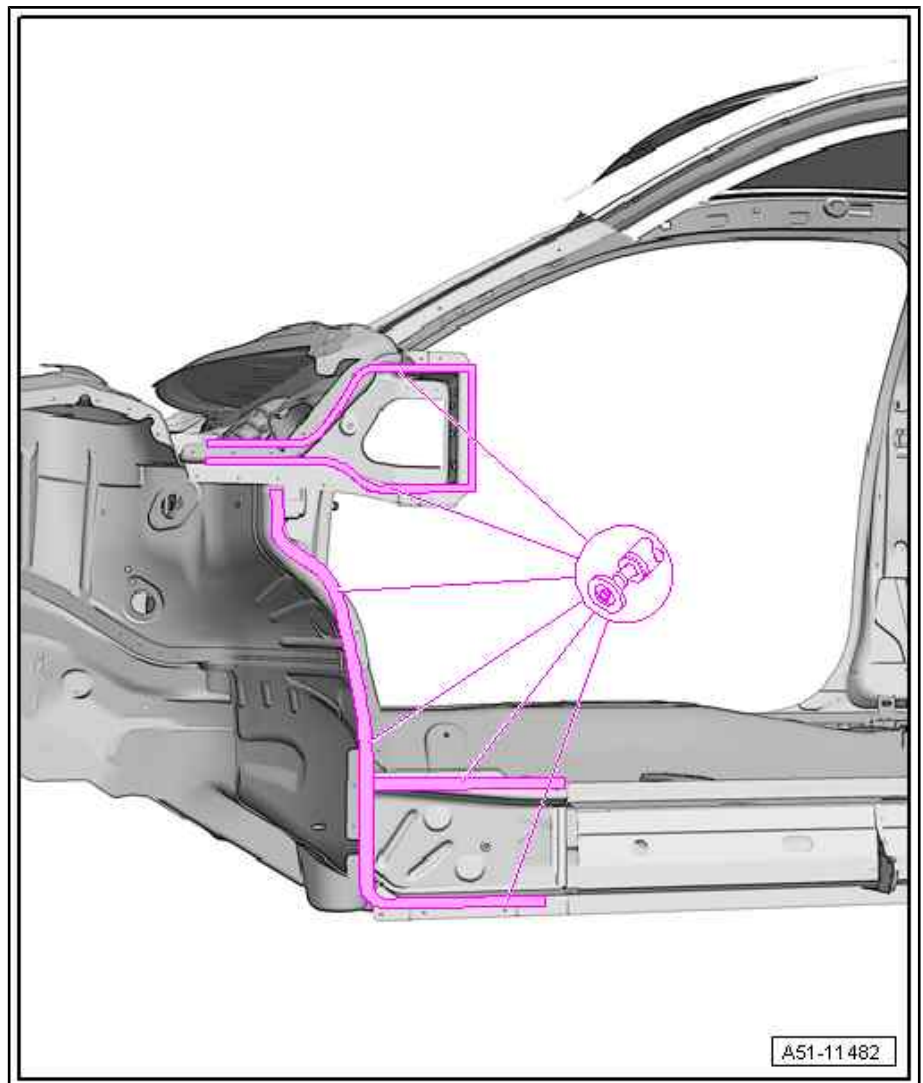
### Cutting locations

- Separate original joint using spot weld breaker .





- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.



### Replacement parts

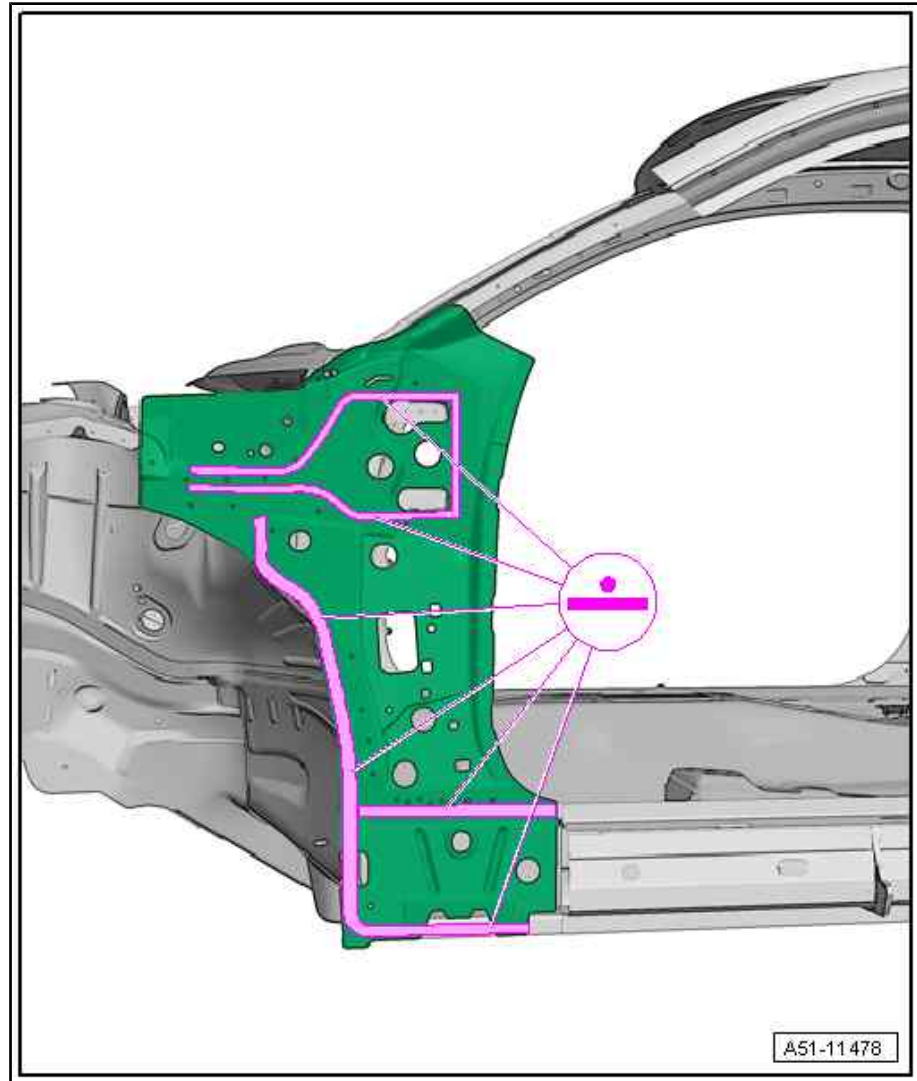
- ◆ Inner A-pillar reinforcement

#### NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

### Welding in

- Weld in inner A-pillar reinforcement using resistance spot welder : RP spot weld seam.



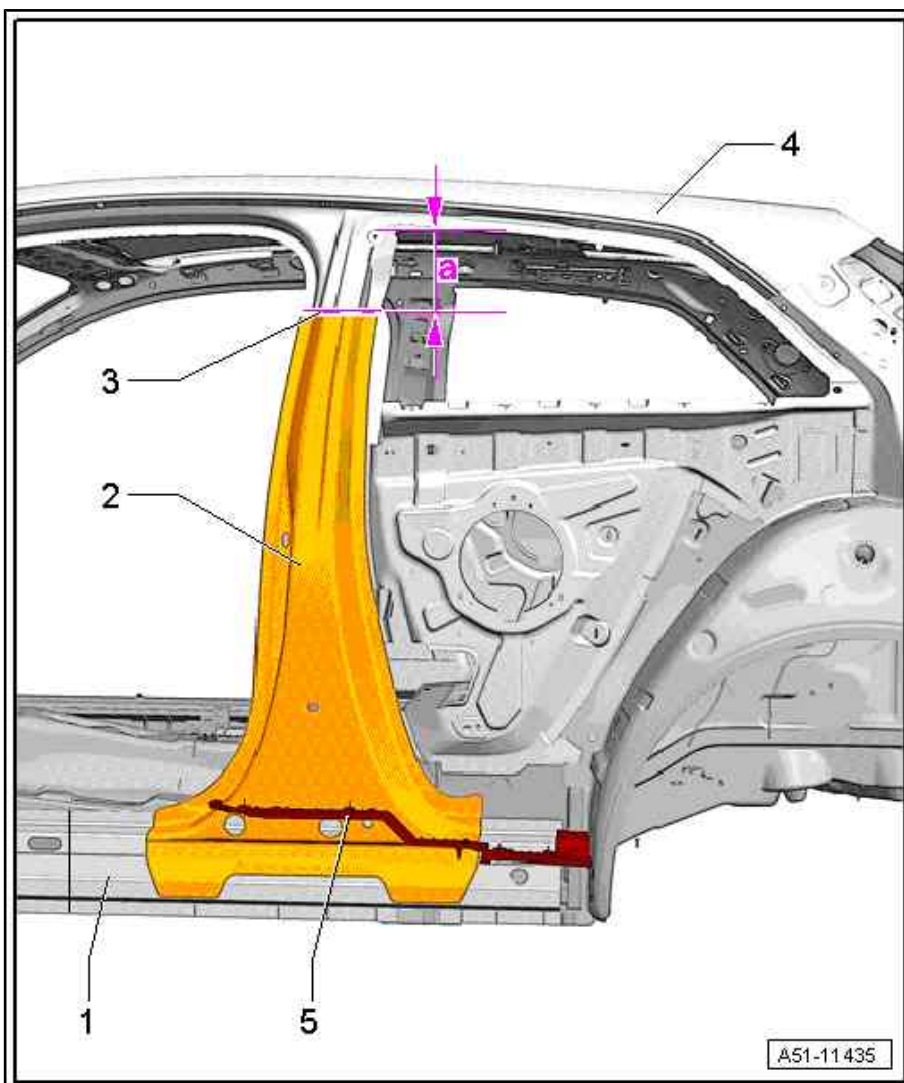
- Welding in outer A-pillar ⇒ [page 310](#)
- Welding in lower inner A-pillar ⇒ [page 340](#)
- Welding in upper A-pillar (part section) ⇒ [page 315](#)
- Welding in upper wheel housing longitudinal member ⇒ [page 69](#)



RO: 51425552

## 22 Inner B-pillar - Partial renewal (A3)

- 1 - Side member reinforcement
- 2 - Inner B-pillar
- 3 - Separating cut in B-pillar, dimension -a- = 175 mm
- 4 - Side panel
- 5 - Moulded foam insert



### 22.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker
- ◆ Mechanical door tensioner

#### NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .



## 22.2 Procedure

- Removing side panel ⇒ [page 499](#)

### Cutting locations

Permitted separating cuts on complete side panel ⇒ [page 125](#) .



#### Note

*Before cutting out the inner B-pillar, insert the mechanical door tensioners - V.A.G 1438- in the door openings to brace the roof in position.*



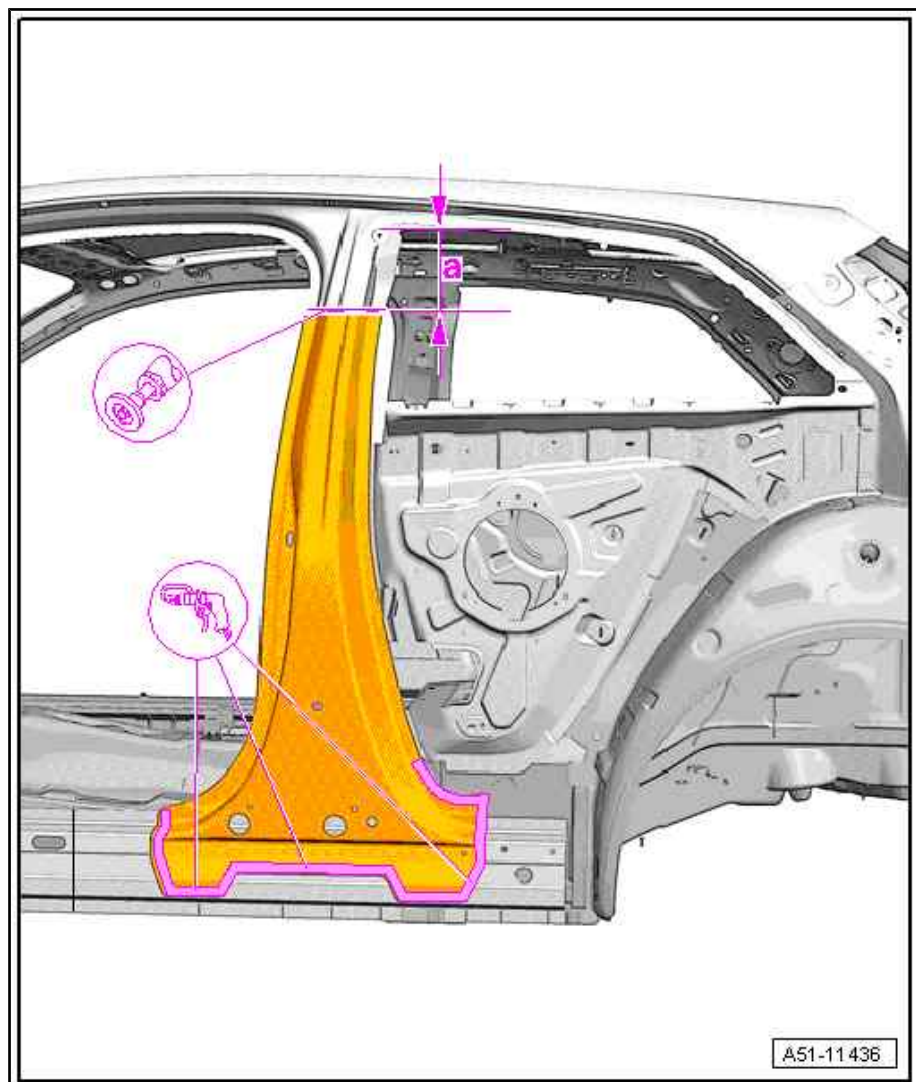
#### Note

*A separating cut is only permissible at the location described.*

- Mark off separating cut on B-pillar according to dimension -a- and make cut using compact angle grinder .

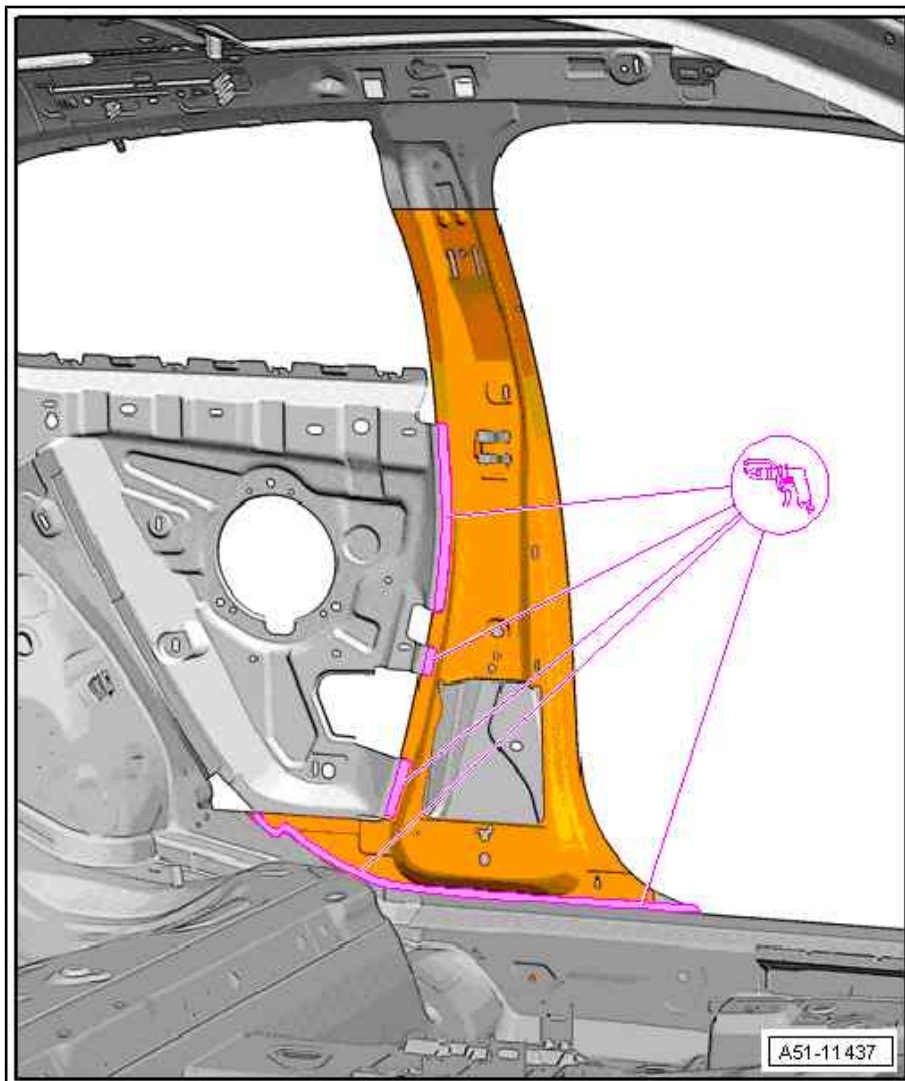
**Dimension -a- = 175 mm**

- Separate original joint using spot weld breaker .





- Separate original joint using spot weld breaker .



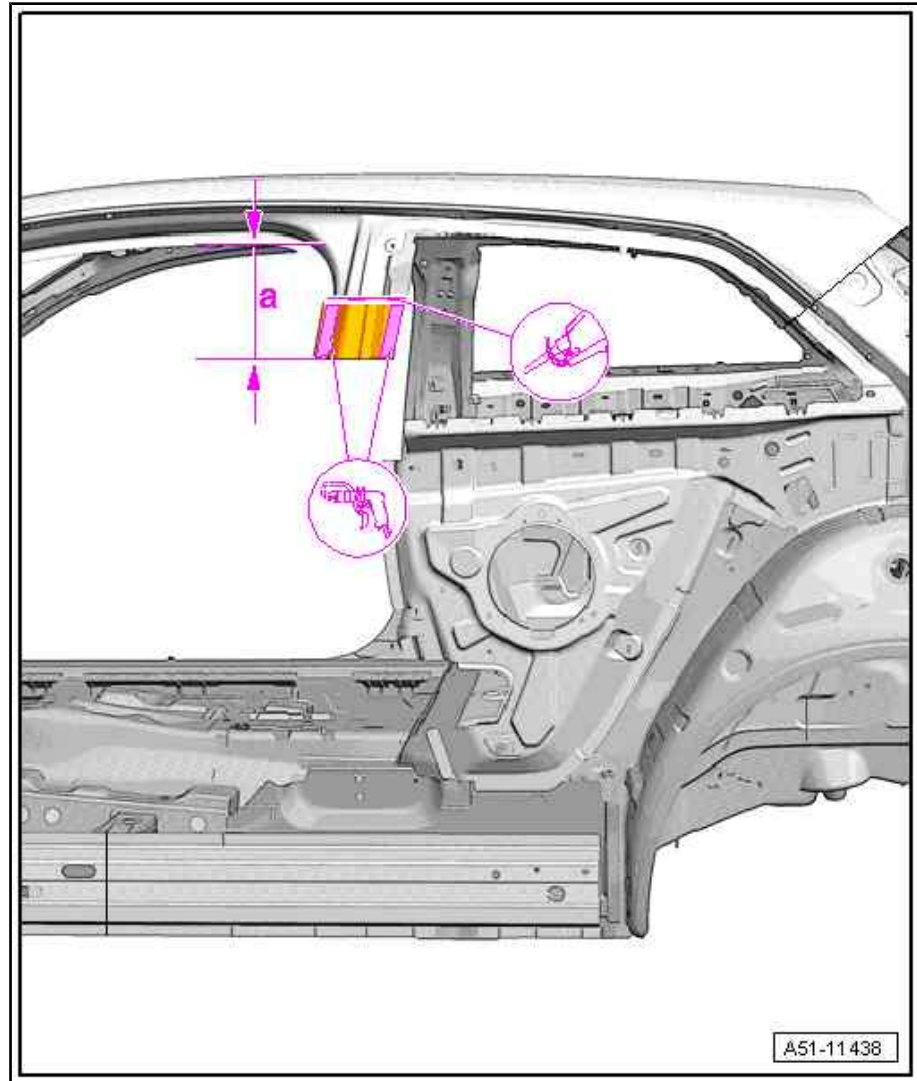
**i** Note

*A separating cut is only permissible at the location described.*

- Mark off separating cut on outer B-pillar according to dimension -a- and make cut using body saw .

**Dimension -a- = 105 mm**

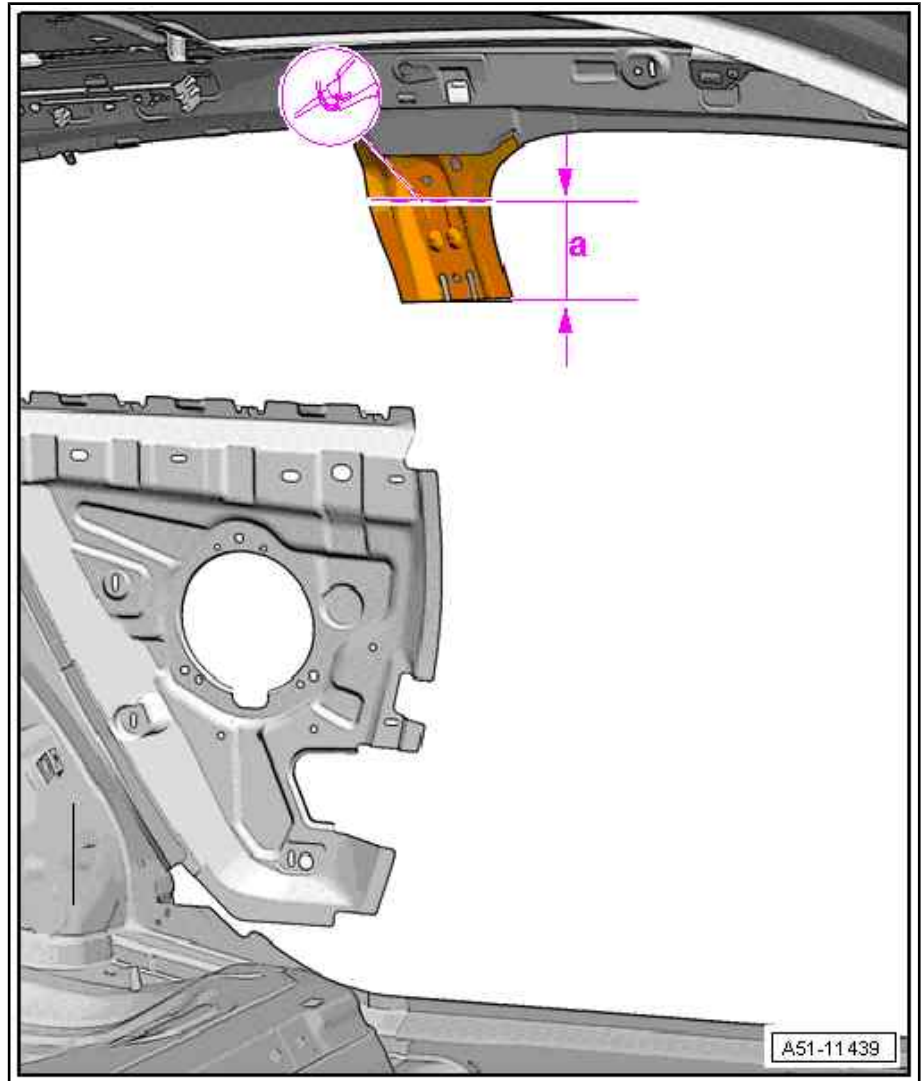
- Separate original joint using spot weld breaker .



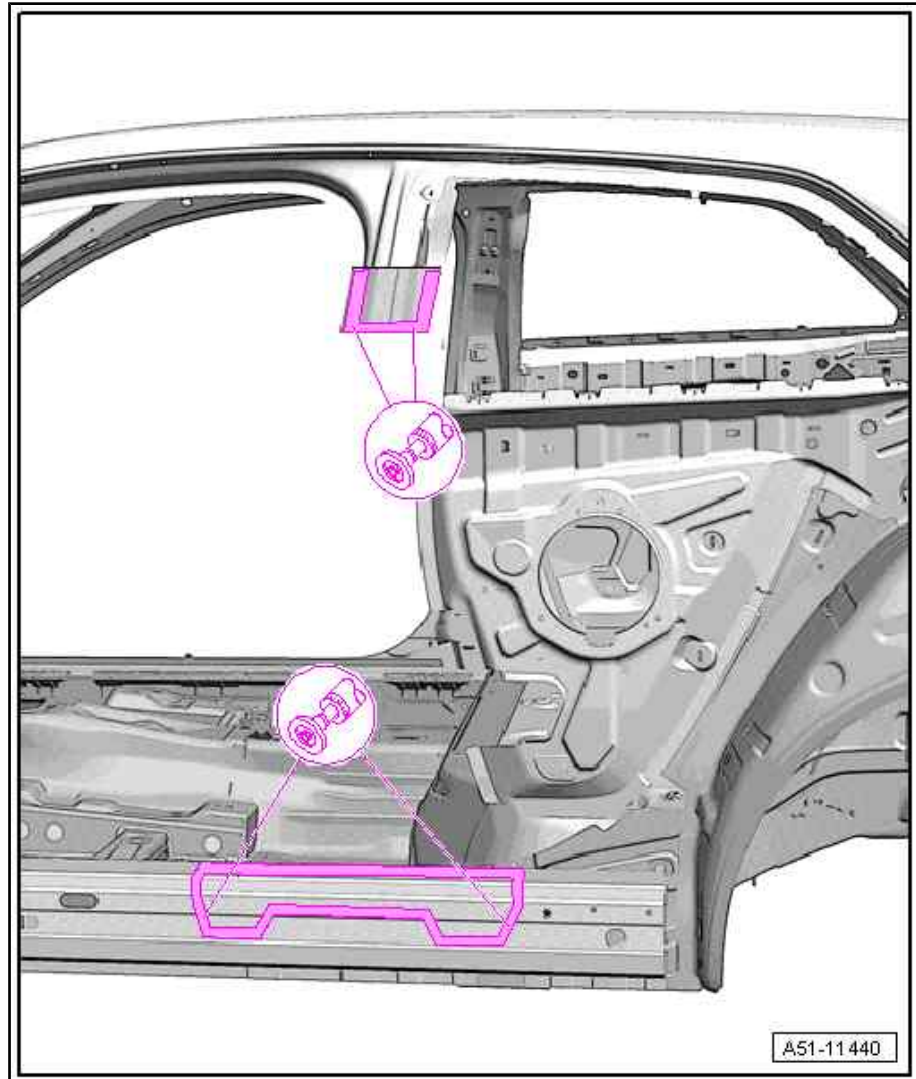
- Mark off separating cut on B-pillar closure plate according to dimension -a- and make cut using body saw .

**Dimension -a- = 70 mm**

- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- To ensure that the ultra-high strength steel can be welded properly, the areas round the parting cut must be sanded down to bare metal inside and out.

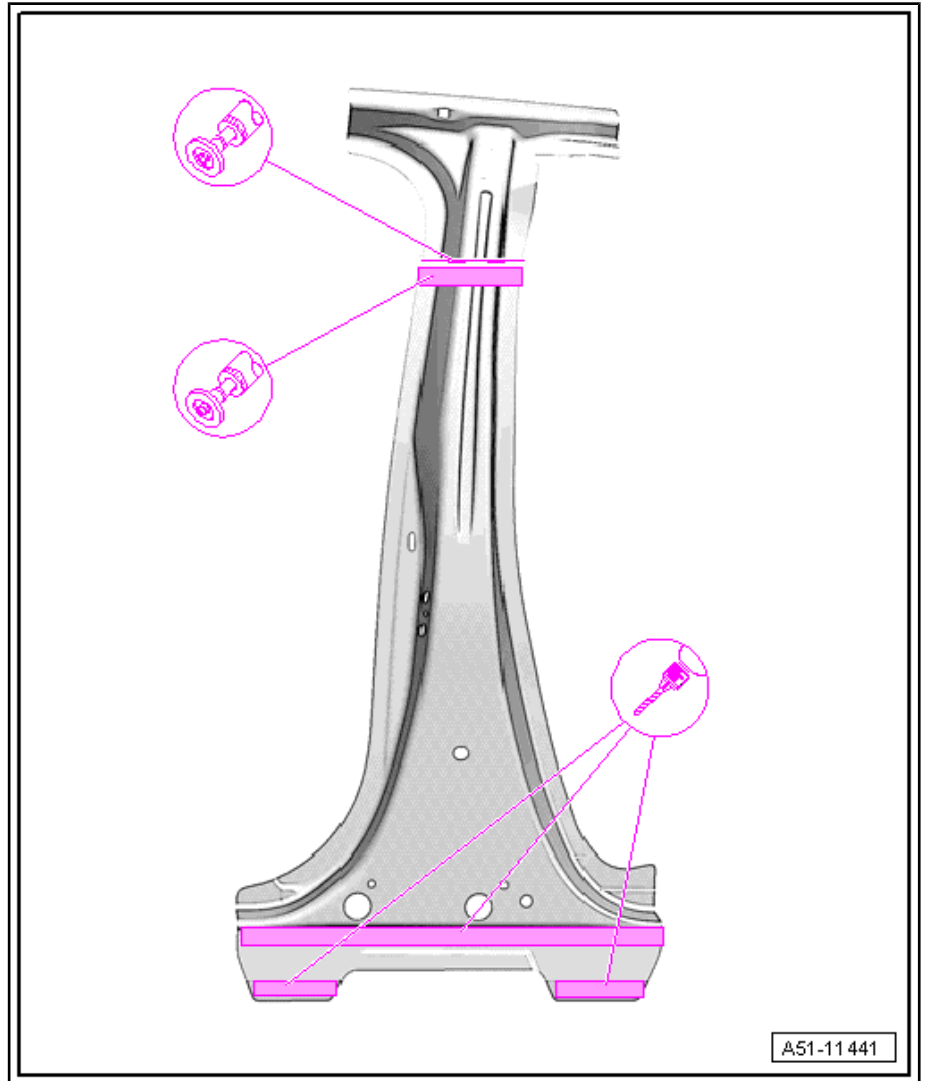


### Replacement parts

- ◆ Inner B-pillar
- ◆ Additional B-pillar reinforcement
- ◆ Threaded plate (M 8), striker plate
- ◆ Closure plate

### Preparing new part

- Transfer separating cut to new part and cut off using compact angle grinder .
- Grind area around separating cut down to bare metal on inside and outside using compact angle grinder .
- Drill holes for SG plug weld seam using drill as shown (8 mm Ø).
- Prepare flanges on new part for welding.



- Transfer separating cut to new part and cut off using compact angle grinder .
- Grind welding surfaces down to bare metal.



**!** NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

Marking prohibited weld area

**i** Note

*For safety reasons (crash resistance), no welding work may be carried out in the prohibited weld areas as marked in the following illustration.*

Dimension -a- = 135 mm

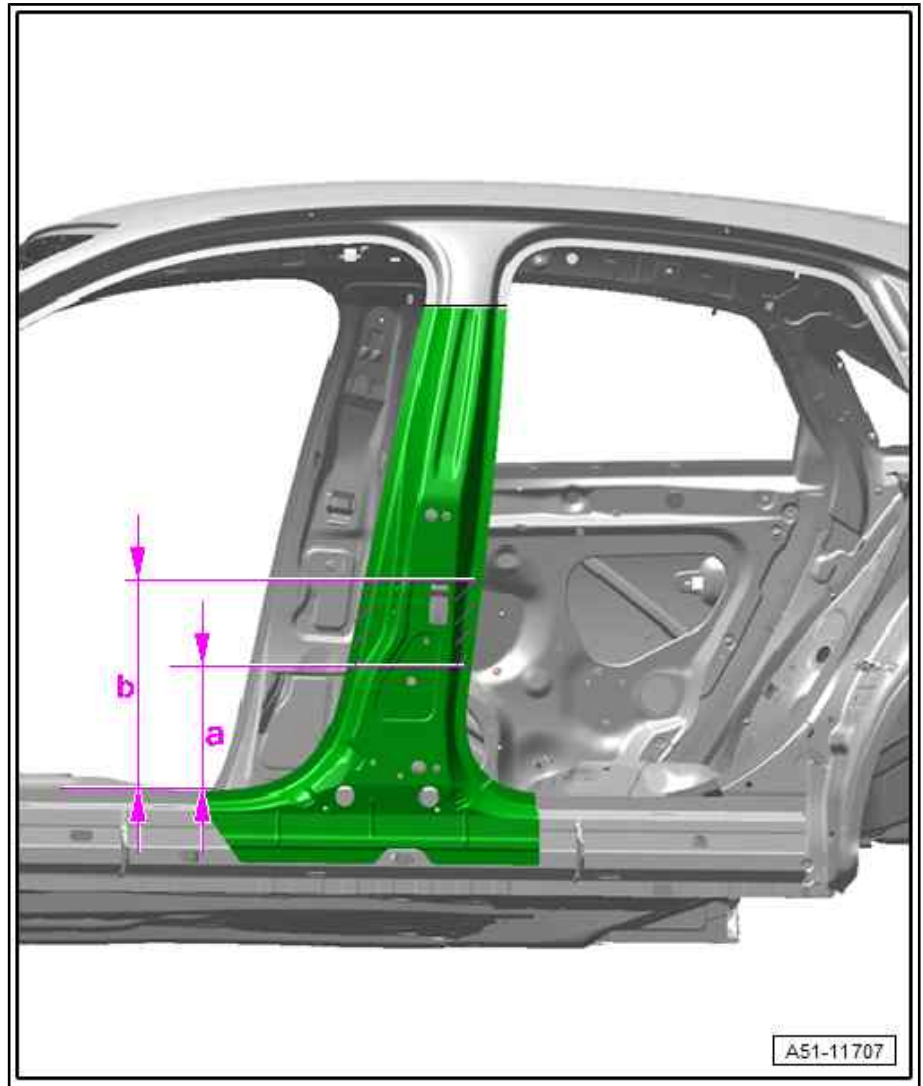
Dimension -b- = 250 mm

**i** Note

*Note areas where welding is not permitted -hatched areas-.*

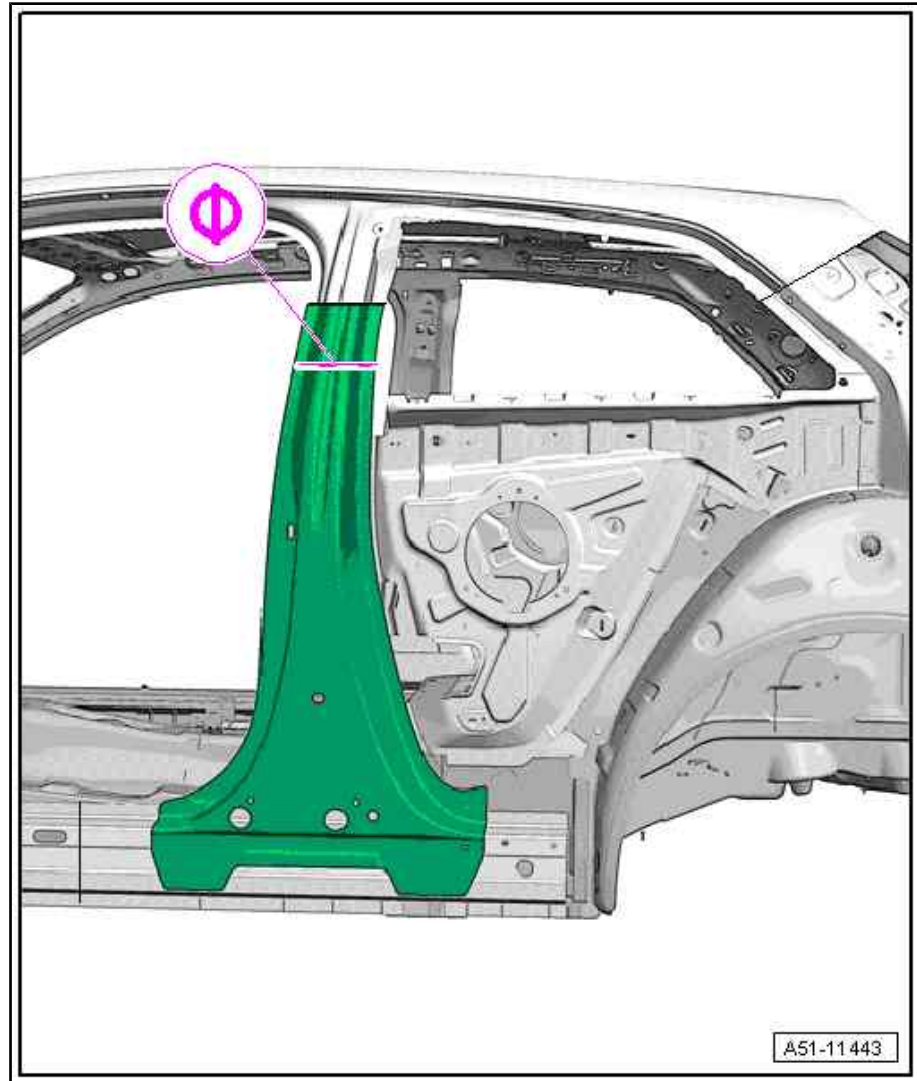


- In areas where welding is not permitted -hatched areas-, clamp panels together until 2-component epoxy adhesive - DA 001 730 A2- has cured.
- Make one RP spot weld above and below prohibited weld areas.

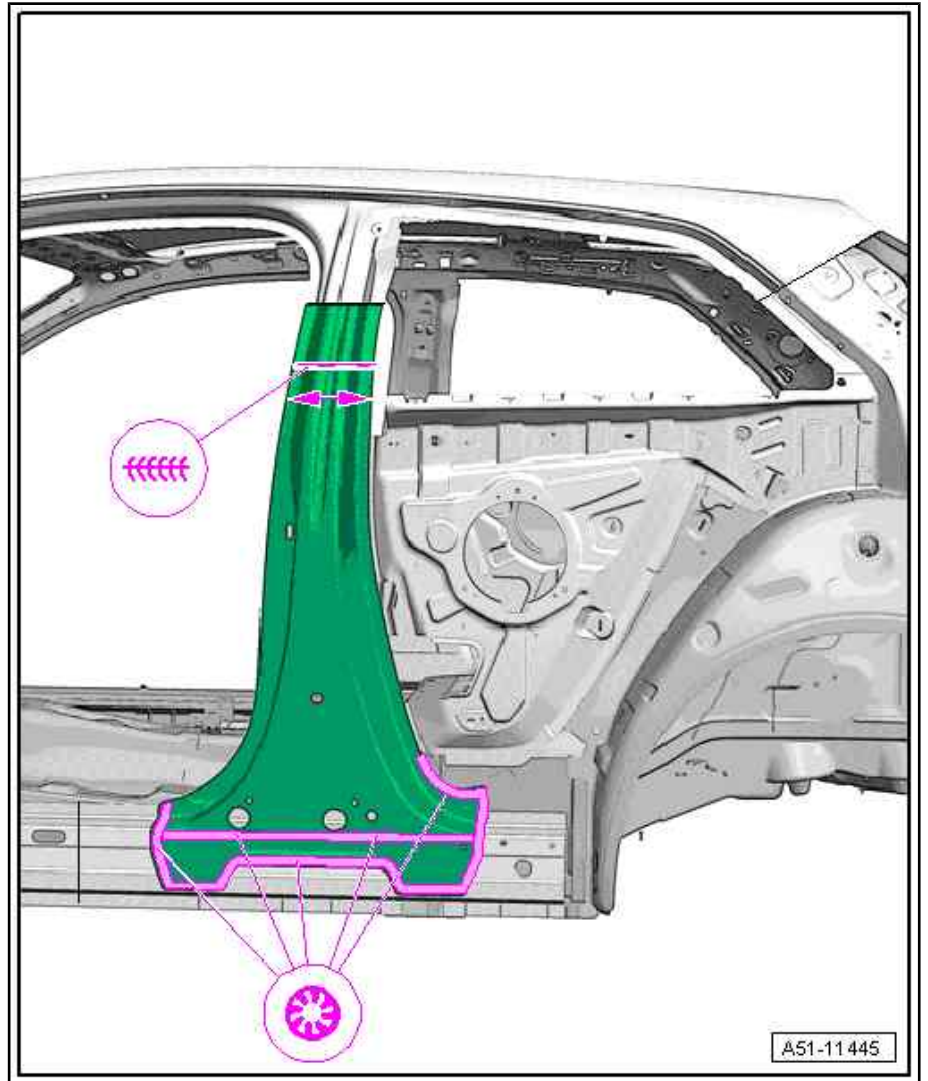


### Welding in

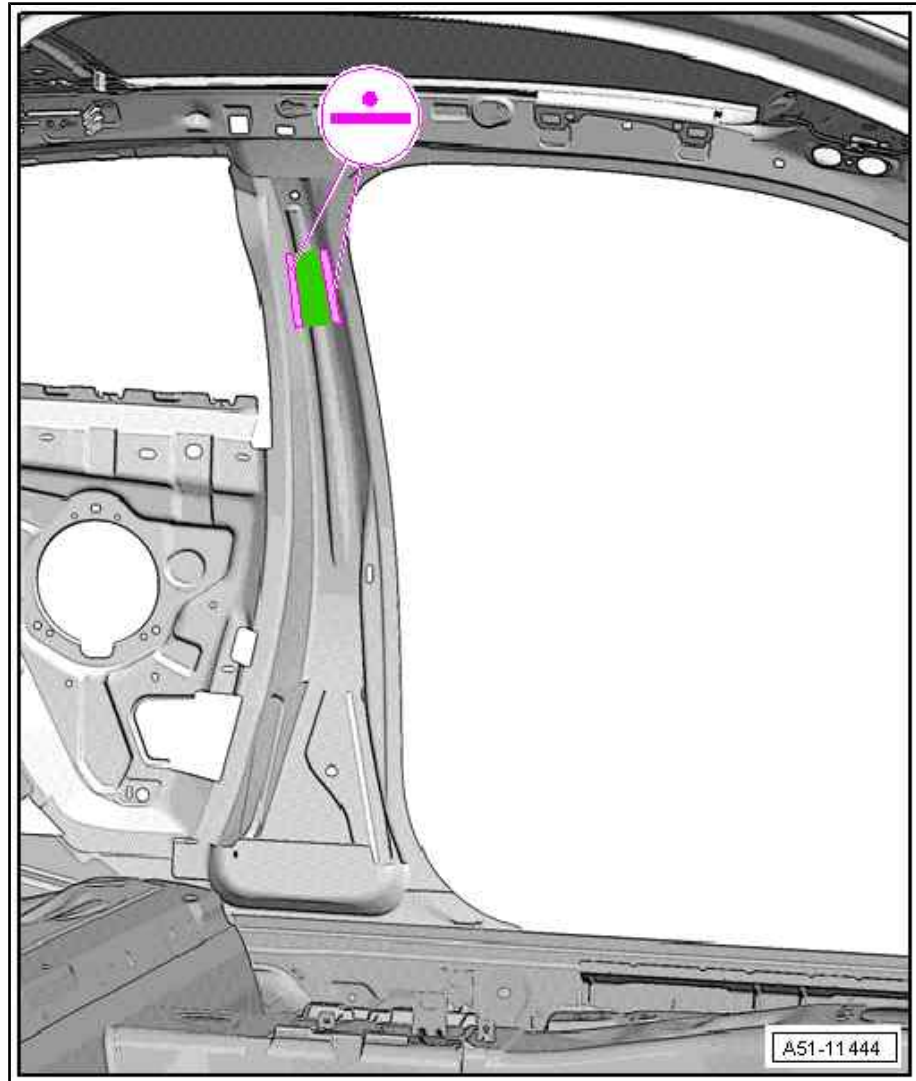
- To avoid distortion, only tack weld B-pillar using shielded arc welding equipment .



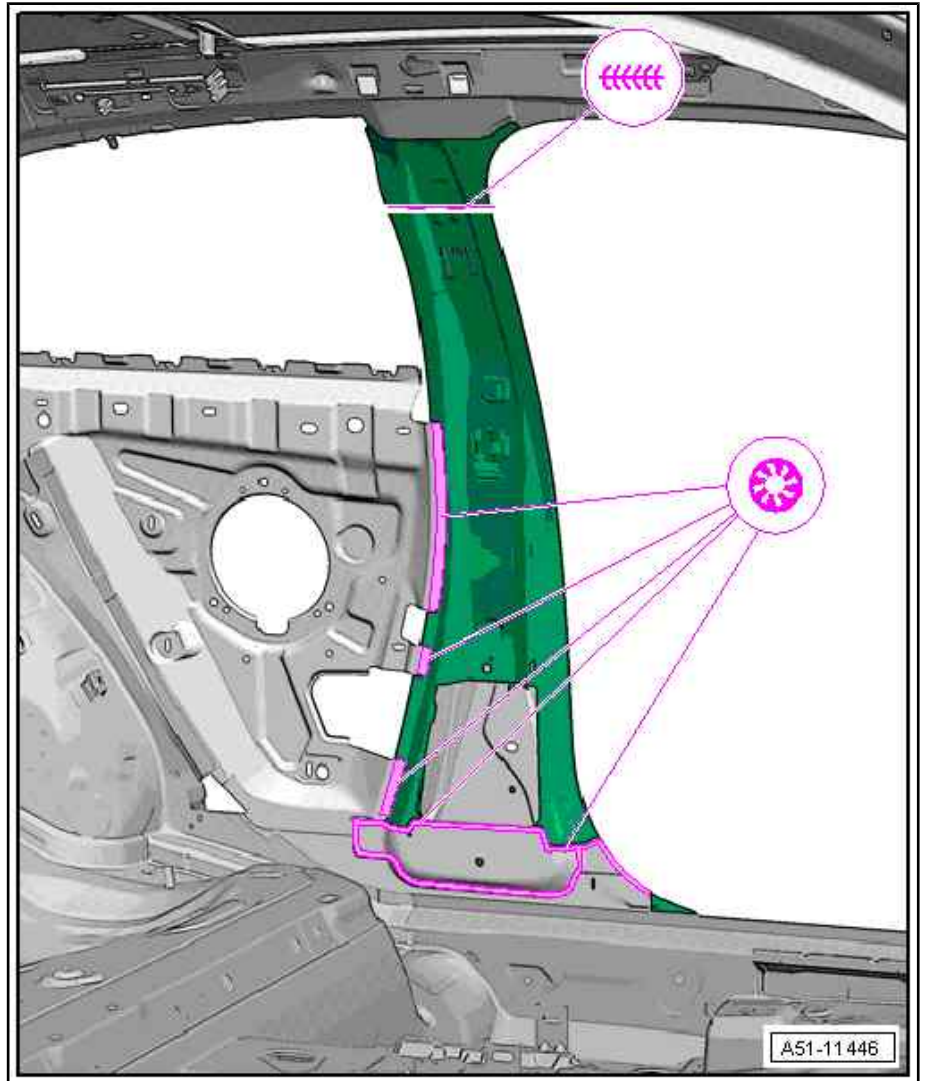
- Weld in at separating cut from inside to outside using shielded arc welding equipment : SG continuous seam.
- Weld in lower outer B-pillar using shielded arc welding equipment : SG plug weld seam.



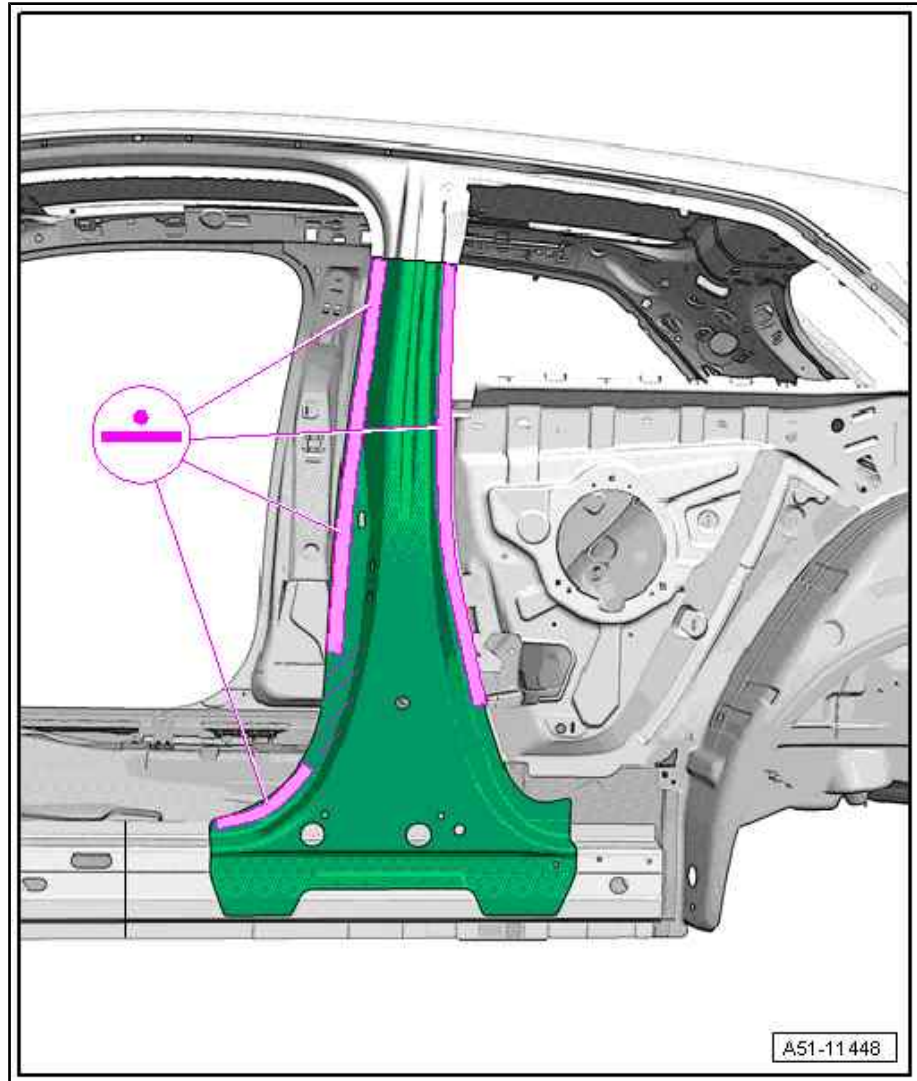
- Weld in additional B-pillar reinforcement using resistance spot welder : RP spot weld seam (6x spot welds left and right).



- Weld in B-pillar closure plate at separating cut using shielded arc welding equipment : SG continuous seam.
- Weld in lower inner B-pillar using shielded arc welding equipment : SG plug weld seam.



- Weld in outer B-pillar using resistance spot welder : RP spot weld seam.



- Welding in side panel ⇒ [page 499](#)
- Renewing moulded foam insert ⇒ [page 18](#)



RO: 51 41 55 50

## 23 Outer B-pillar - Renewal

Sportback and Saloon identical

### 1 - B-pillar

Outer B-pillar

### 2 - Upper separating cut

### 3 - Lower separating cut

Partial renewal

*Partial renewal is possible with this separating cut.*

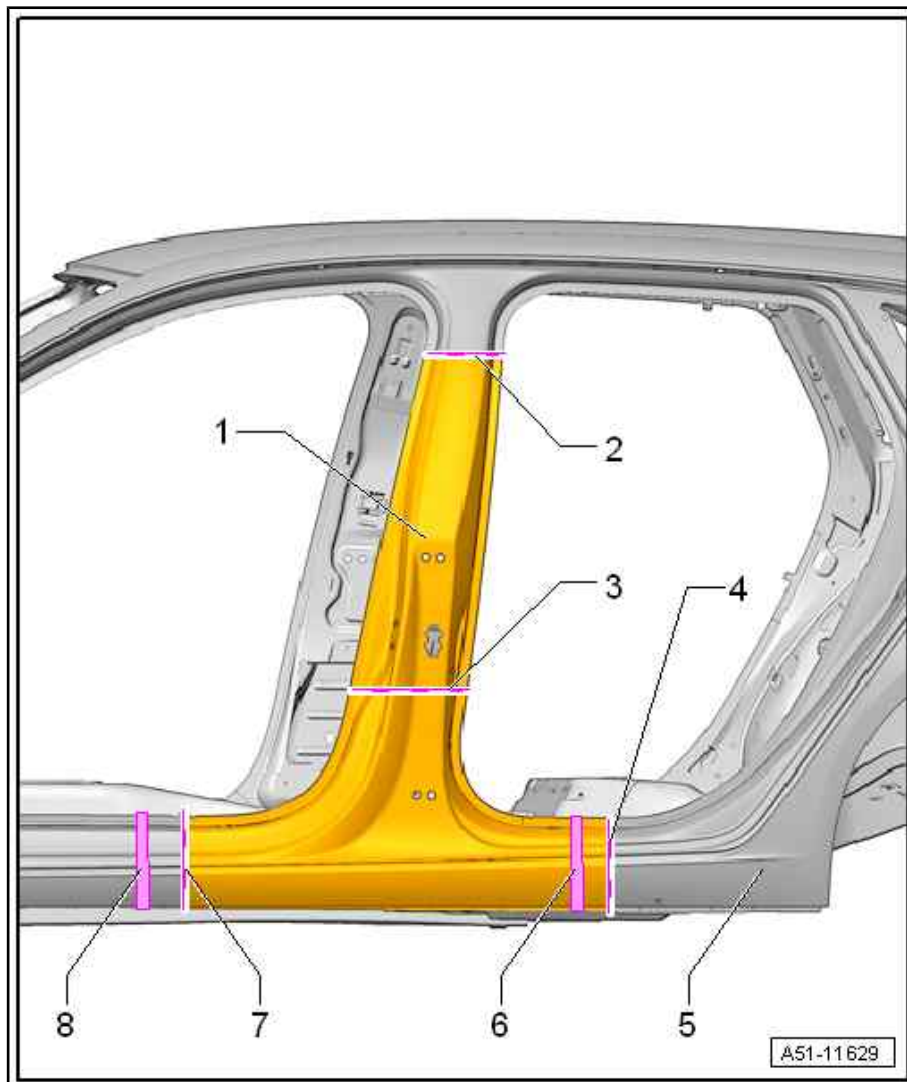
### 4 - Separating cut in side member (rear)

### 5 - Rear side member

### 6 - Moulded foam insert

### 7 - Separating cut in side member (front)

### 8 - Moulded foam insert



### 23.1 Tools

Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker



One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .



## 23.2 Procedure

### Cutting locations

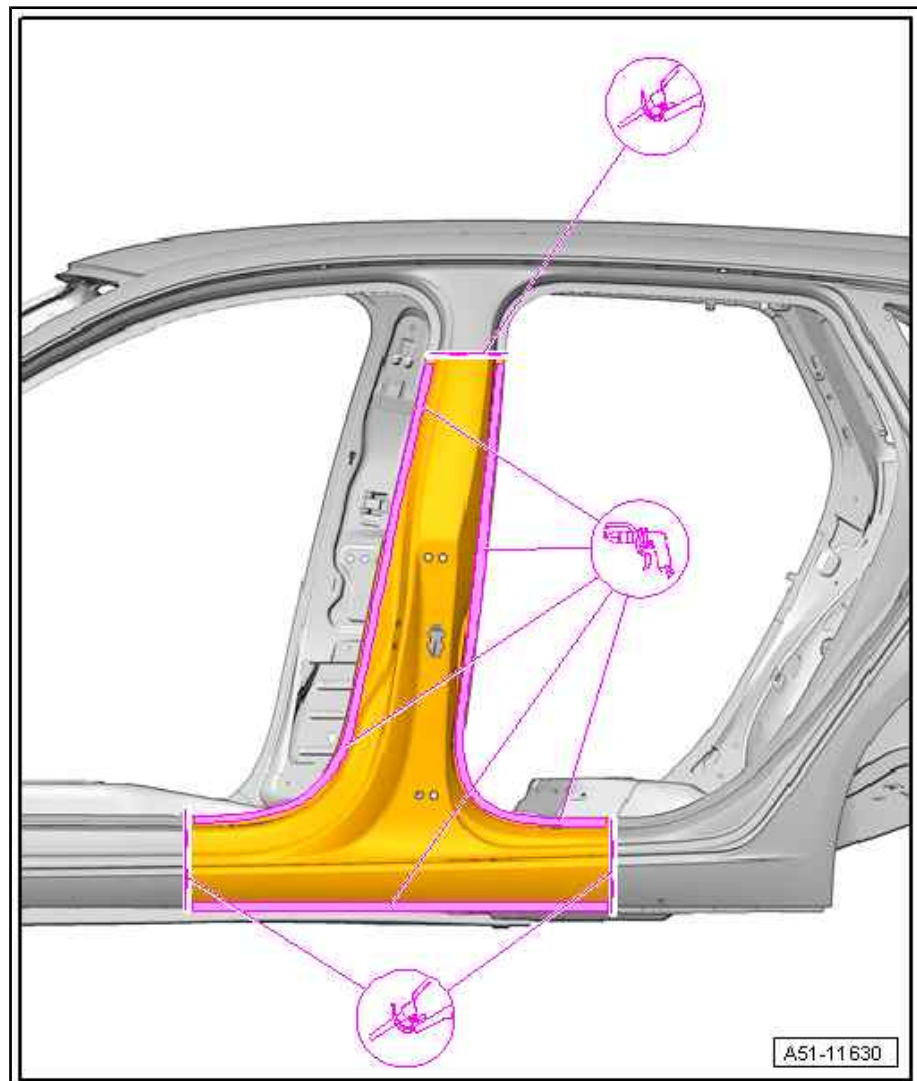
Permitted separating cuts on complete side panel ⇒ [page 125](#) .



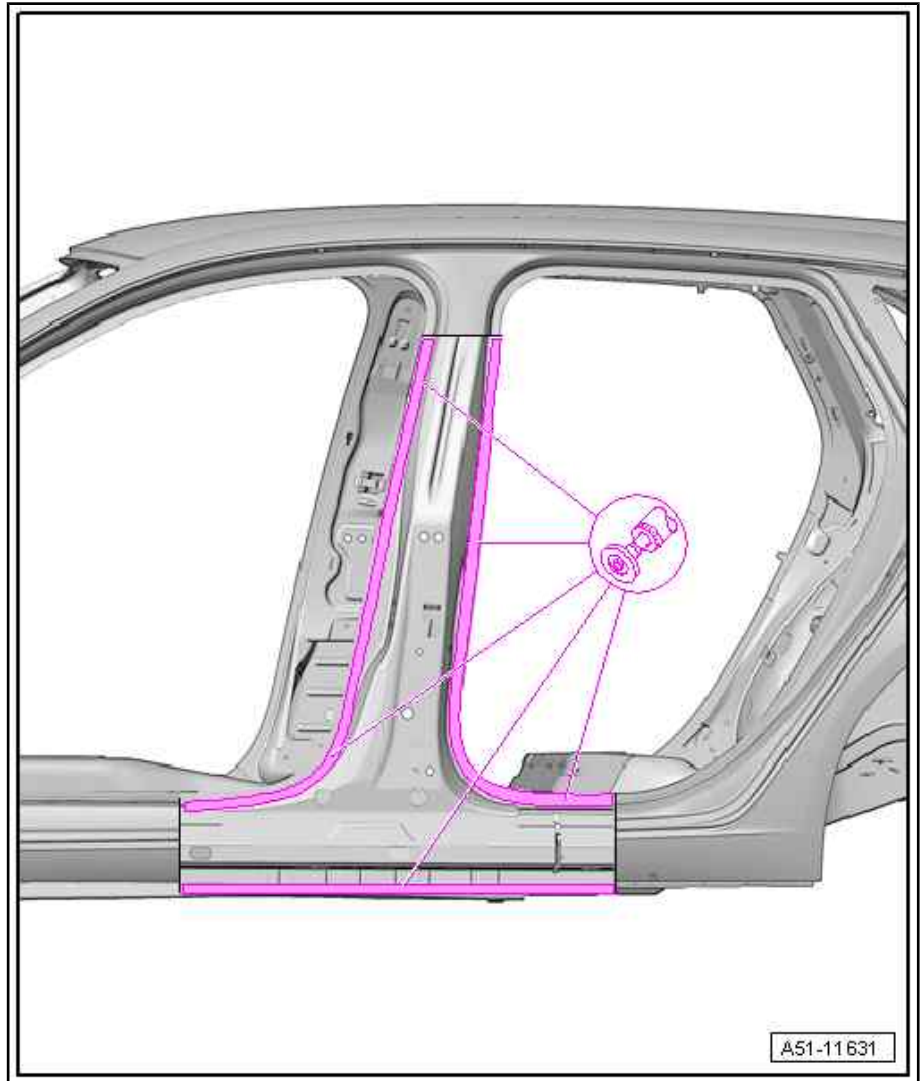
### Note

*Part section repair is possible using separating cut -3-.*

- Separate original joint using spot weld breaker .
- Make separating cuts as shown using body saw .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.

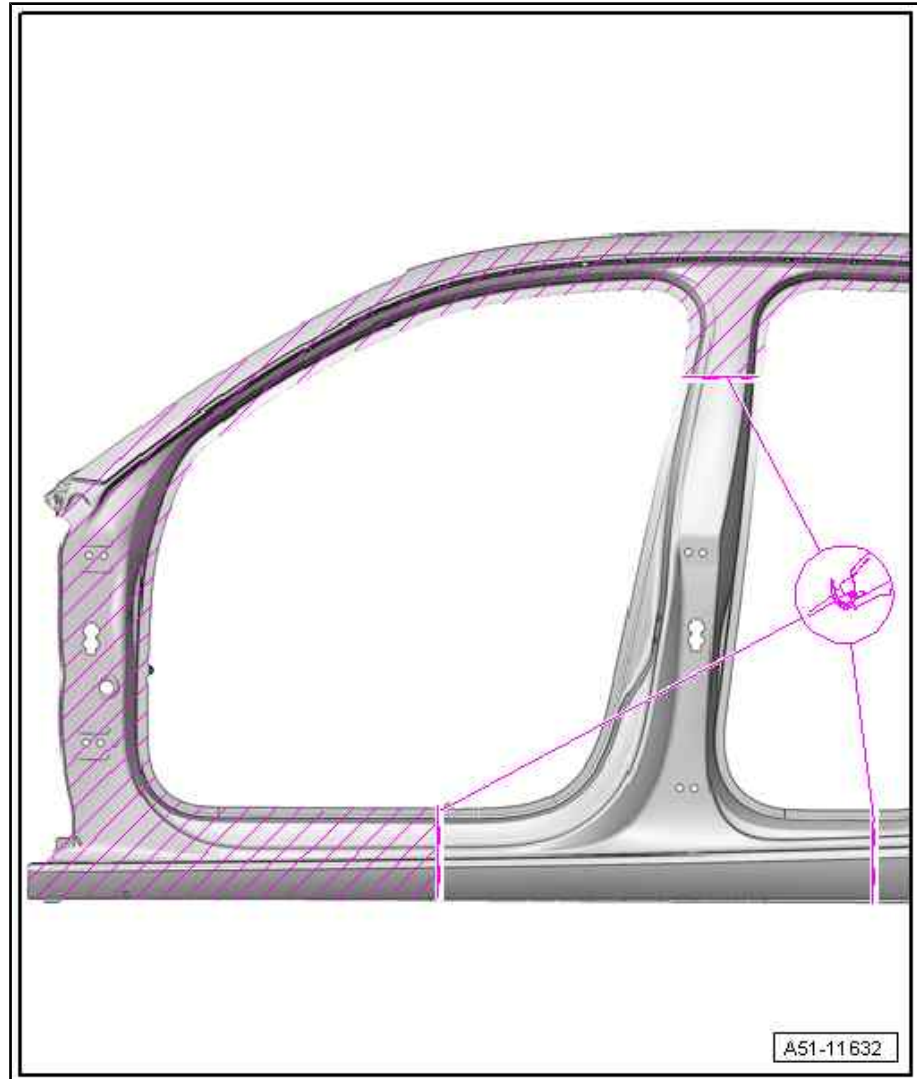


#### Replacement part

- ◆ B-pillar (sub-part)

#### Preparing new part

- Transfer separating cuts to new part and cut to size using body saw .
- Grind welding surfaces down to bare metal.

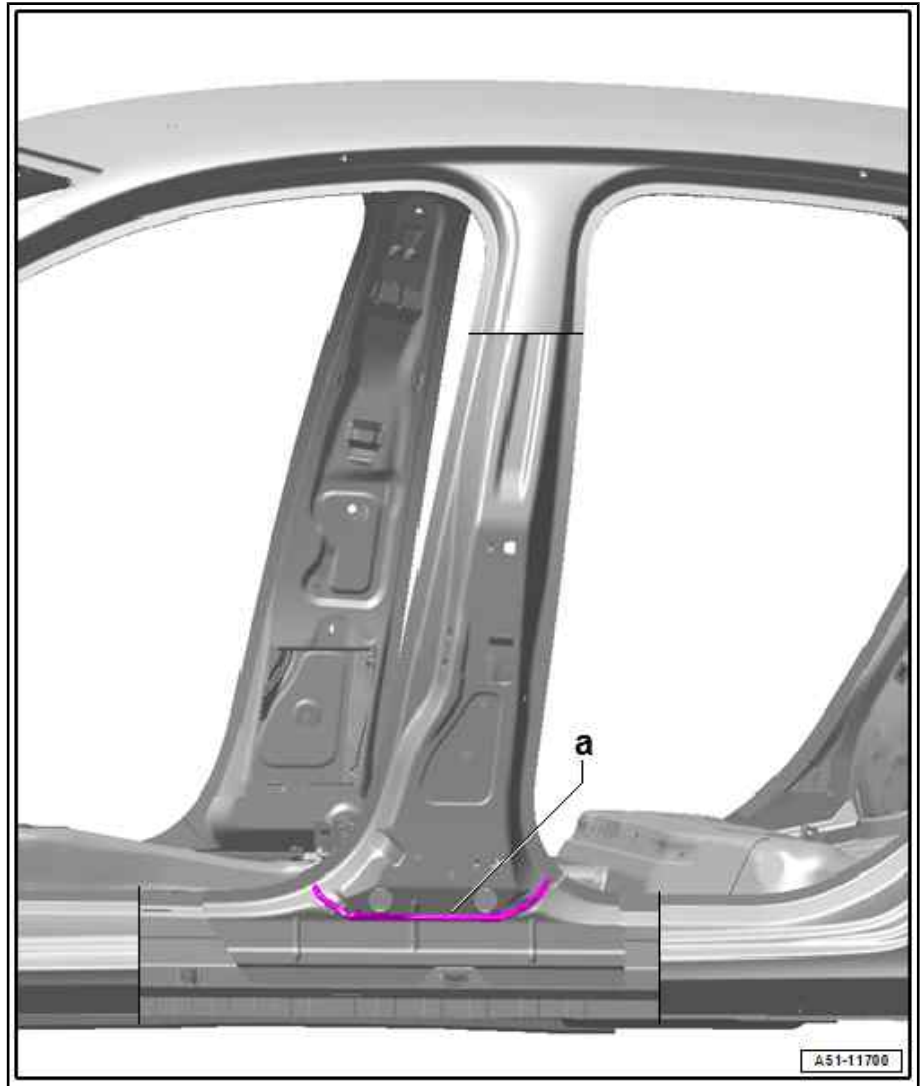


**!** NOTICE

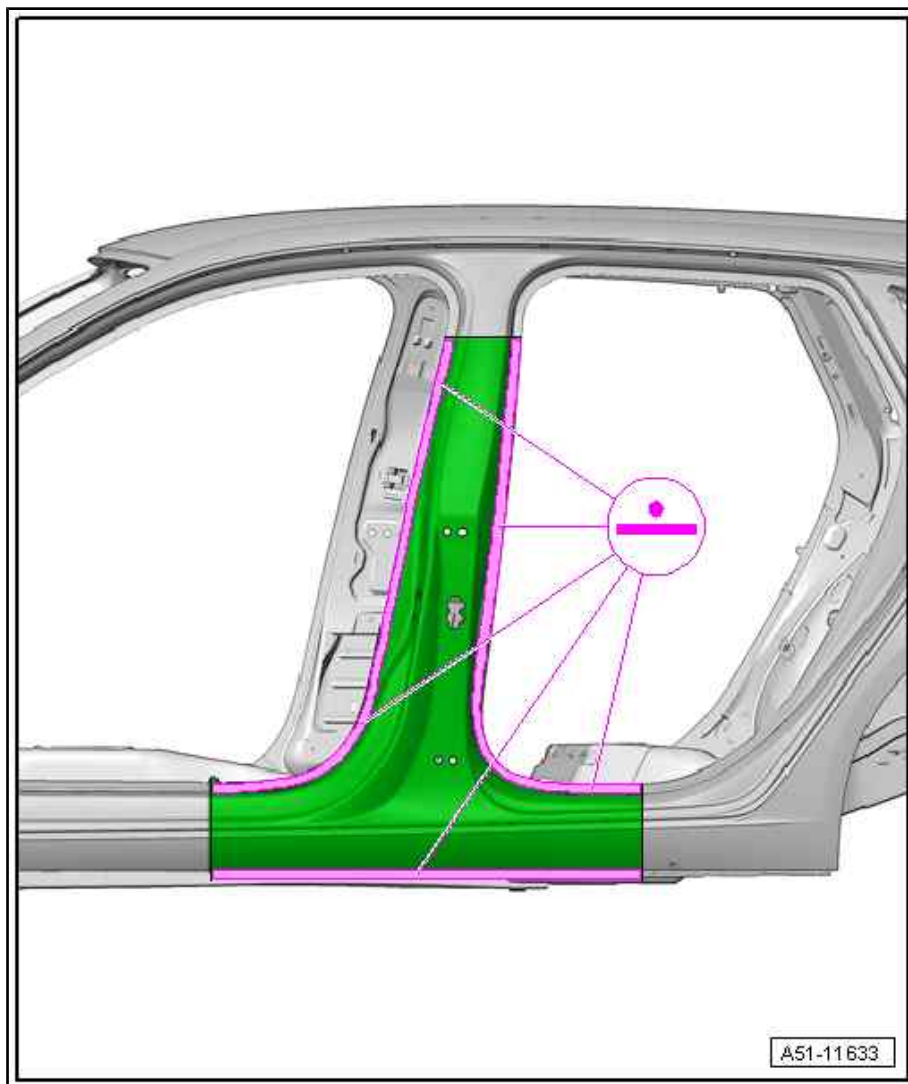
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

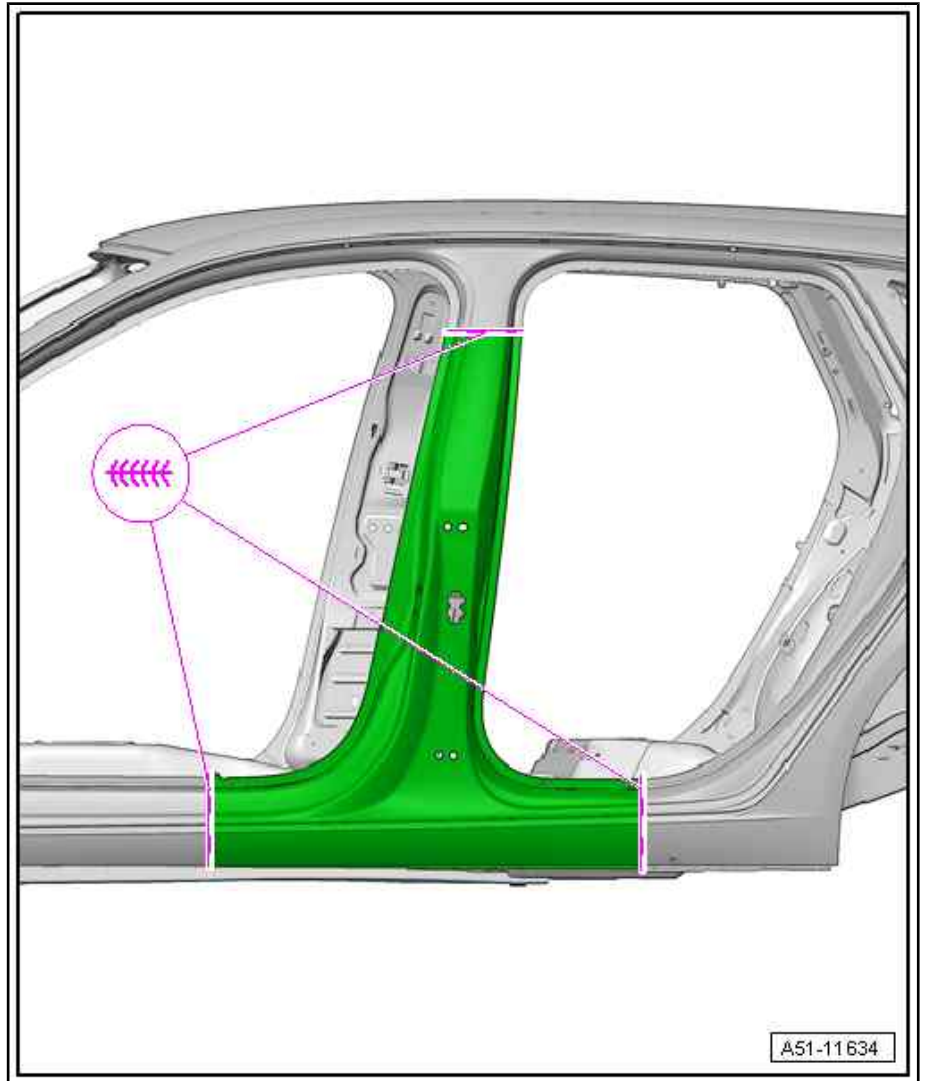
Inserting moulded foam insert -a- ⇒ [page 18](#)



- With no load on vehicle, match up new part and fix in position on portal gauge.
- Check fit relative to bolt-on parts.
- Weld in B-pillar using resistance spot welder : RP spot weld seam.



- Weld at separating cuts using shielded arc welding equipment : SG continuous seam.





RO: 51425552

## 24 Inner B-pillar - Partial renewal (Sportback)

1 - Front side member

2 - Separating cut in side member (front)

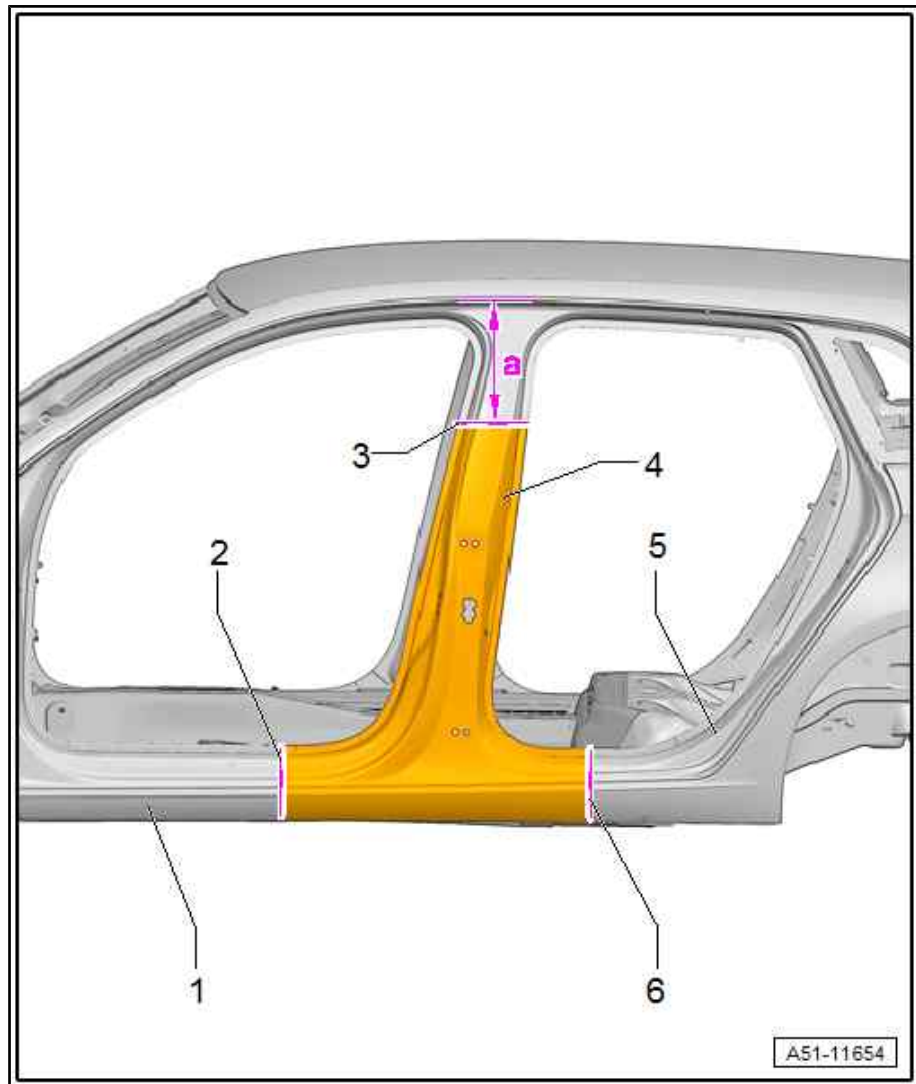
3 - Separating cut in B-pillar

Dimension -a- = 210 mm

4 - Outer B-pillar

5 - Rear side member

6 - Separating cut in side member (rear)



### 24.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker
- ◆ Mechanical door tensioner



#### NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .



## 24.2 Procedure

### Cutting locations

Permitted separating cuts on complete side panel ⇒ [page 125](#) .



#### Note

*Before cutting out the inner B-pillar, insert the mechanical door tensioners - V.A.G 1438- in the door openings to brace the roof in position.*



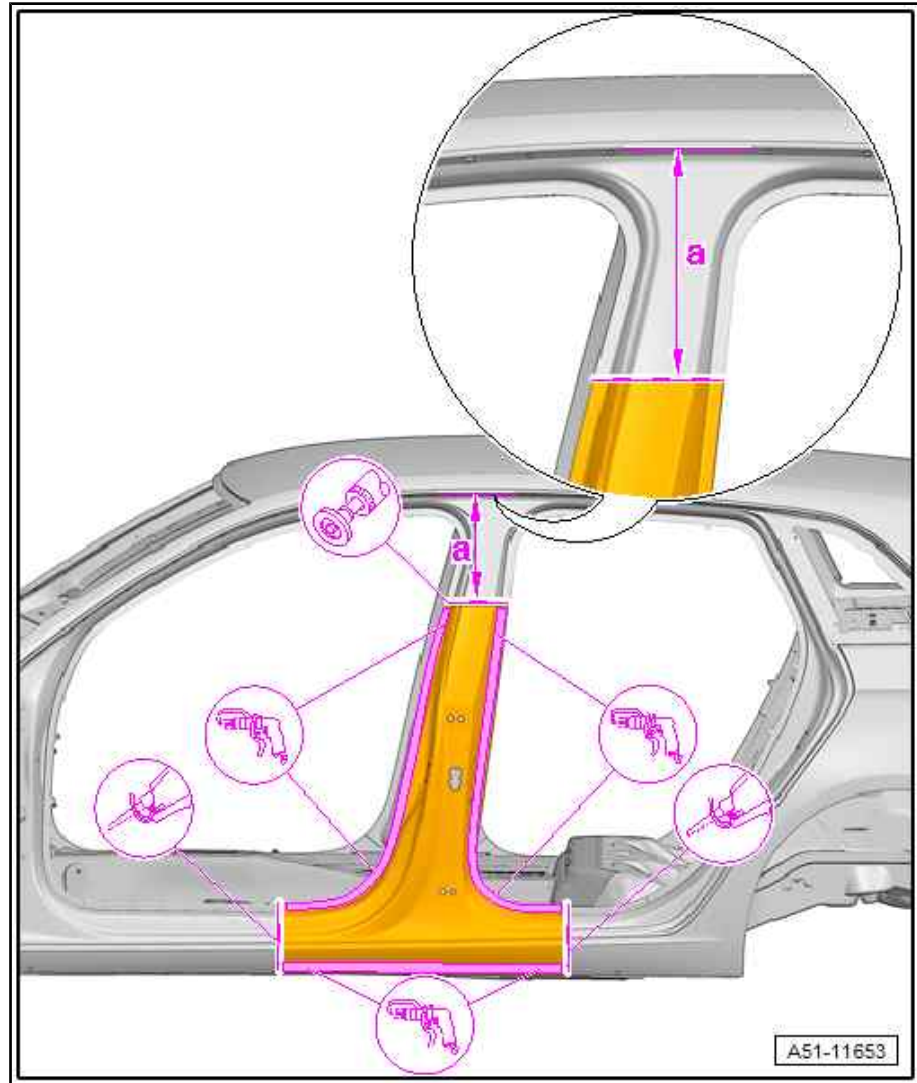
#### Note

*A separating cut is only permissible at the location described.*

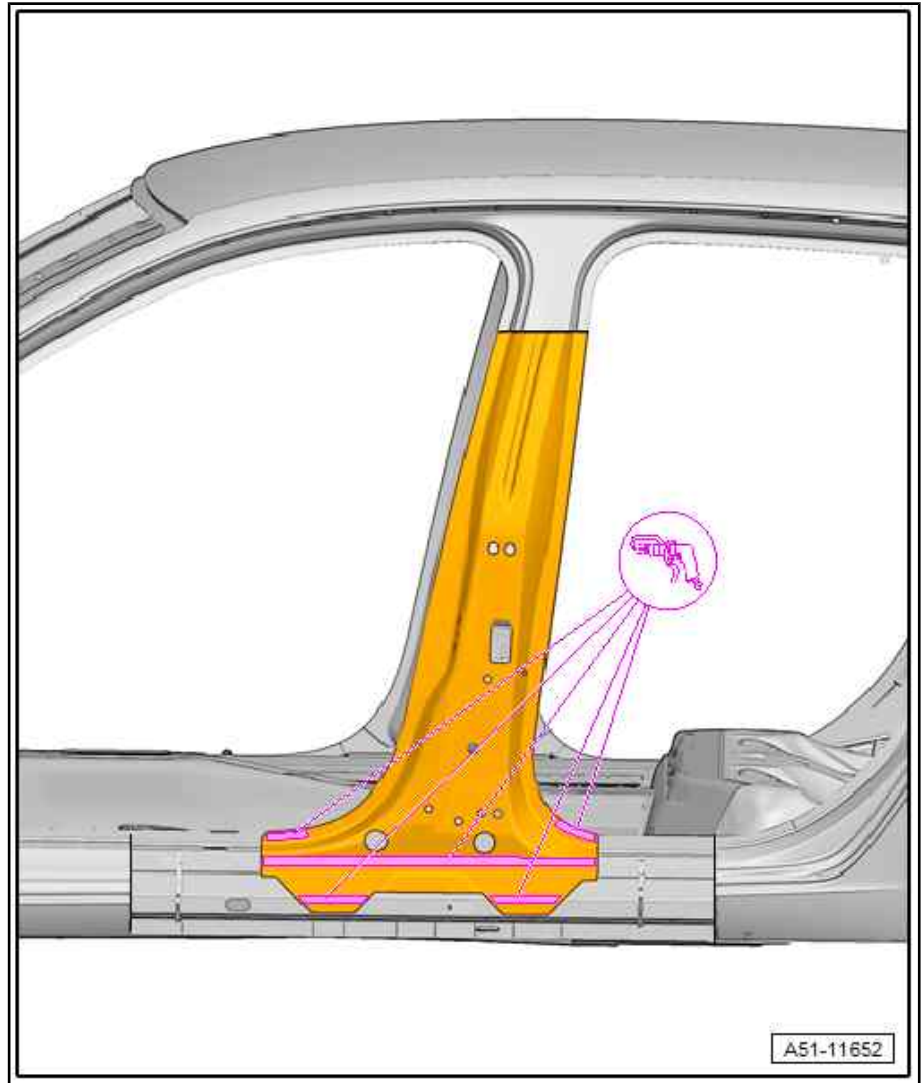
- Mark off separating cut on B-pillar according to dimension -a- and make cut using compact angle grinder .

#### Dimension -a- = 210 mm

- Separate original joint using spot weld breaker .
- Make separating cuts on side member as shown using body saw .



- Separate original joint at B-pillar (bottom)/inner side member using spot weld breaker .

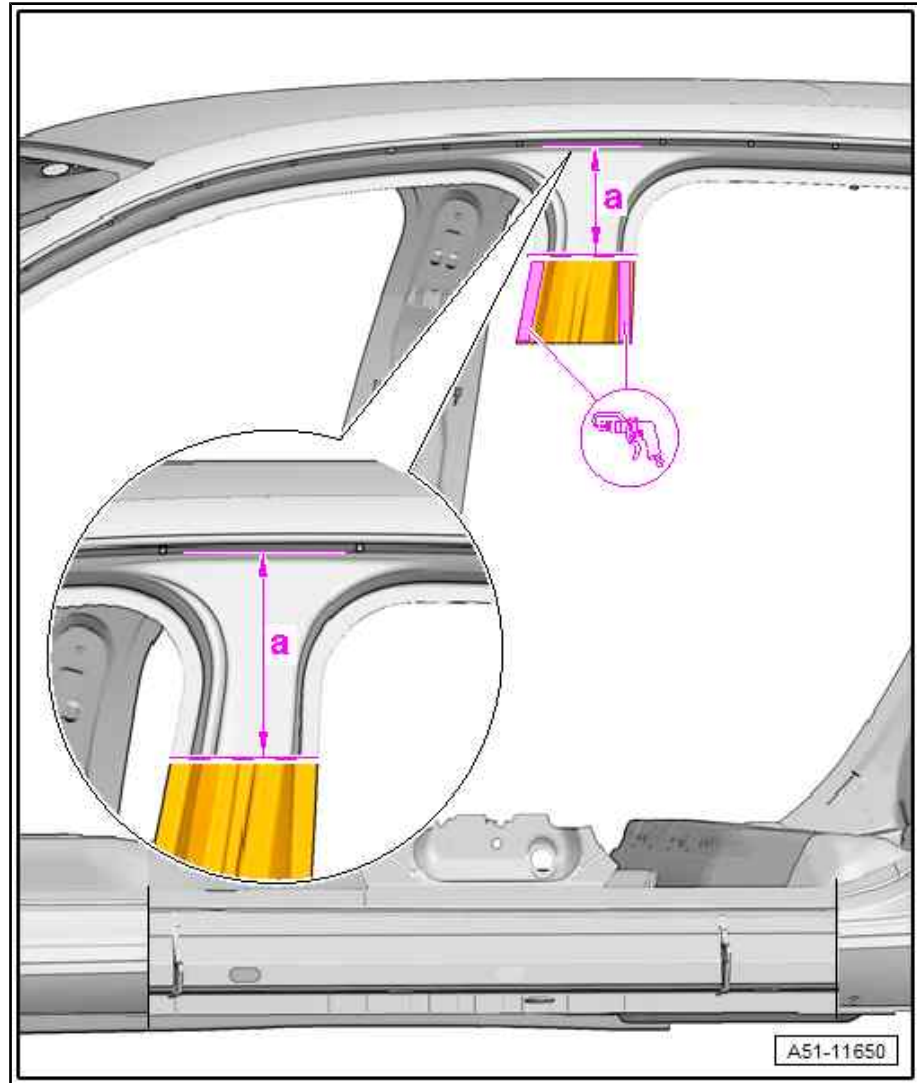


**Note**

*A separating cut is only permissible at the location described.*

- Separate original joint using spot weld breaker .
- Mark off separating cut on outer B-pillar according to dimension -a- and make cut using body saw .

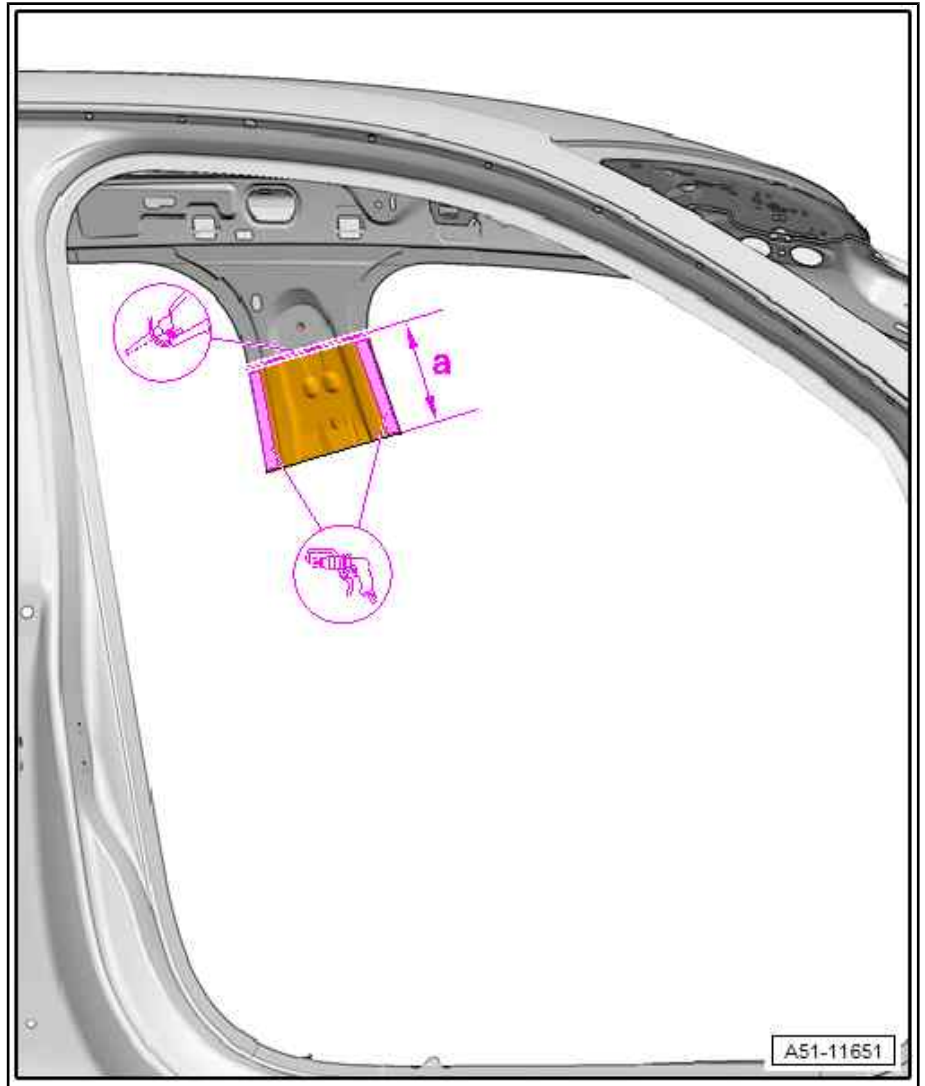
**Dimension -a- = 100 mm**



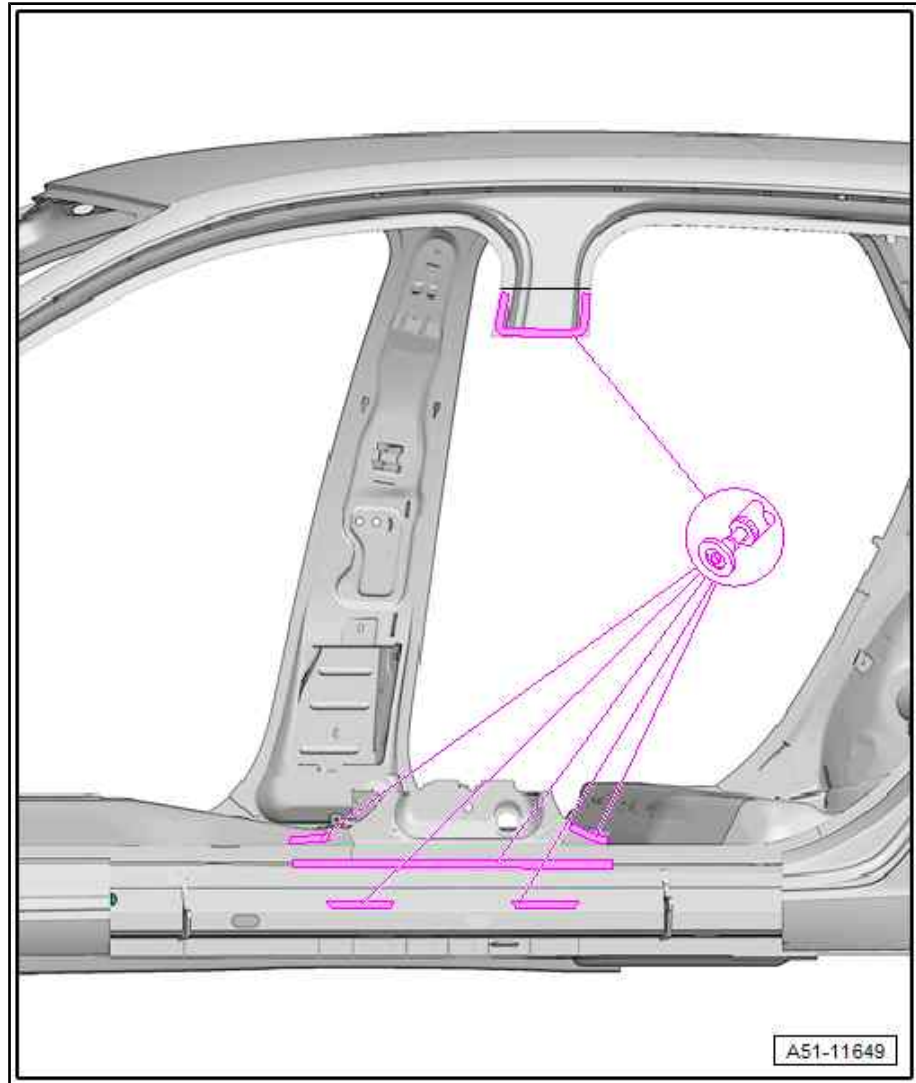
- Mark off separating cut on B-pillar closure plate according to dimension -a- and make cut using body saw .

**Dimension -a- = 70 mm**

- Separate original joint at inner web plate using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind area around separating cut down to bare metal on inside and outside.

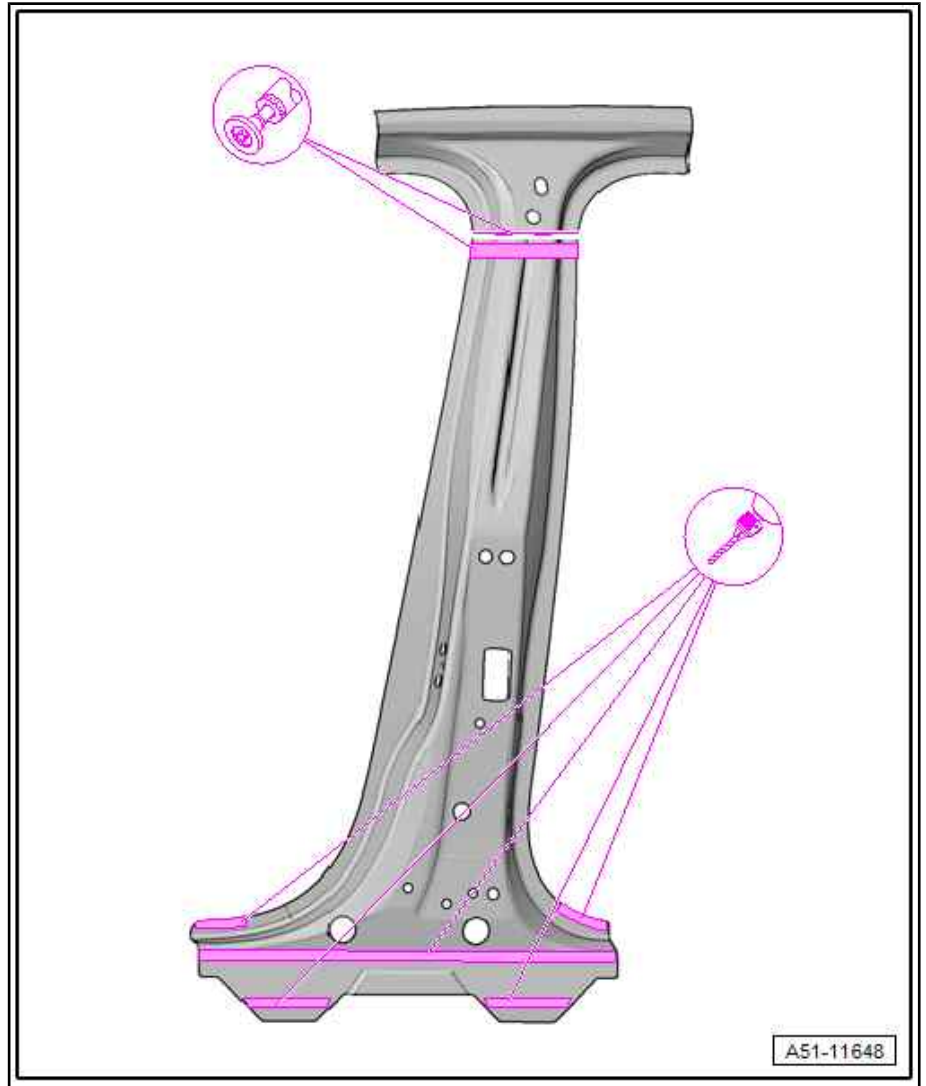


### Replacement parts

- ◆ Inner B-pillar
- ◆ B-pillar reinforcement
- ◆ Closure plate

### Preparing new part

- Transfer separating cut to new part and cut off using compact angle grinder .
- Grind area around separating cut down to bare metal on inside and outside using compact angle grinder .
- Drill holes for SG plug weld seam using drill as shown (8 mm Ø).
- Prepare flanges on new part for welding.



- Transfer separating cut to new part and cut off using compact angle grinder .
- Prepare flanges on new part for welding.
- Grind welding surfaces down to bare metal.

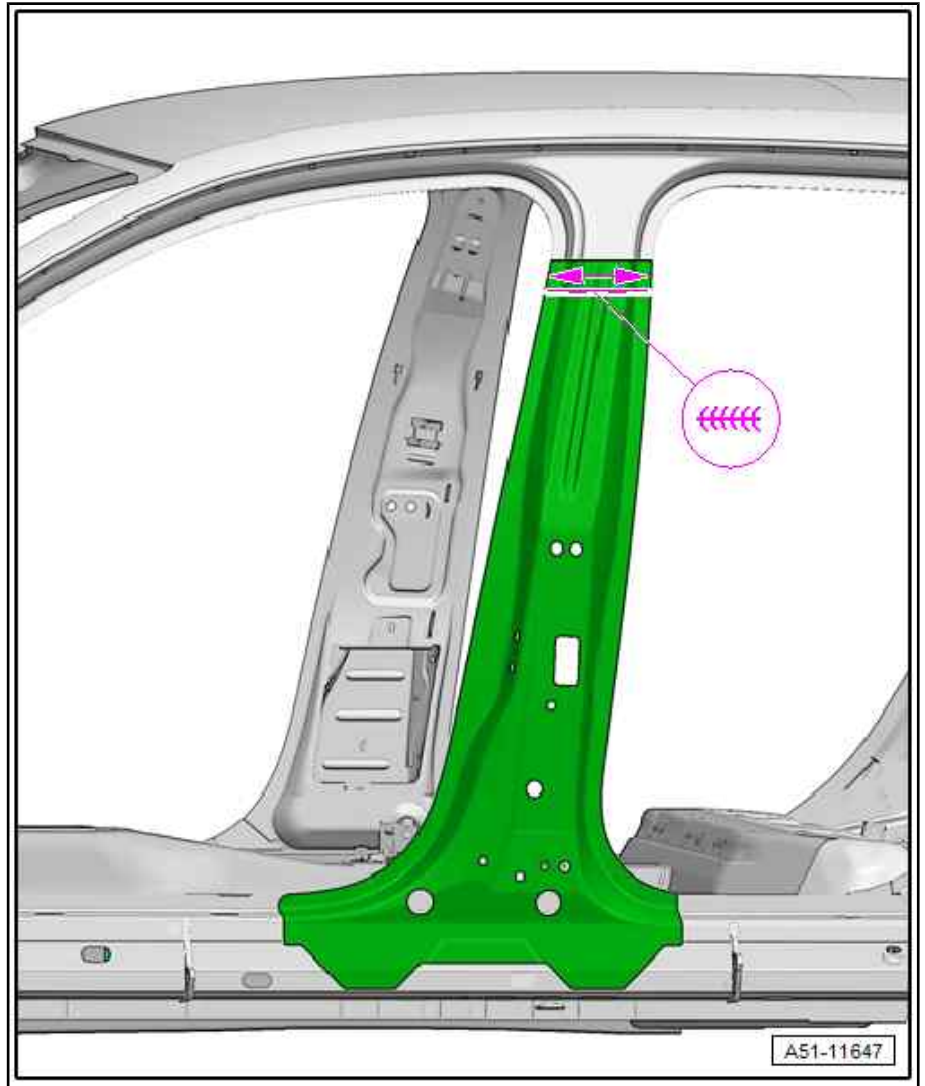


**!** NOTICE

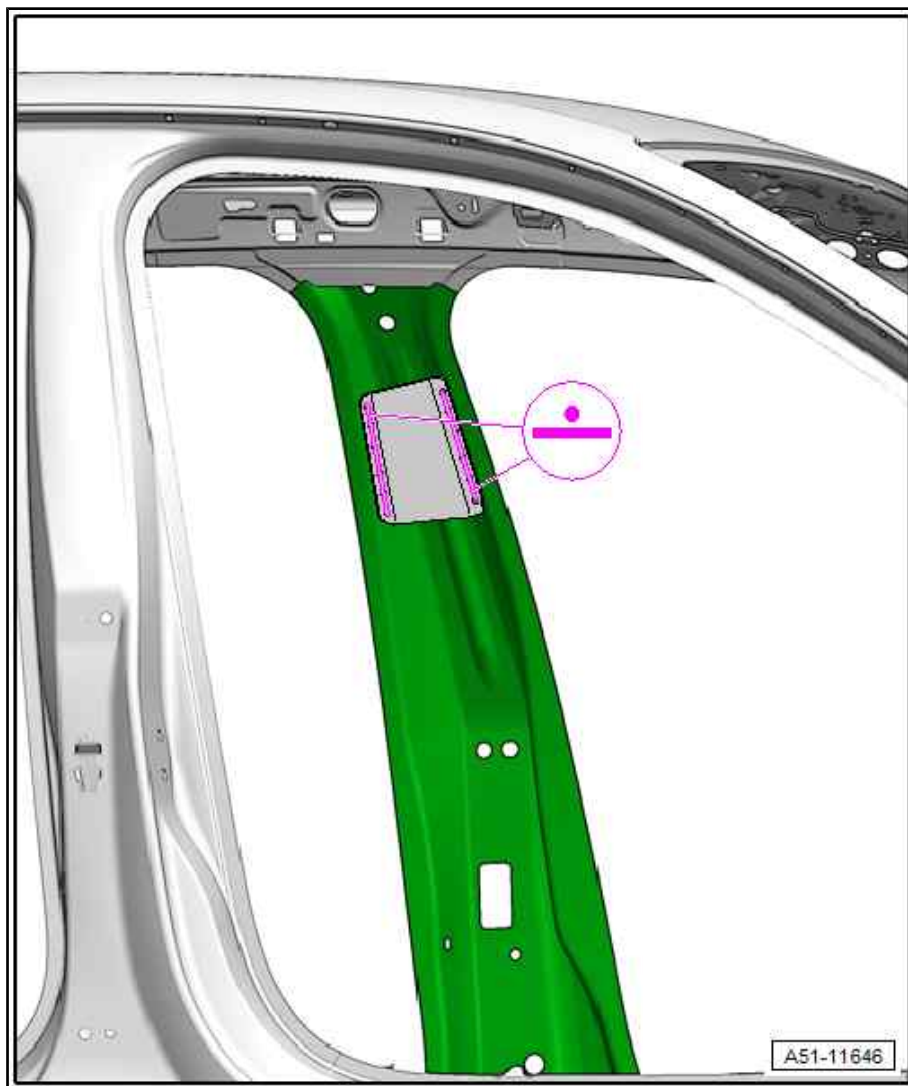
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

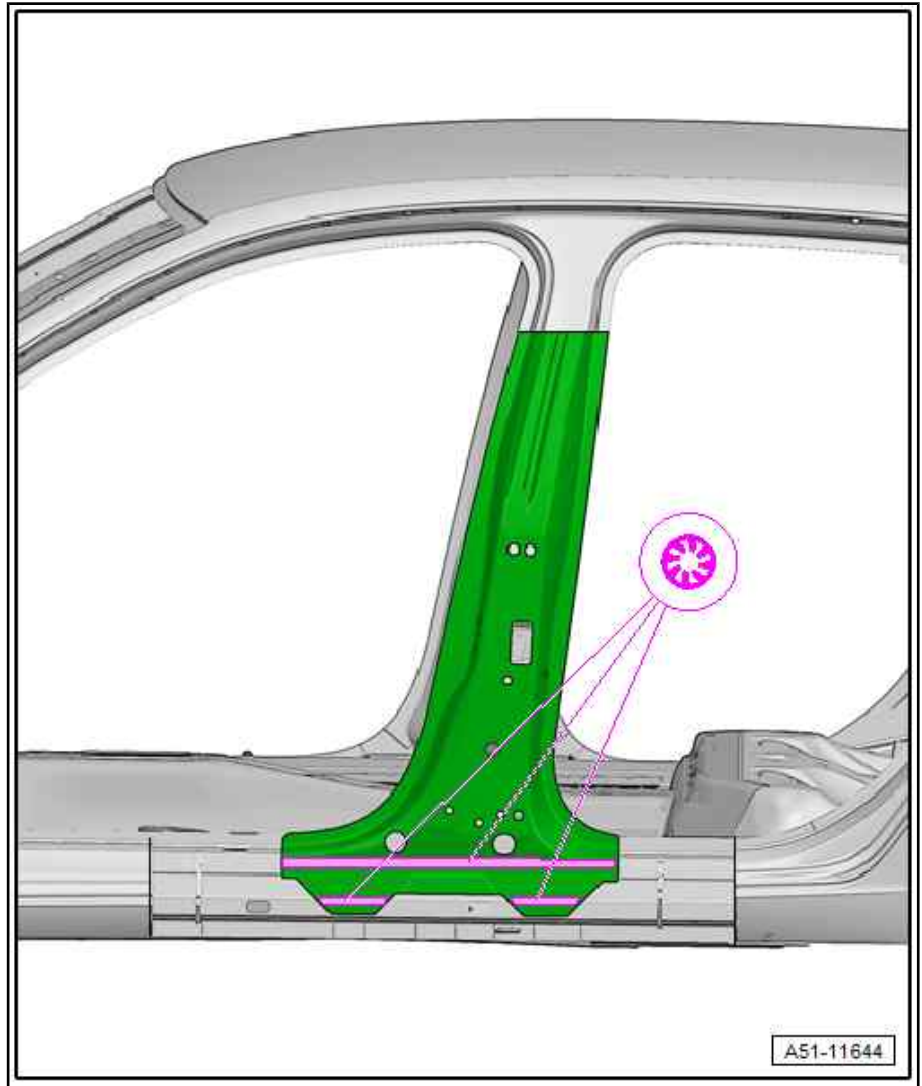
- To avoid distortion, only tack weld inner B-pillar initially using shielded arc welding equipment .
- Then weld in inner B-pillar from inside to outside using shielded arc welding equipment : SG continuous seam.



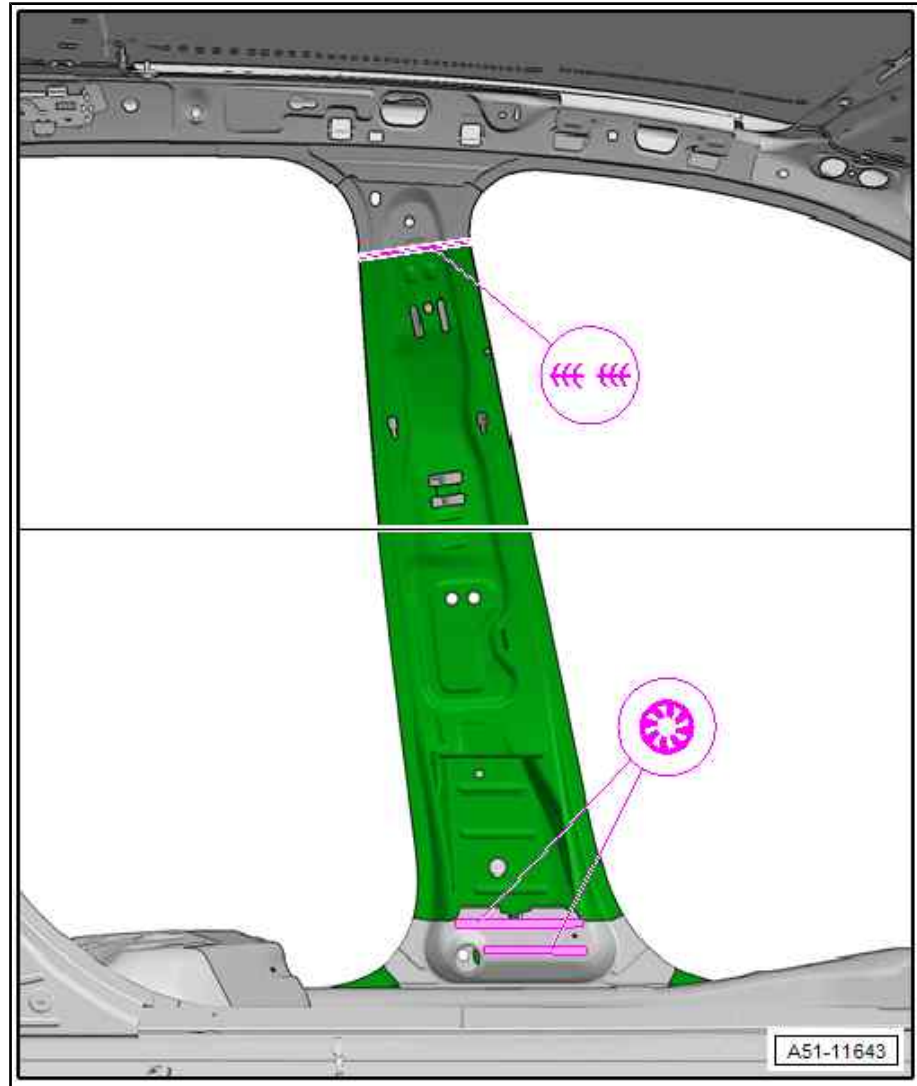
- Additionally weld inner B-pillar reinforcement using resistance spot welder : RP spot weld seam (6x spot welds left and right).



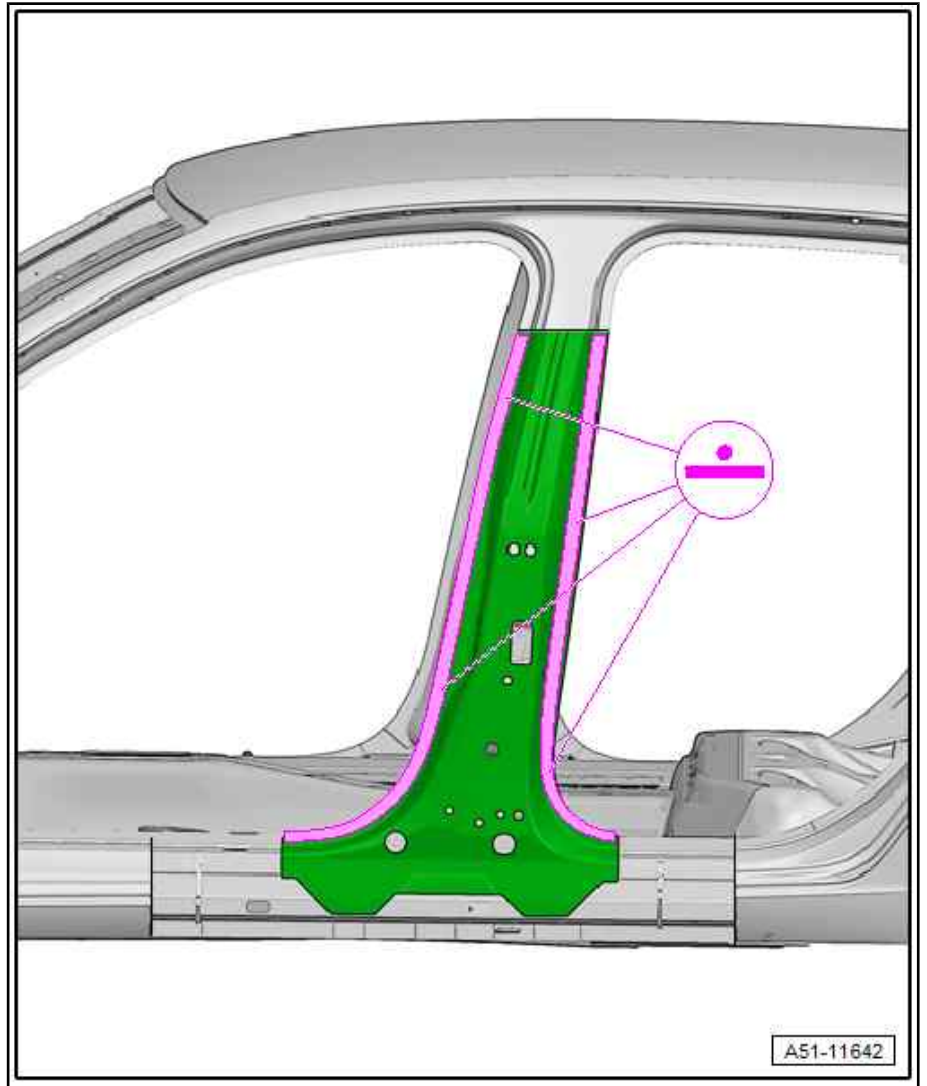
- Weld in lower outer B-pillar using shielded arc welding equipment : SG plug weld seam.



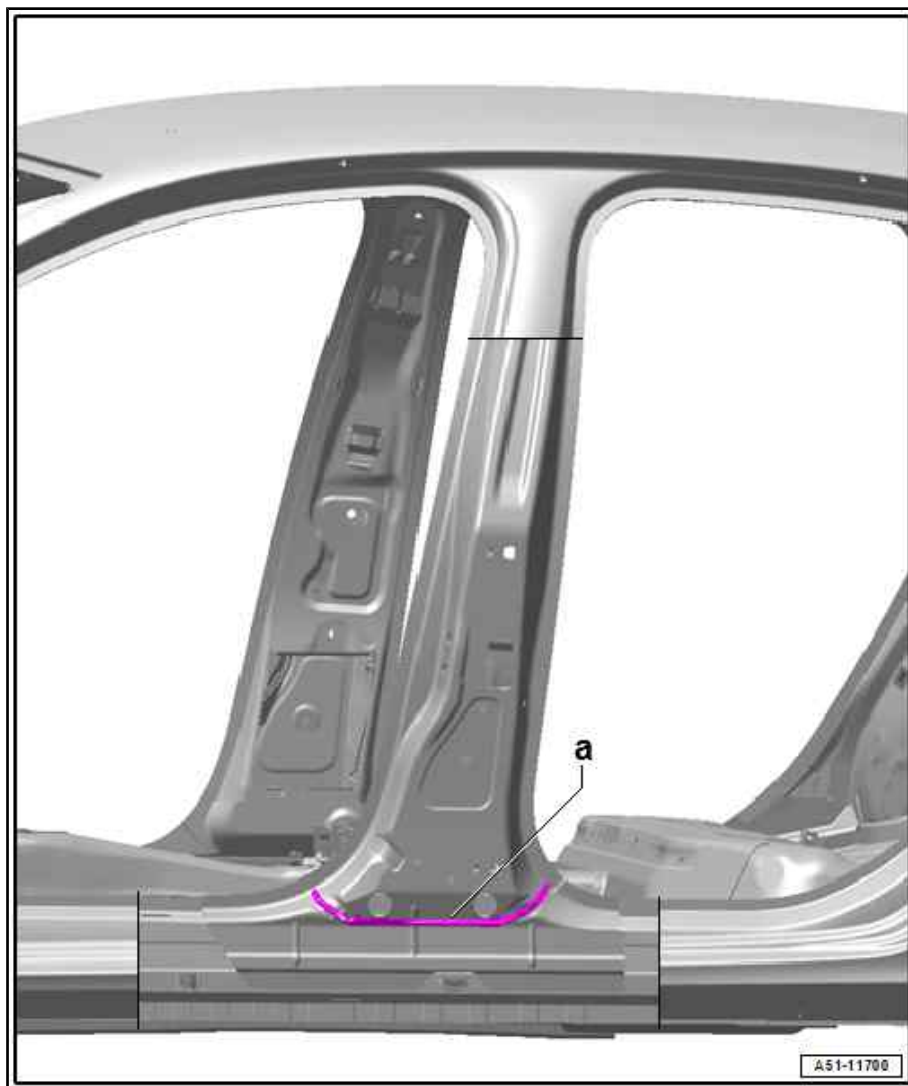
- Weld in lower inner B-pillar using shielded arc welding equipment : SG plug weld seam.
- Weld in upper inner B-pillar at separating cut using shielded arc welding equipment : SG continuous seam (staggered - with gaps).



- Weld in B-pillar using resistance spot welder : RP spot weld seam (distance between spot welds = 65 mm).



Inserting moulded foam insert -a- ⇒ [page 18](#)



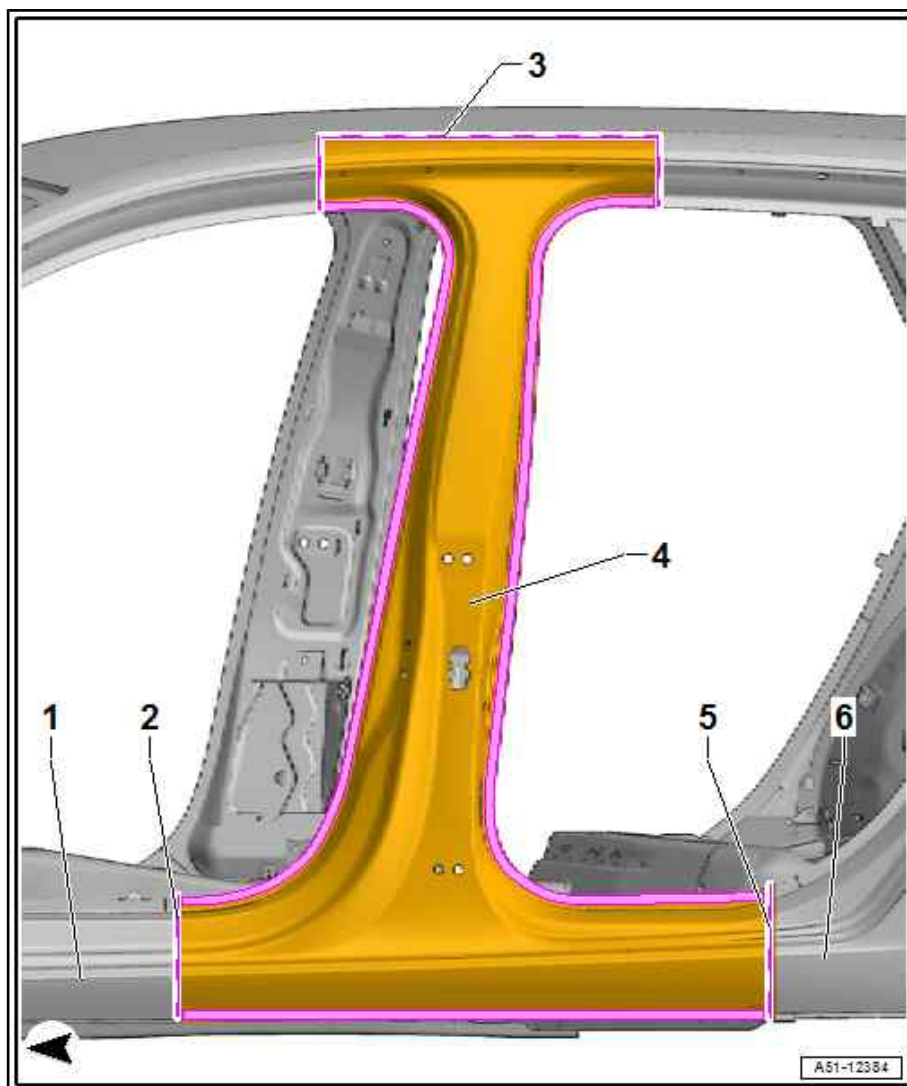
- Renew outer B-pillar ⇒ [page 363](#) .



RO: 51425552

## 25 Inner B-pillar - Partial renewal (e-tron vehicles only)

- 1 - Front side member
- 2 - Separating cut in side member (front)
- 3 - Separating cut in B-pillar
- 4 - Outer B-pillar
- 5 - Rear side member
- 6 - Separating cut in side member (rear)



### 25.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker
- ◆ Mechanical door tensioner



One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .



## 25.2 Procedure

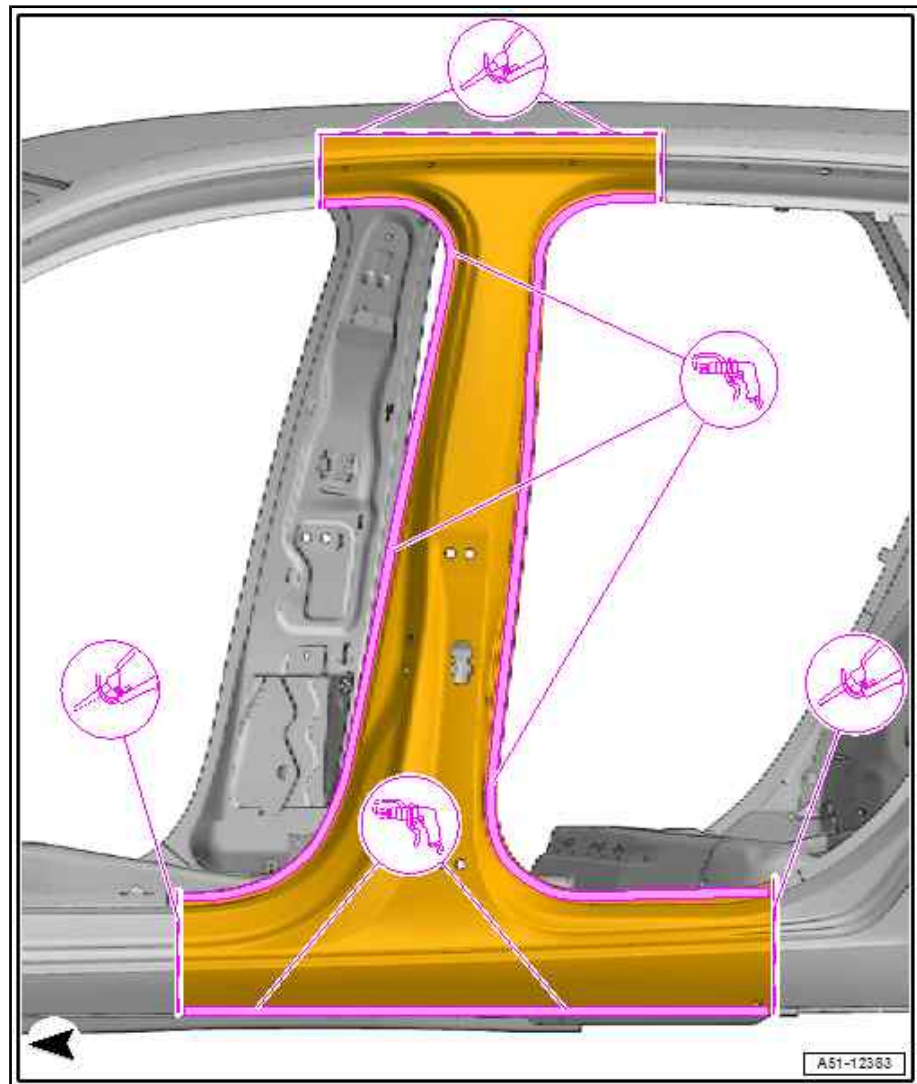
### Cutting locations



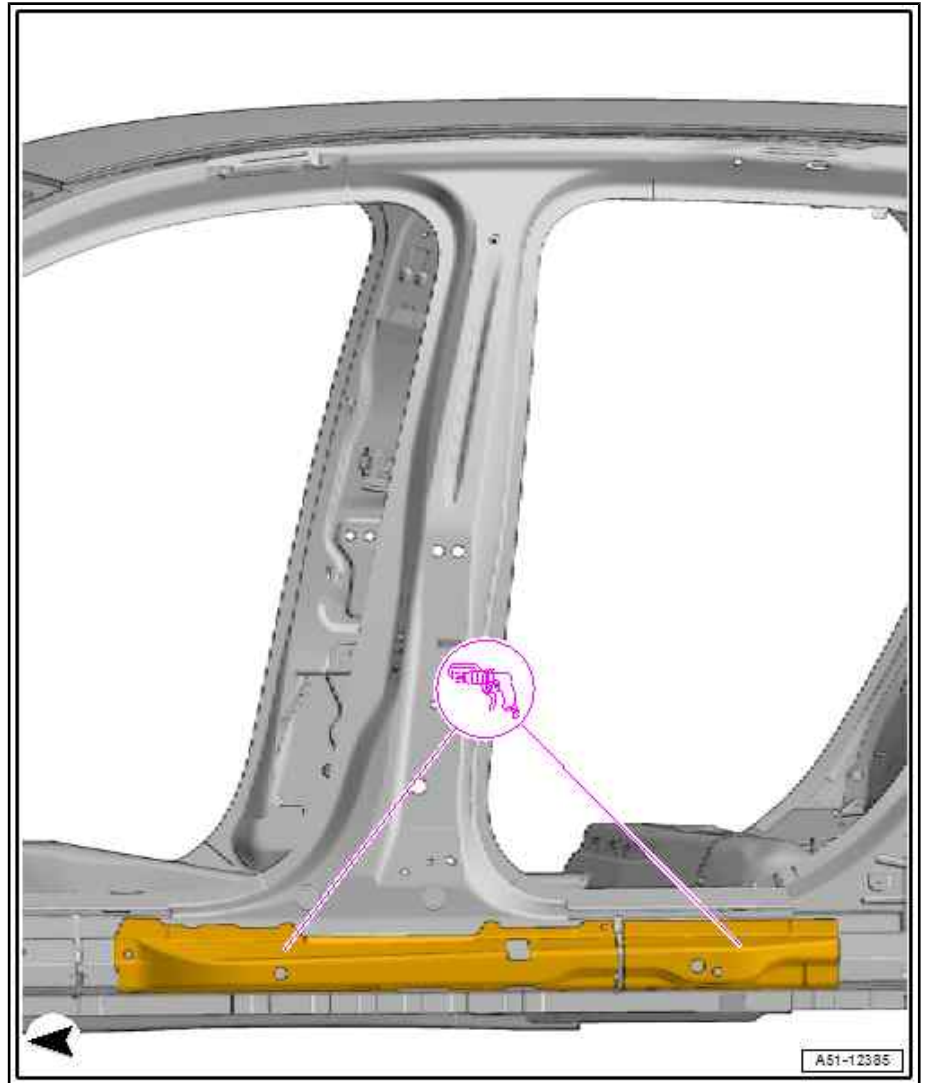
#### Note

*Before cutting out the inner B-pillar, insert the mechanical door tensioners - V.A.G 1438- in the door openings to brace the roof in position.*

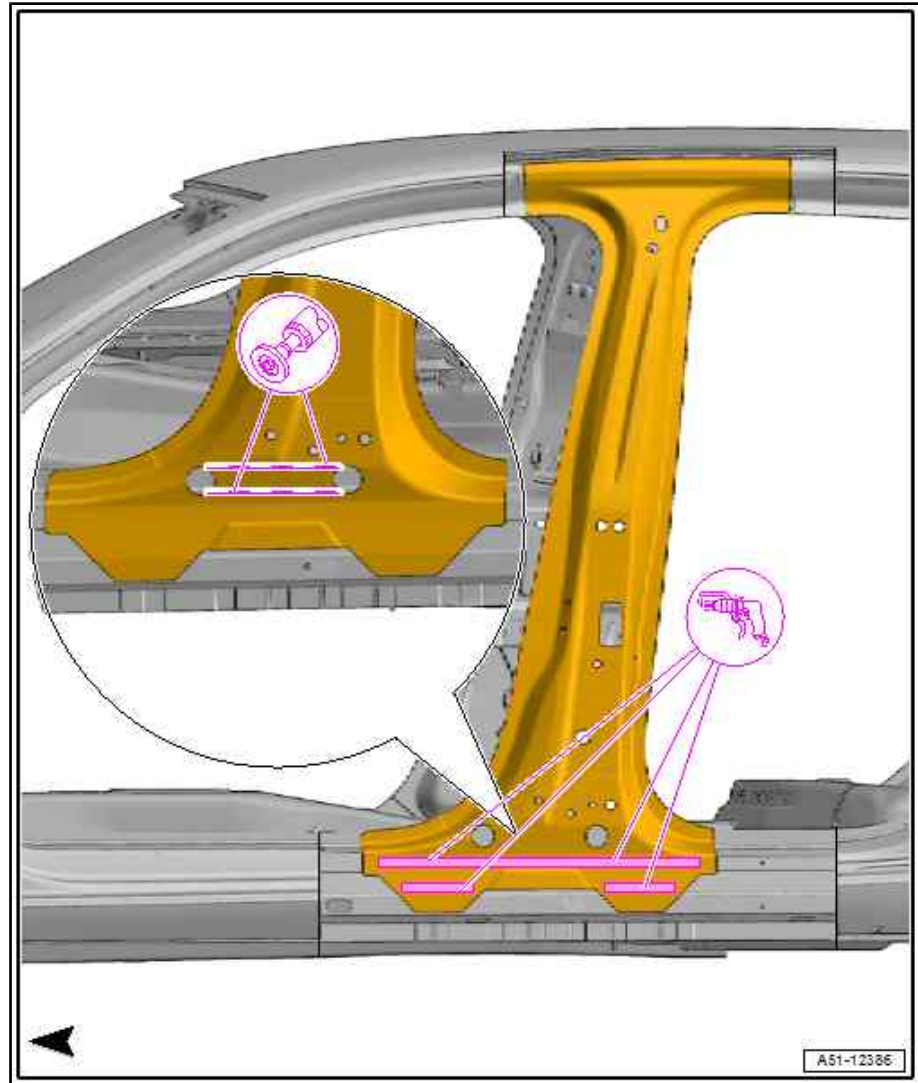
- Separate original joint using spot weld breaker .
- Make separating cuts as shown using body saw .



- Separate reinforcement at inner side member using spot weld breaker .



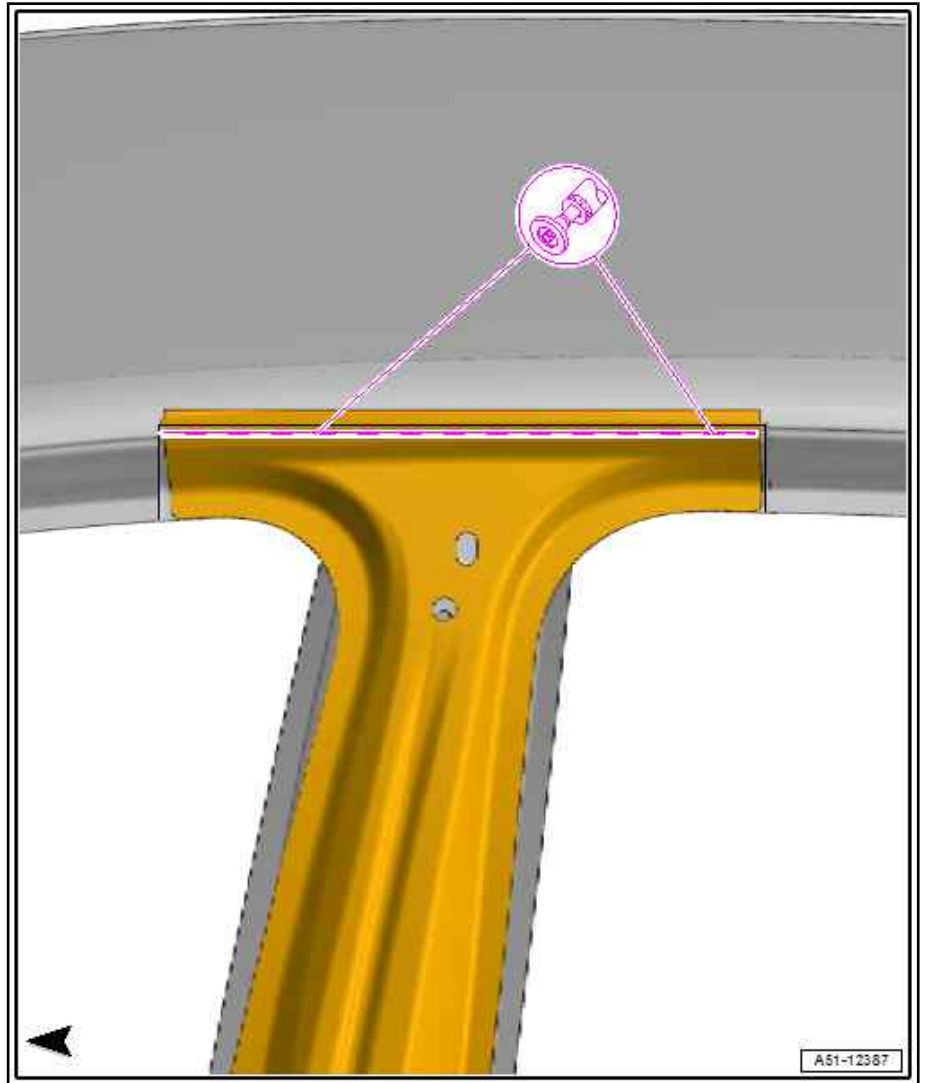
- Separate original joint at B-pillar (bottom)/inner side member using spot weld breaker .
- Make separating cut as shown using compact angle grinder so that spot welds located behind can be removed.



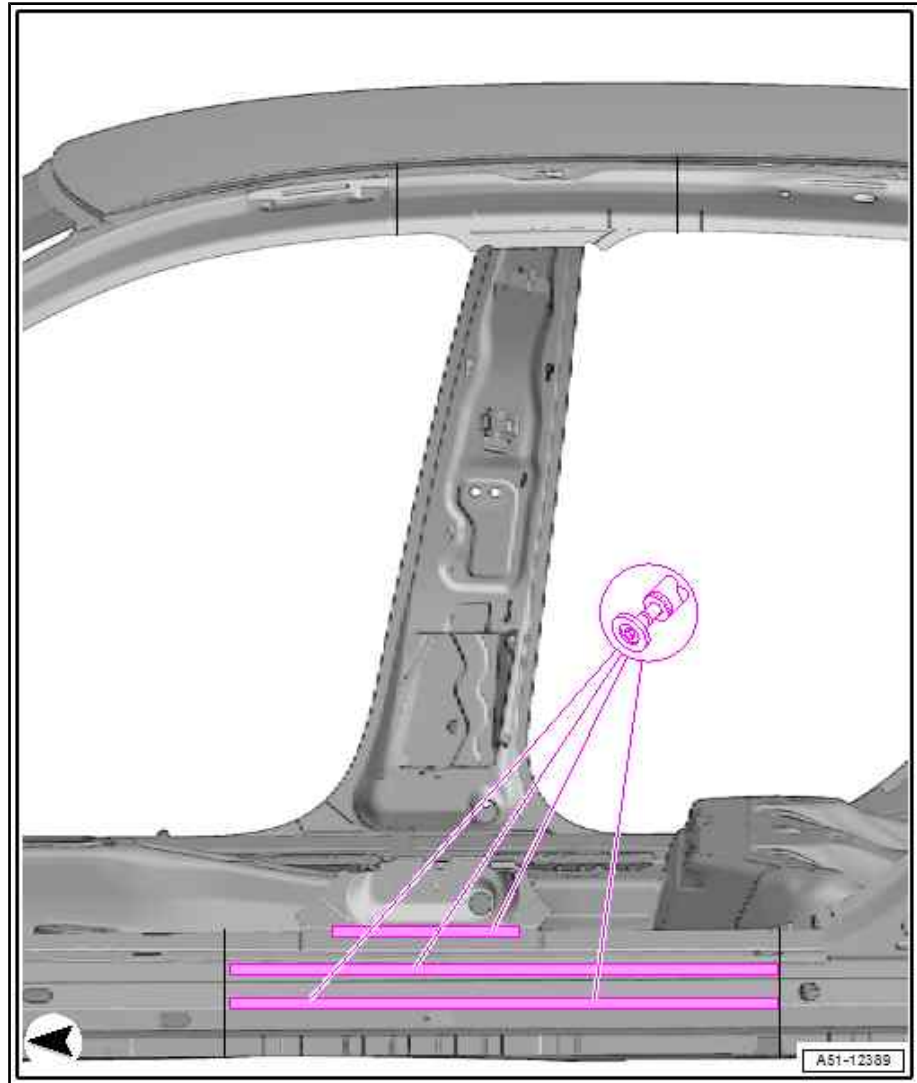
**Note**

*A separating cut is only permissible at the location described.*

- Make separating cut using compact angle grinder .



- Remove remaining material using compact angle grinder .

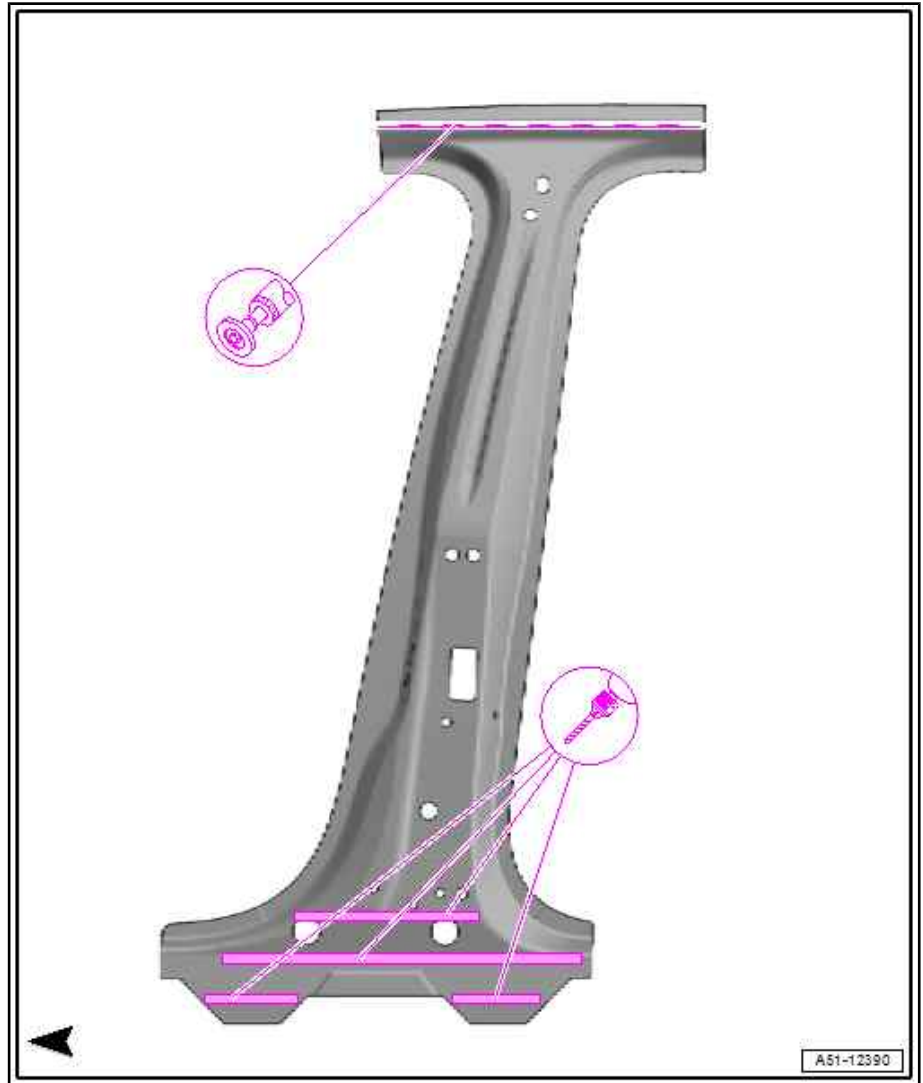


### Replacement parts

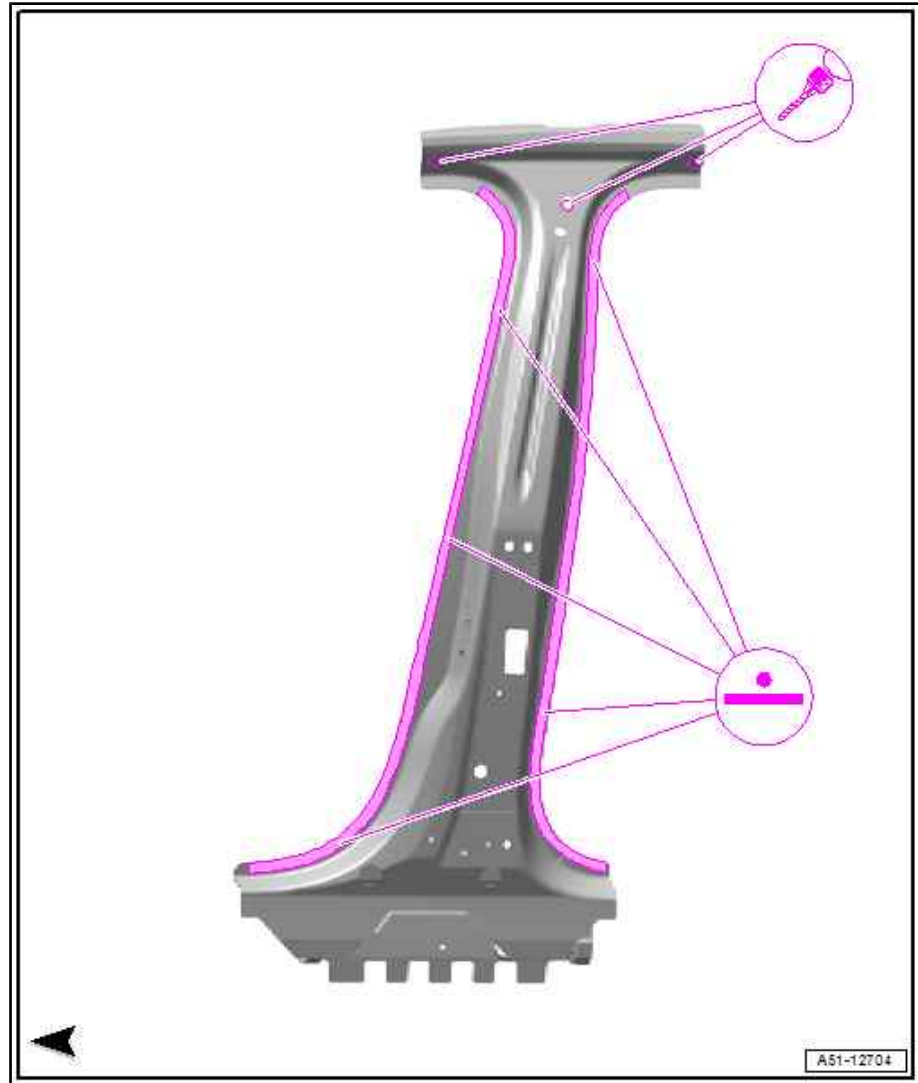
- ◆ Inner B-pillar
- ◆ Closure plate

### Preparing new part

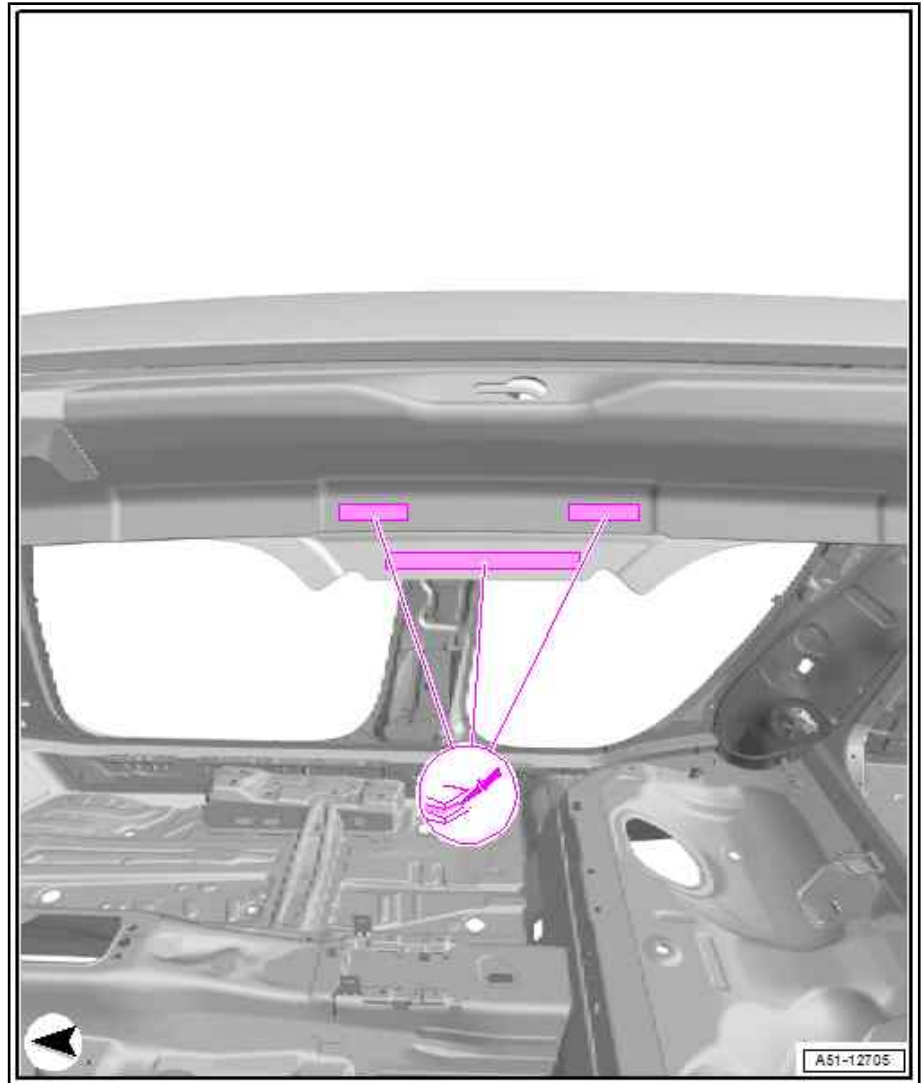
- Transfer separating cut to new part and cut off using compact angle grinder .
- Grind area around separating cut down to bare metal on inside and outside using compact angle grinder .
- Drill holes for SG plug weld seam using drill as shown (8 mm  $\varnothing$ ).
- Prepare flanges on new part for welding.



- Drill holes for SG plug weld seam using drill as shown (8 mm  $\varnothing$ ).
- Weld in inner B-pillar using resistance spot welder : RP spot weld seam (distance between spot welds = 60 mm).



- Apply 2-component epoxy adhesive - DA 001 730 A2- : 2 adhesive beads of approx. 4 mm Ø.

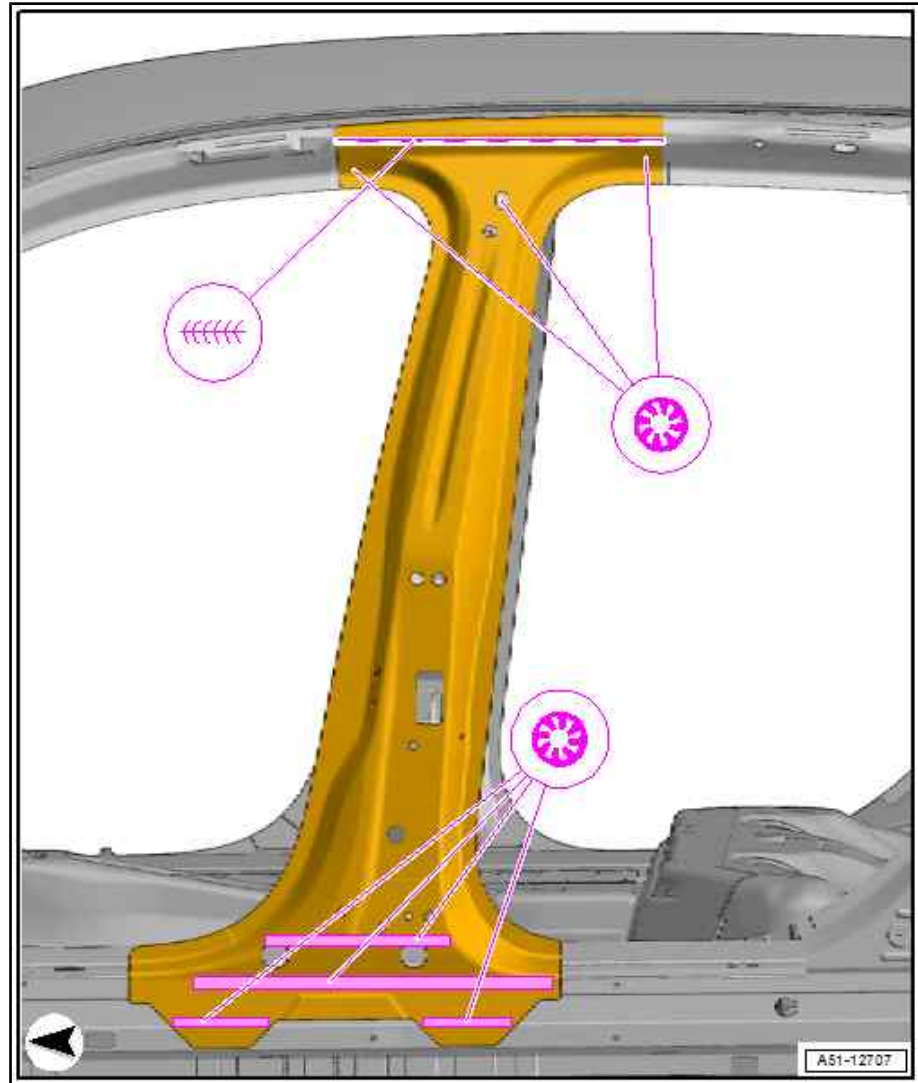


**!** NOTICE

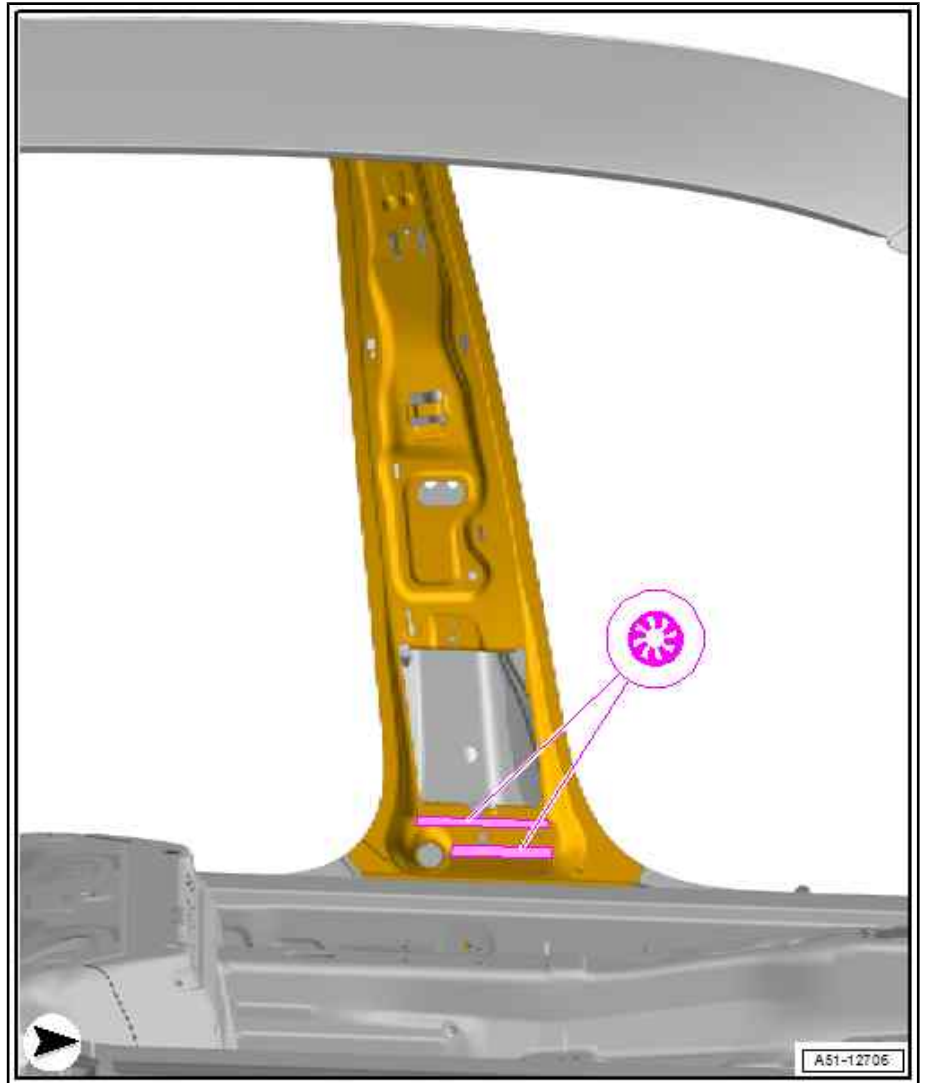
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

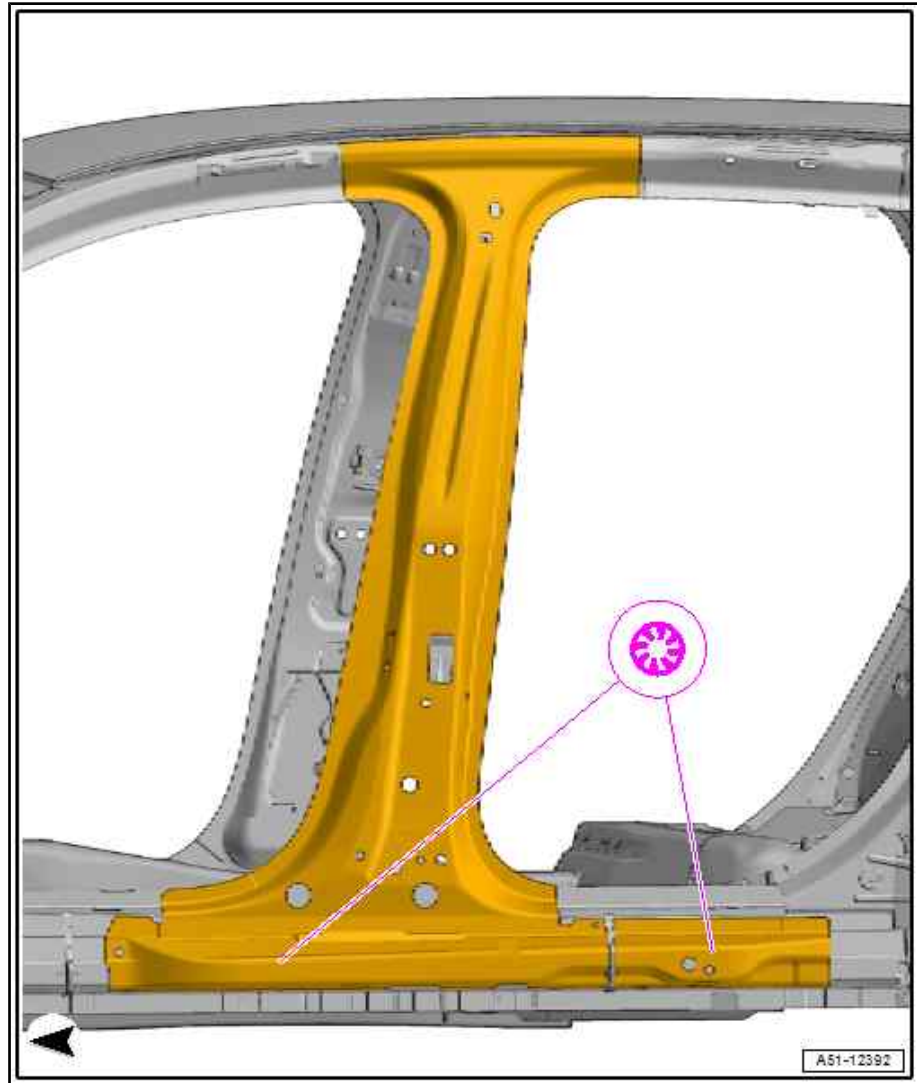
- Weld in upper B-pillar at separating cut using shielded arc welding equipment : SG continuous seam.
- Weld in B-pillar using shielded arc welding equipment : SG plug weld seam.



- Weld in lower inner B-pillar using shielded arc welding equipment : SG plug weld seam.



- Weld in reinforcement using shielded arc welding equipment :  
SG plug weld seam.



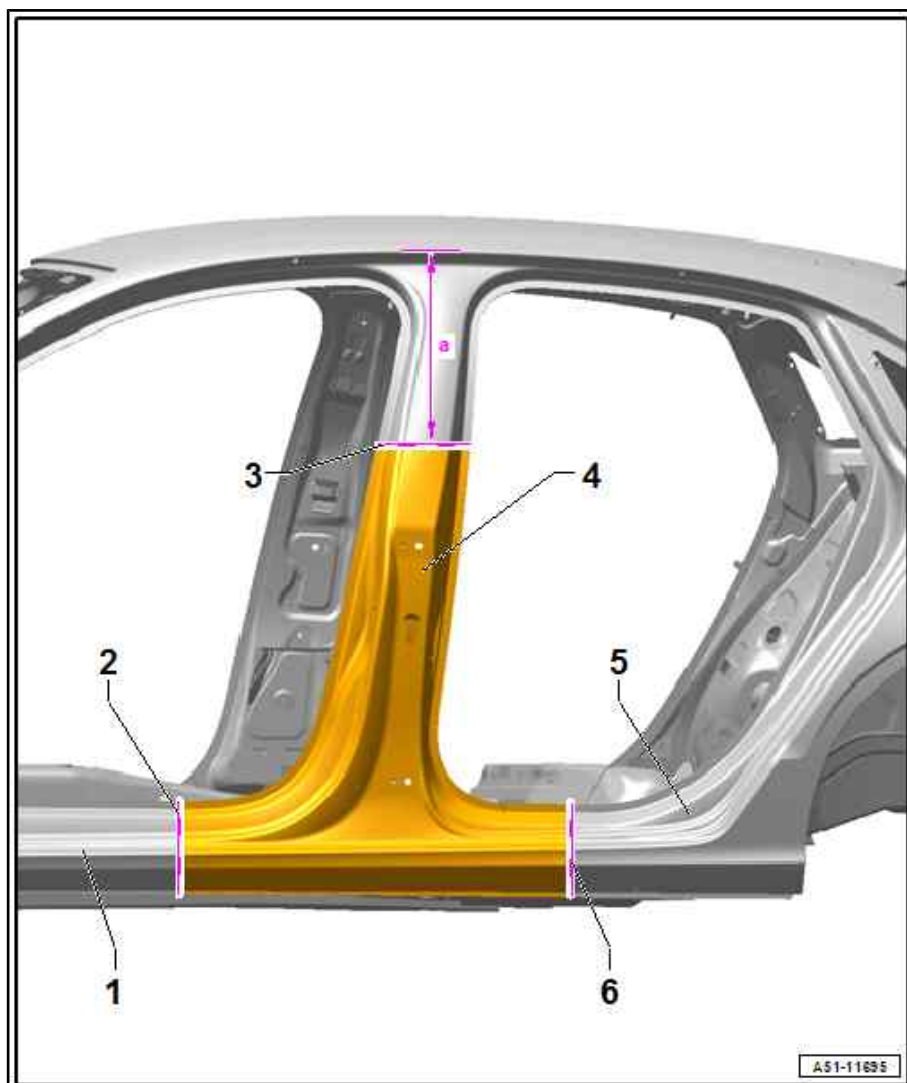
- Renew outer B-pillar ⇒ [page 363](#) .



RO: 51425552

## 26 Inner B-pillar - Partial renewal (Saloon)

- 1 - Front side member
- 2 - Separating cut in side member (front)
- 3 - Separating cut in B-pillar
- Dimension -a- = 260 mm
- 4 - Outer B-pillar
- 5 - Rear side member
- 6 - Separating cut in side member (rear)



### 26.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker

#### ! NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .



## 26.2 Procedure

### Cutting locations

Permitted separating cuts on complete side panel ⇒ [page 125](#) .



#### Note

*Before cutting out the inner B-pillar, insert the mechanical door tensioners - V.A.G 1438- in the door openings to brace the roof in position.*



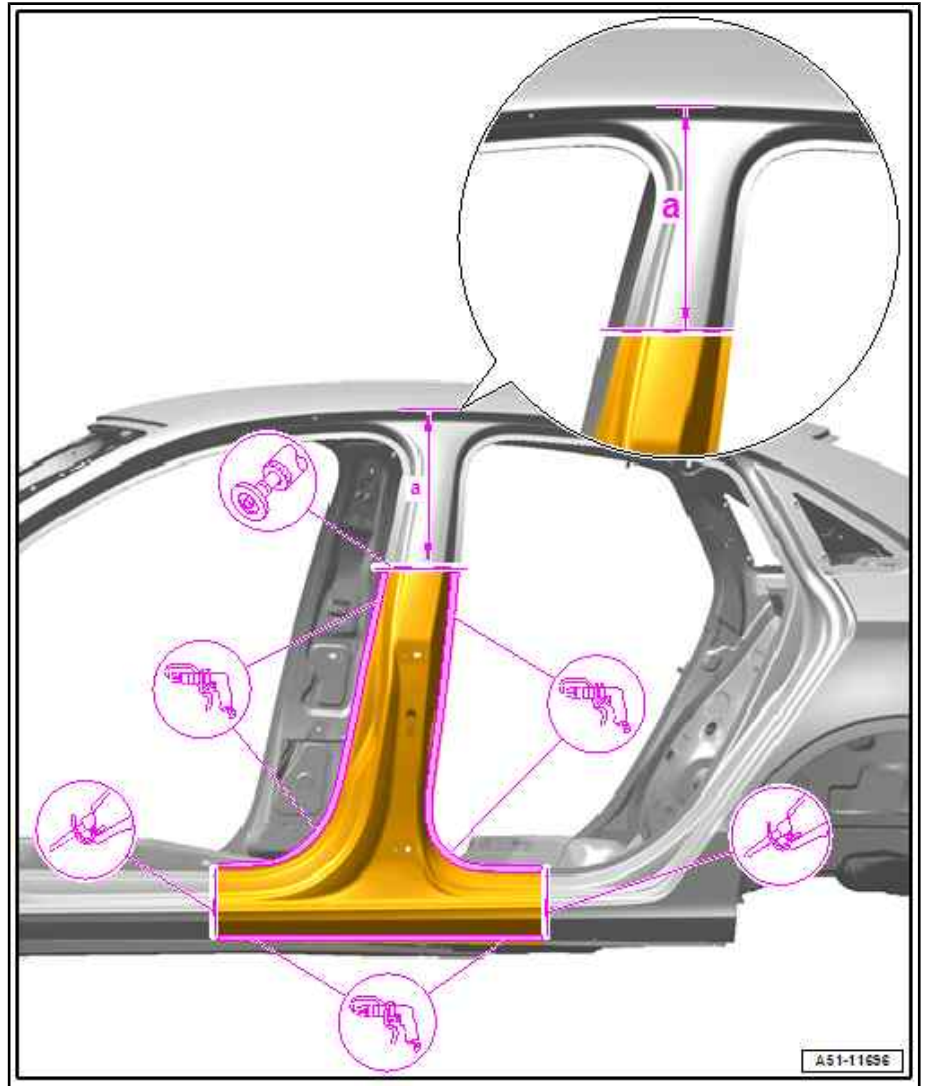
#### Note

*A separating cut is only permissible at the location described.*

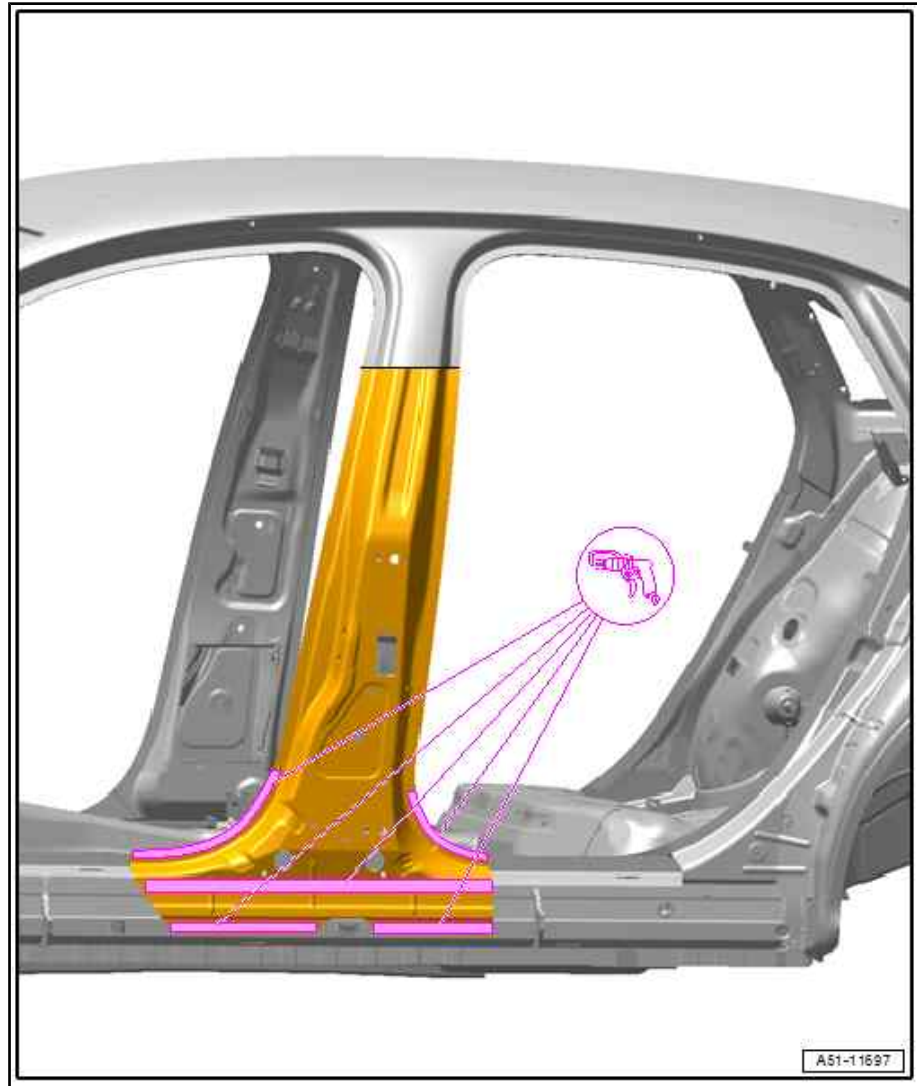
- Mark off separating cut on B-pillar according to dimension -a- and make cut using compact angle grinder .

**Dimension -a- = 260 mm**

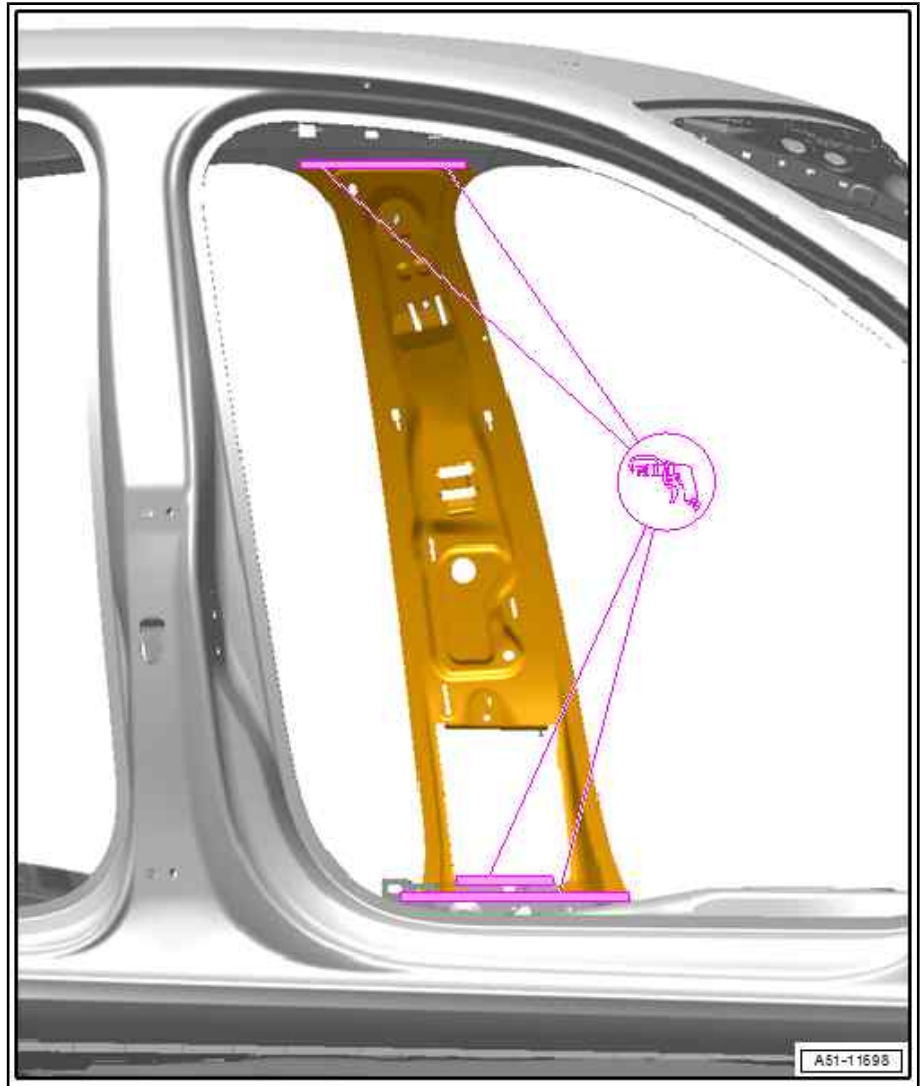
- Separate original joint using spot weld breaker .
- Make separating cuts on side member as shown using body saw .



- Separate original joint at B-pillar (bottom)/inner side member using spot weld breaker .



- Separate original joint at inner closure plate using spot weld breaker .

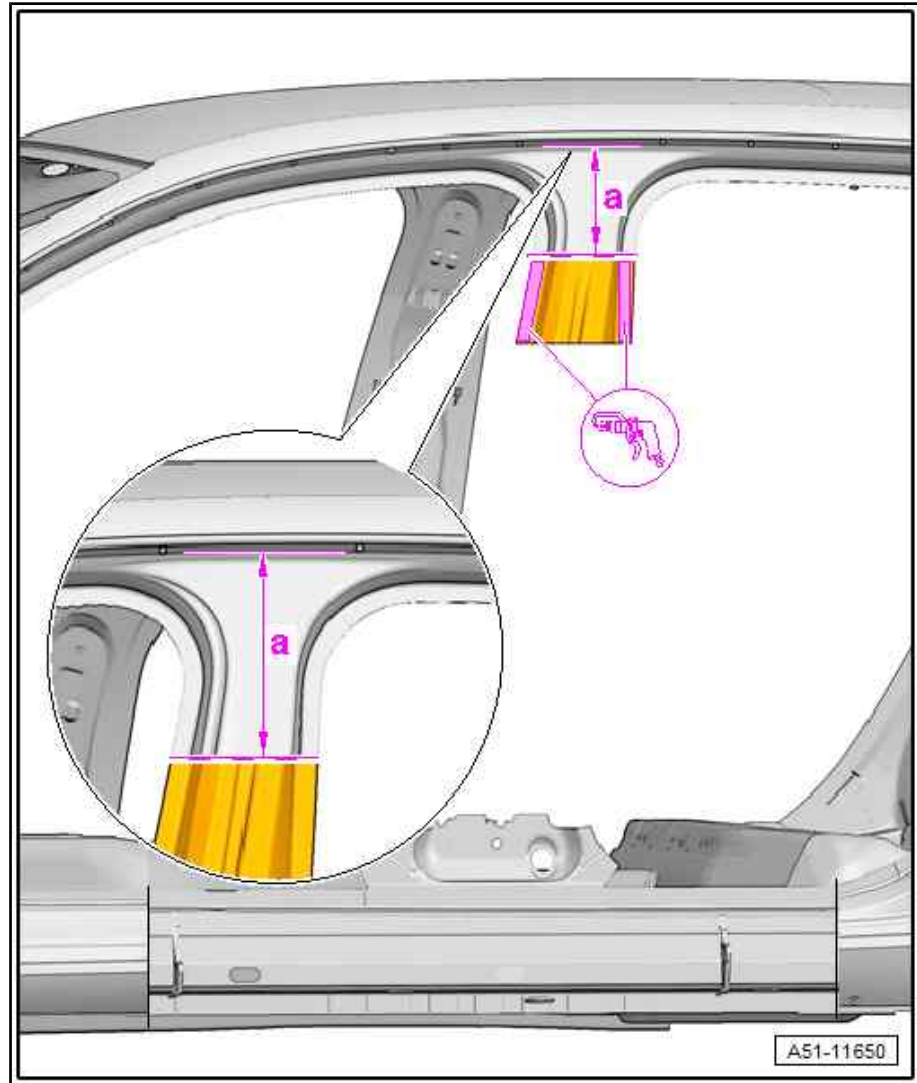


**i** Note

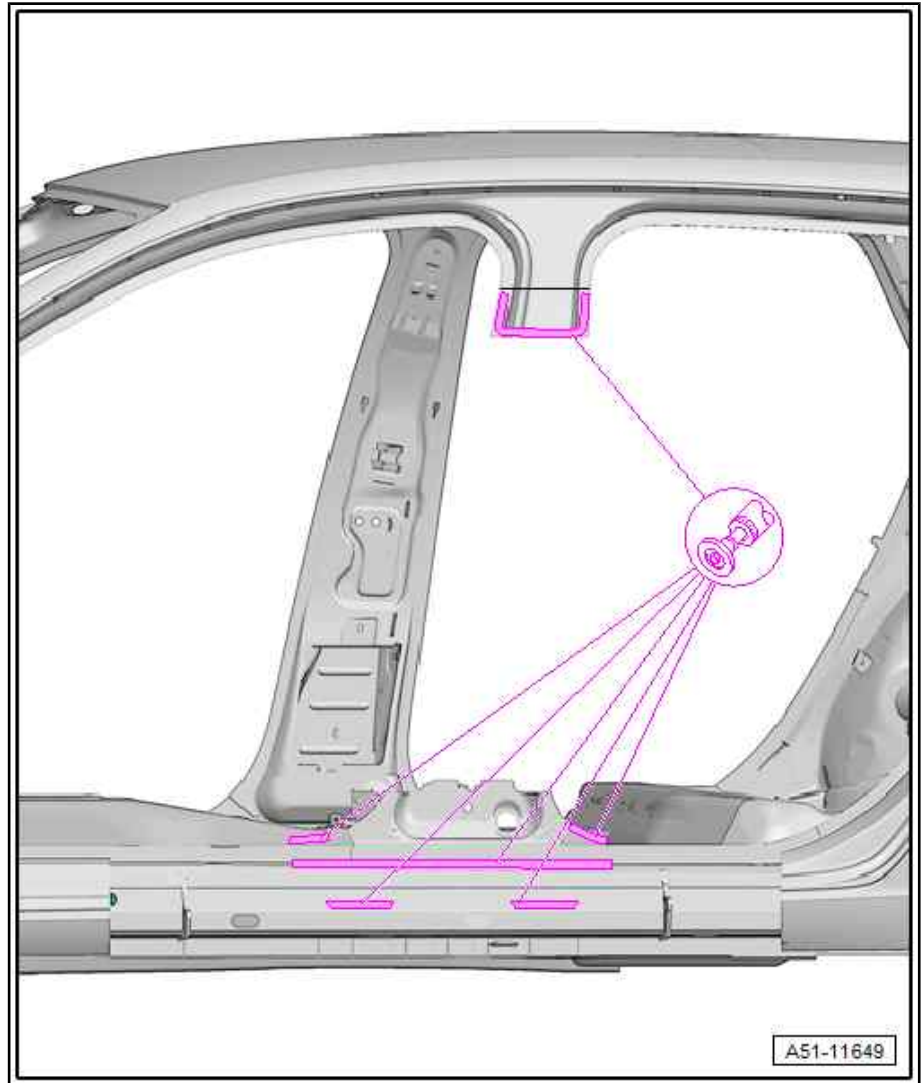
*A separating cut is only permissible at the location described.*

- Separate original joint using spot weld breaker .
- Mark off separating cut on outer B-pillar according to dimension -a- and make cut using body saw .

**Dimension -a- = 90 mm**



- Remove remaining material using compact angle grinder .
- Grind area around separating cut down to bare metal on inside and outside.

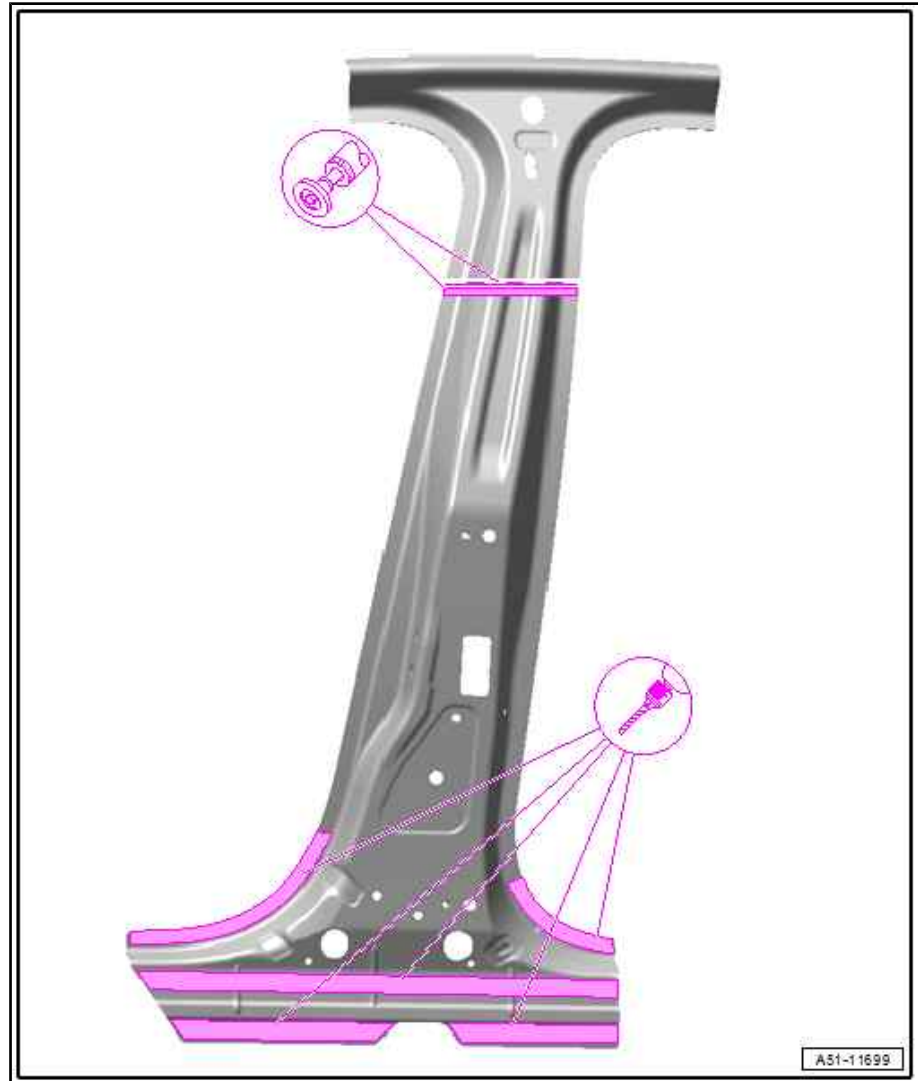


### Replacement parts

- ◆ Inner B-pillar
- ◆ B-pillar reinforcement
- ◆ Closure plate

### Preparing new part

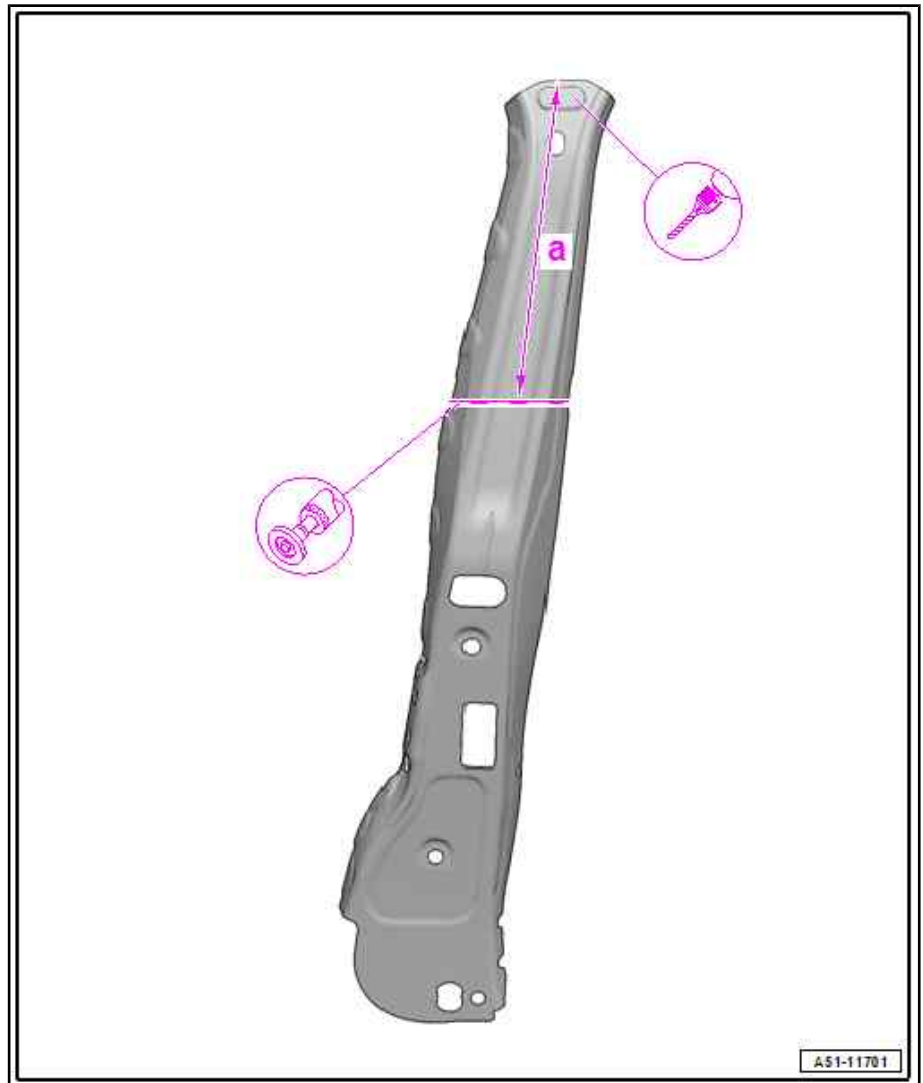
- Transfer separating cut to new part and cut off using compact angle grinder .
- Grind area around separating cut down to bare metal on inside and outside using compact angle grinder .
- Drill holes for SG plug weld seam using drill as shown (8 mm  $\varnothing$ ).
- Prepare flanges on new part for welding.



- Mark off backing plate for B-pillar according to dimension -a- and make cut using compact angle grinder .

**Dimension -a- = 275 mm**

- Drill hole for SG plug weld seam, 8 mm  $\varnothing$  using drill .
- Grind welding surfaces down to bare metal.

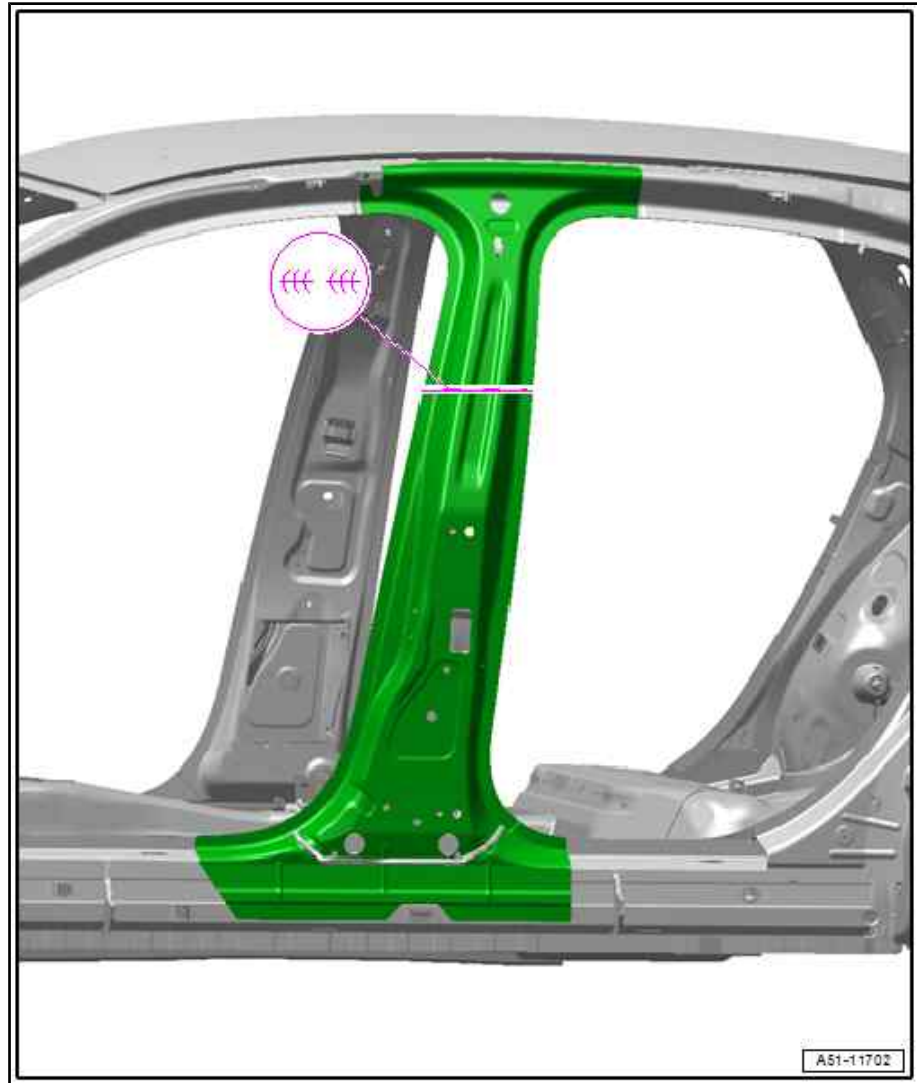


**!** NOTICE

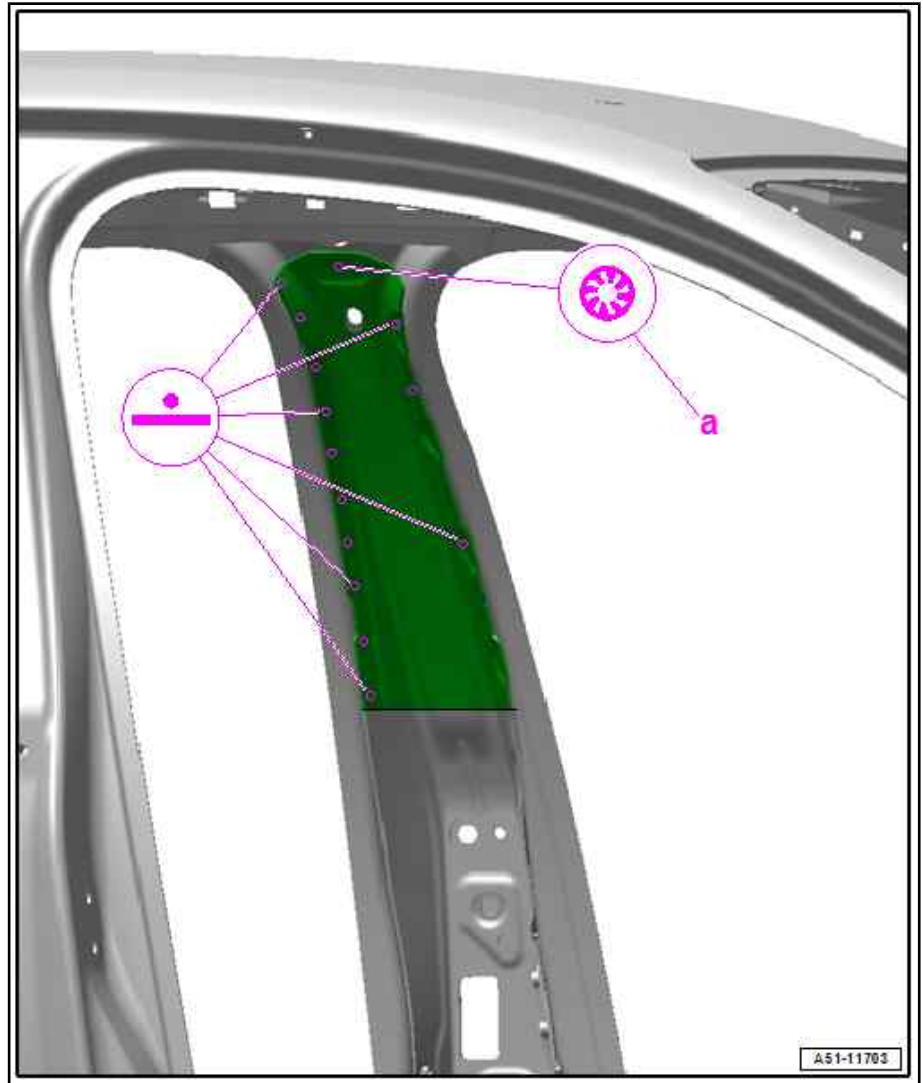
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

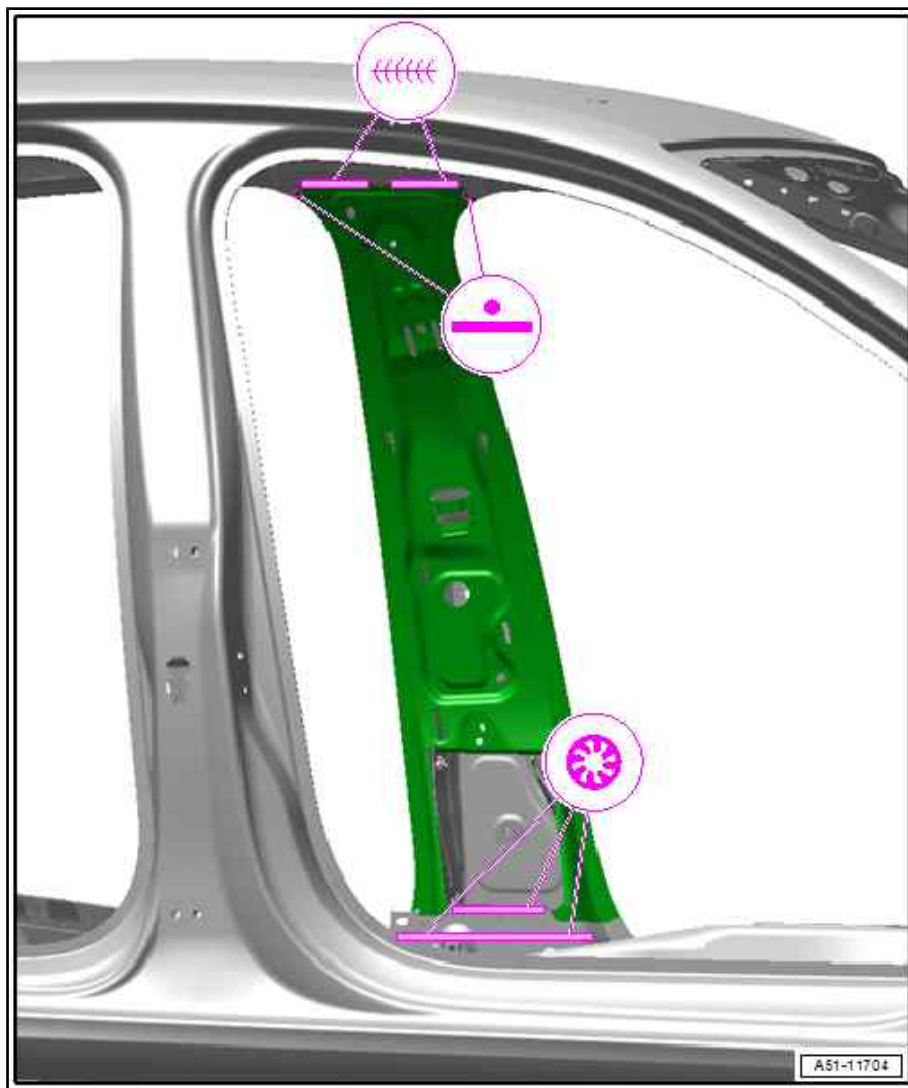
- To avoid distortion, only tack weld separating cut at inner B-pillar initially using shielded arc welding equipment .



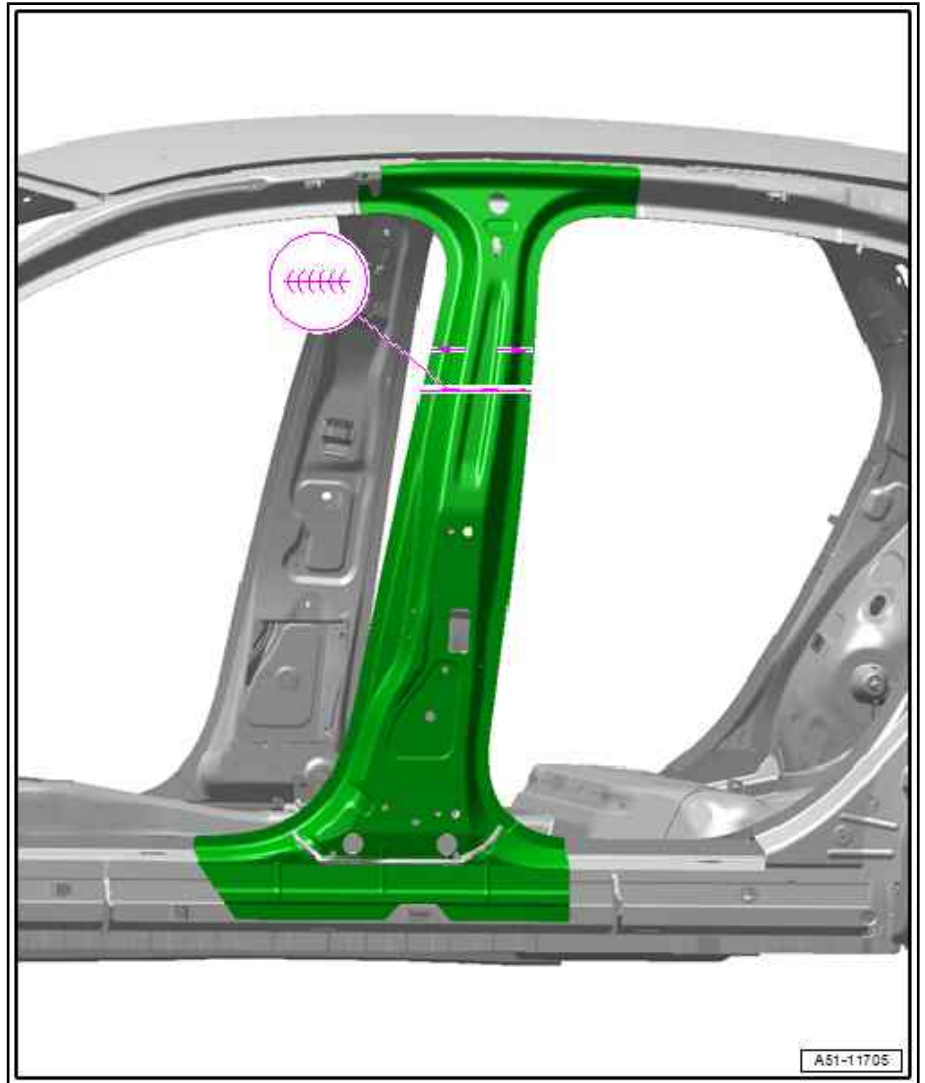
- Additionally weld inner B-pillar reinforcement using resistance spot welder : RP spot weld seam (8x spot welds left and 3x spot welds right).
- Additionally make 1x plug weld -a- using shielded arc welding equipment : SG plug weld seam.



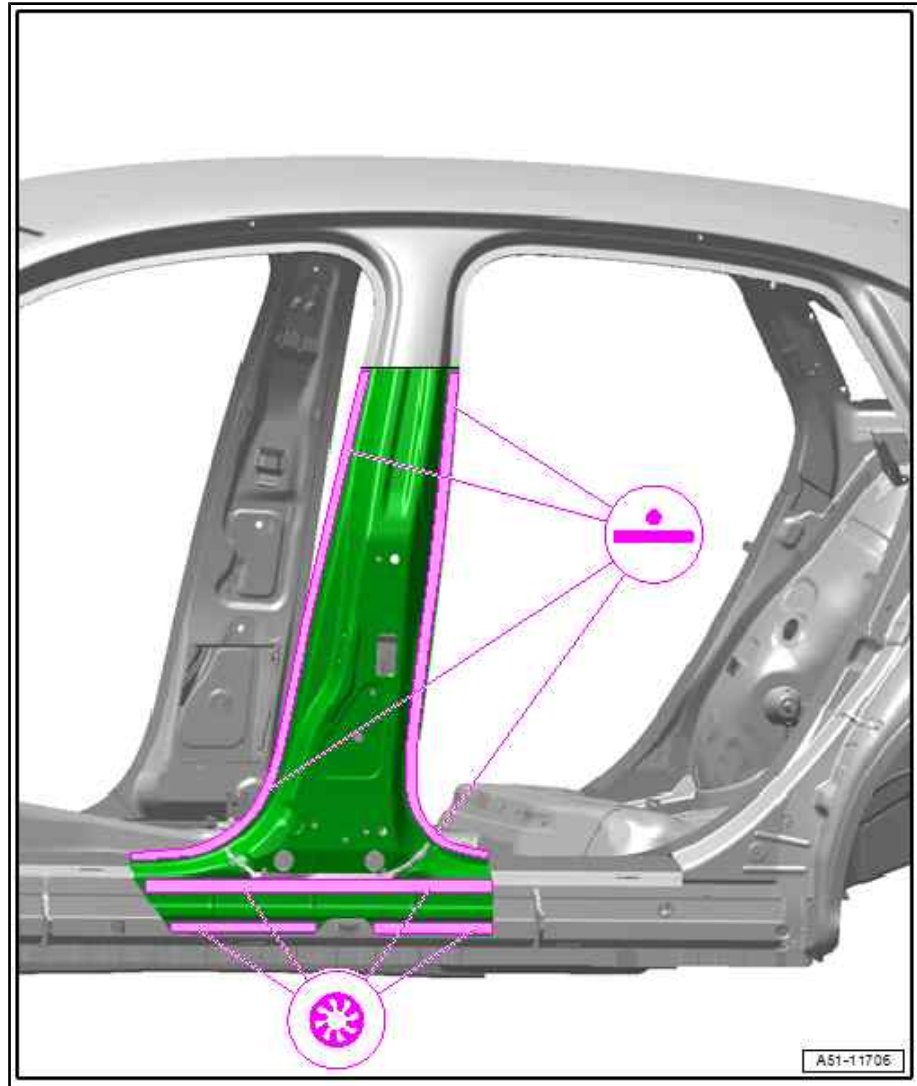
- Weld in closure plate using resistance spot welder : RP spot weld seam.
- Weld in closure plate (top) using shielded arc welding equipment : SG continuous seam.
- Weld in closure plate (bottom) using shielded arc welding equipment : SG plug weld seam.



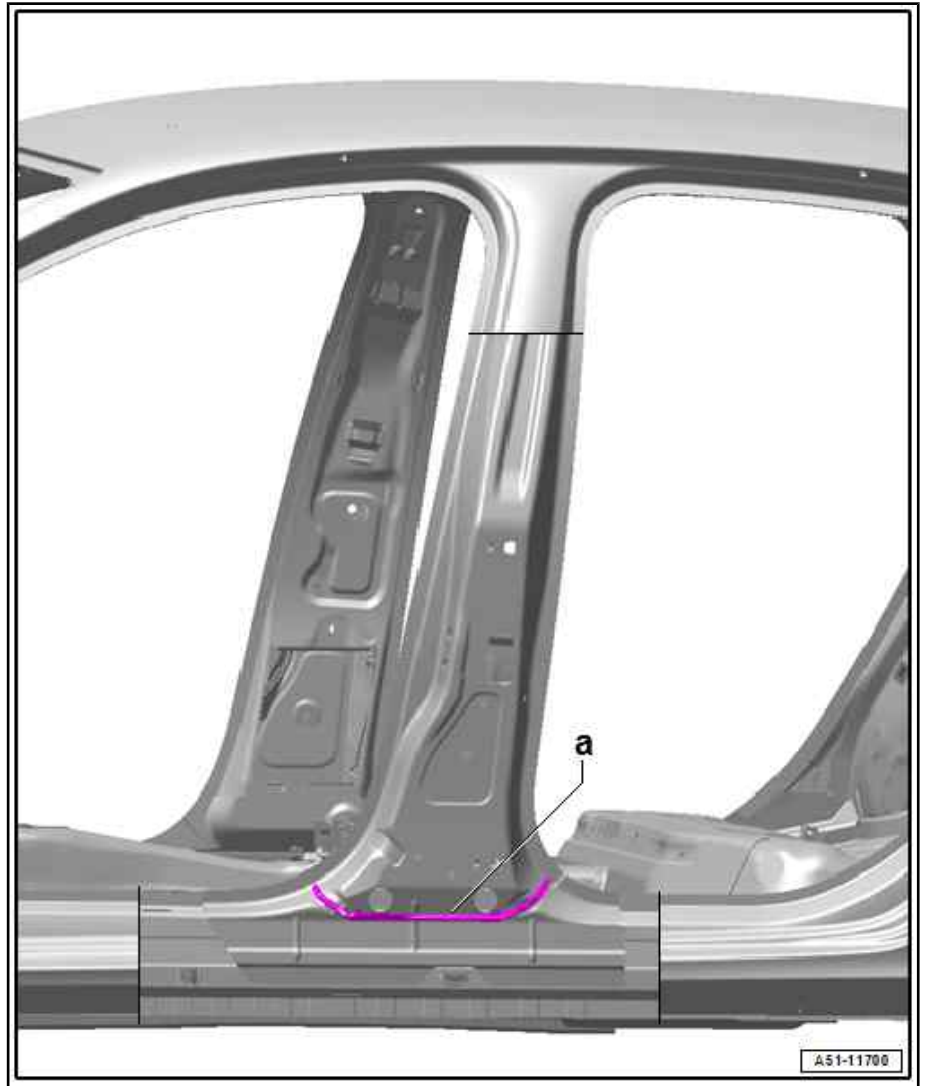
- Then weld in inner B-pillar from inside to outside using shielded arc welding equipment : SG continuous seam.



- Weld in lower B-pillar using shielded arc welding equipment : SG plug weld seam.
- Weld in B-pillar using resistance spot welder : RP spot weld seam.



Inserting moulded foam insert -a- ⇒ [page 18](#)



- Renew outer B-pillar ⇒ [page 363](#) .



RO: 51 42 55 50

## 27 Inner B-pillar - Renewal (Saloon)

1 - Separating cut in side member (front)

2 - Separating cut in outer B-pillar (front)

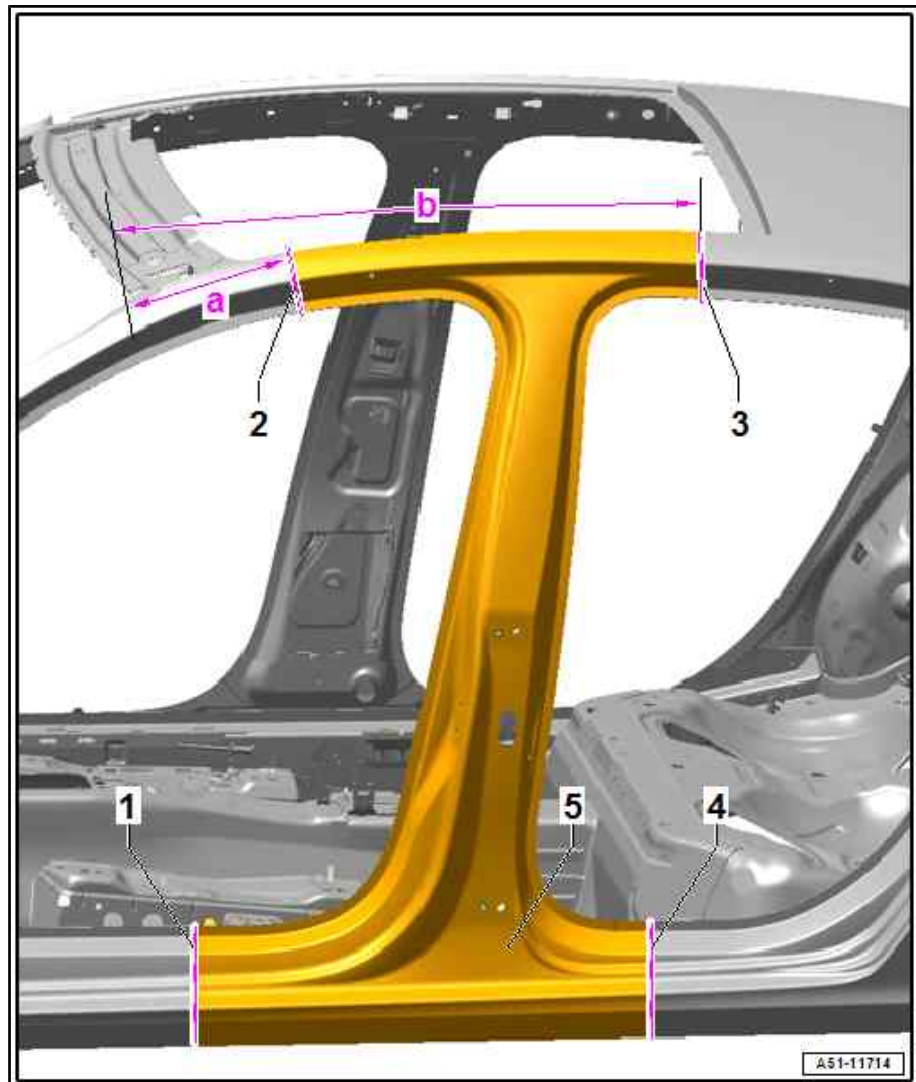
Dimension -a- = 240 mm

3 - Separating cut in outer B-pillar (rear)

Dimension -b- = 850 mm

4 - Separating cut in side member (rear)

5 - Outer B-pillar



### 27.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker



#### NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .



## 27.2 Procedure

- Removing standard roof ⇒ [page 218](#)
- Removing panoramic sunroof ⇒ [page 241](#)

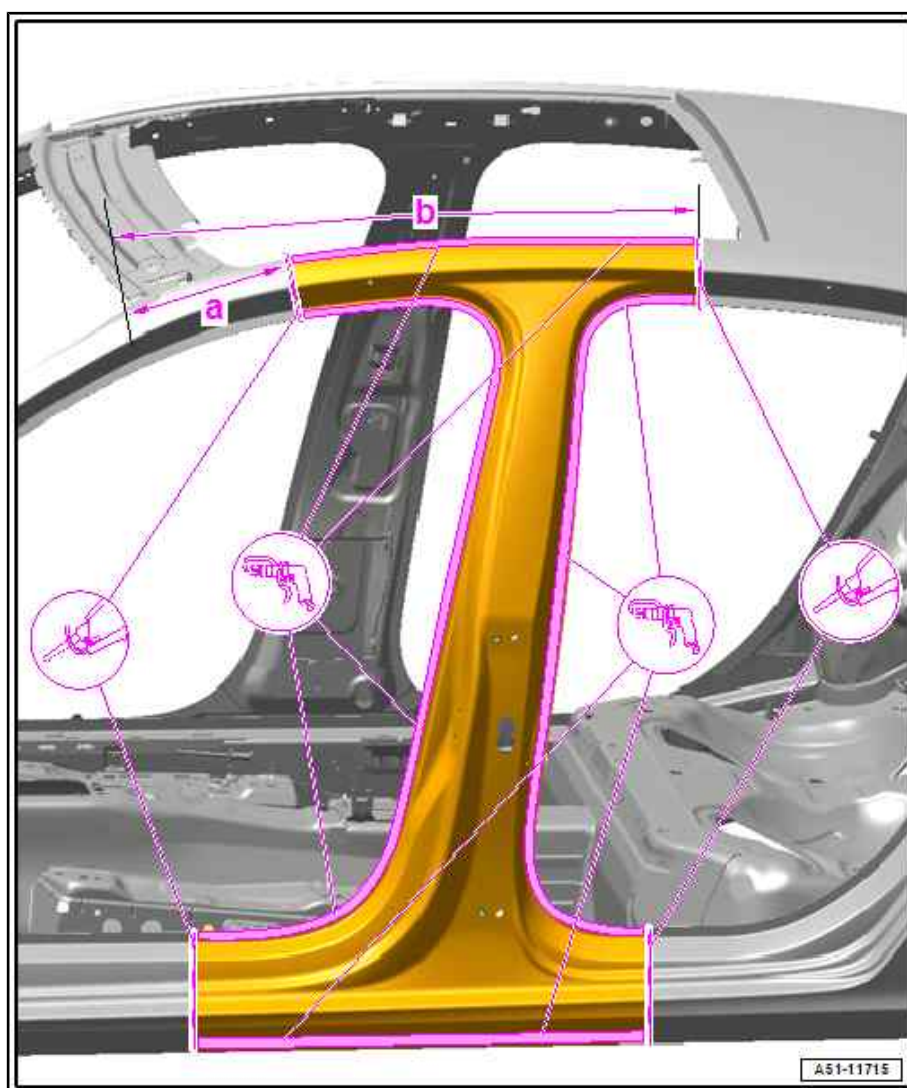
### Cutting locations

Permitted separating cuts on complete side panel ⇒ [page 125](#) .

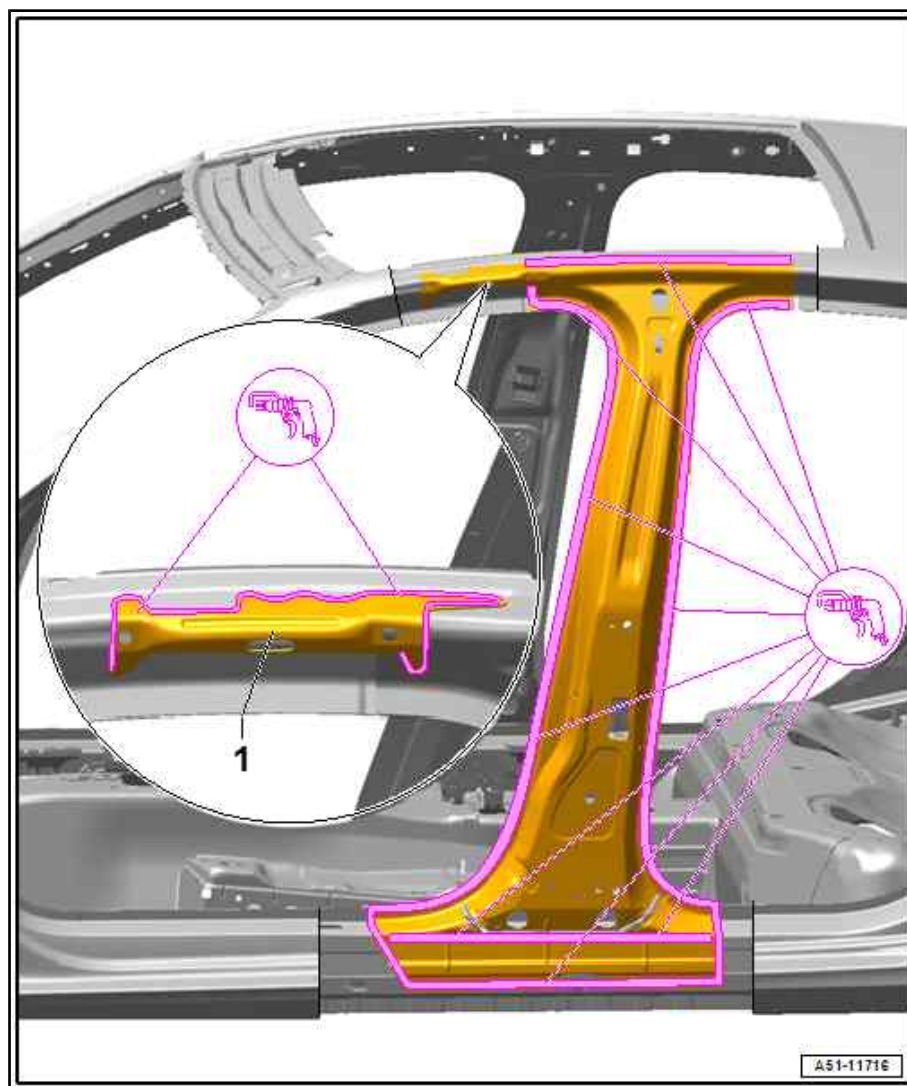
- Separate original joint using spot weld breaker .
- The separating cuts may only be made at the positions shown.
- Mark off separating cut at outer B-pillar according to dimensions -a- and -b- and make the cut using body saw .

Dimension -a- = 240 mm

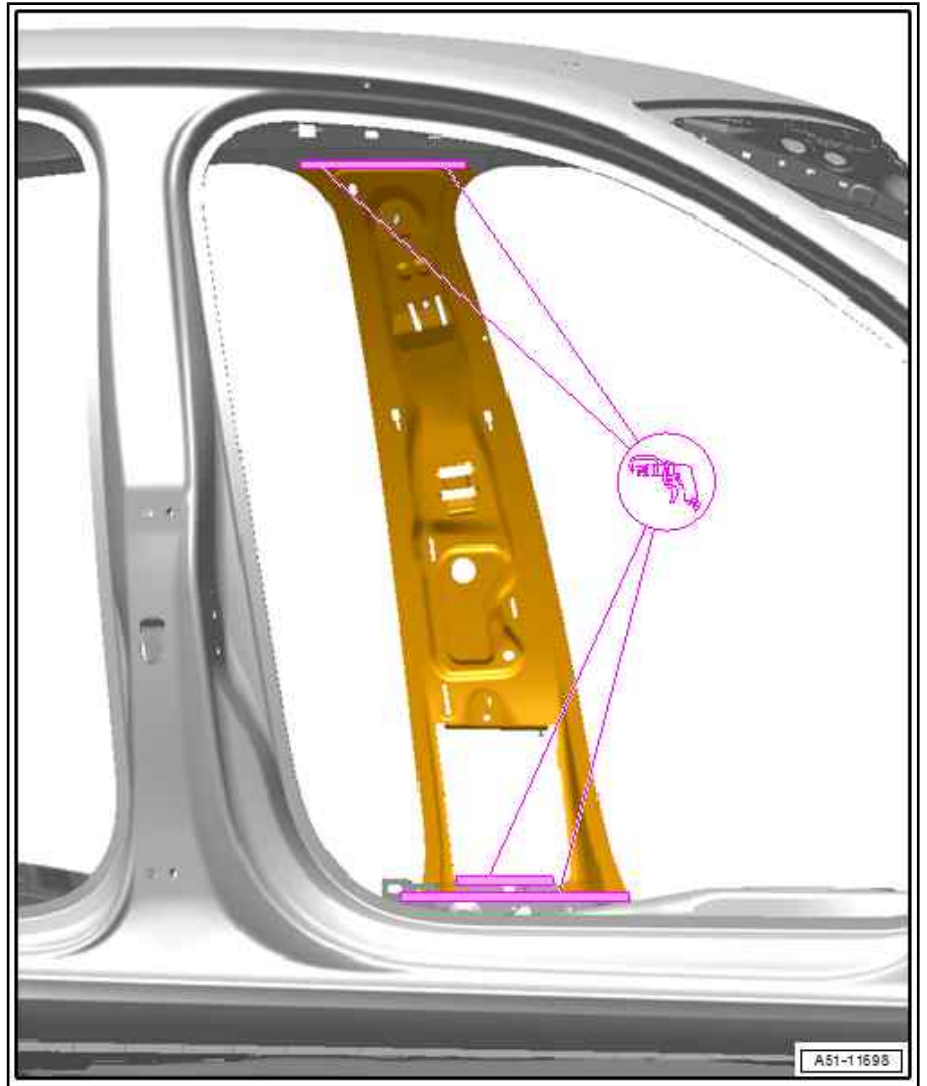
Dimension -b- = 850 mm



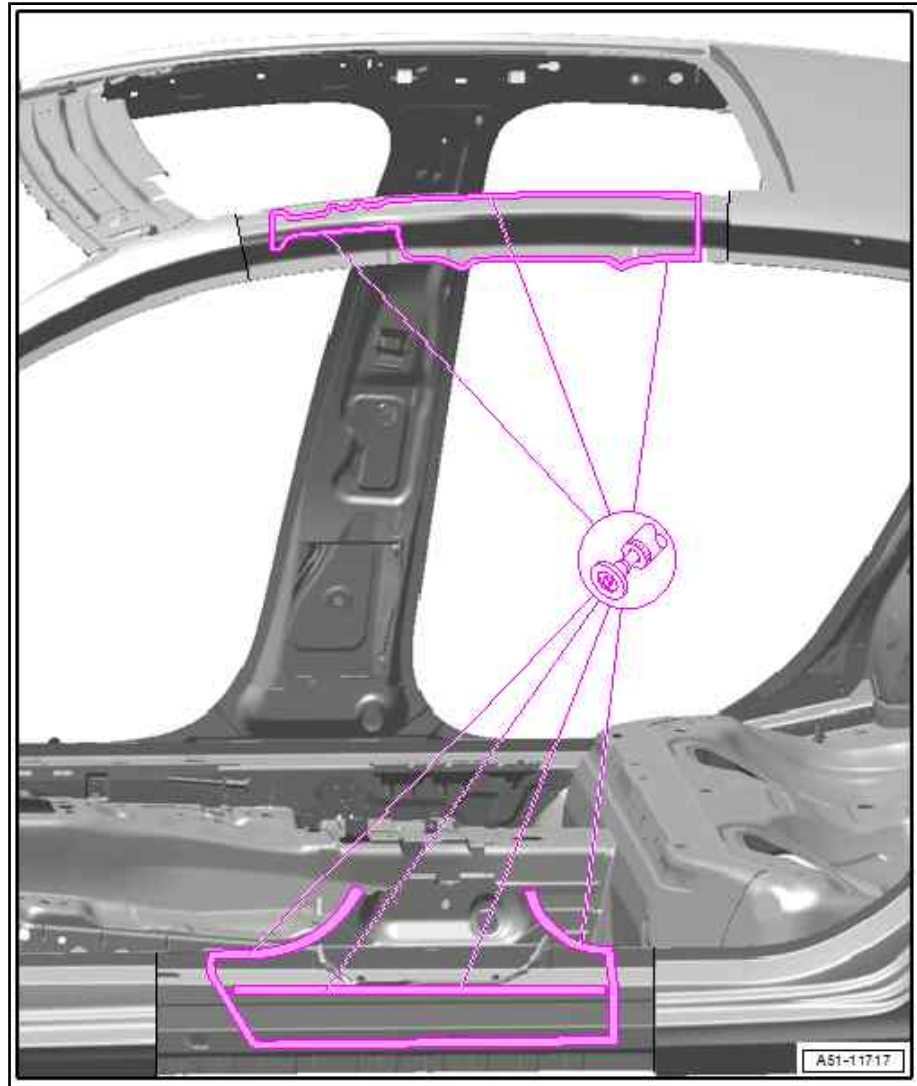
- Separate original joint at roof carrier reinforcement -1- using spot weld breaker .
- Separate original joint using spot weld breaker .



- Separate original joint at inner closure plate using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.

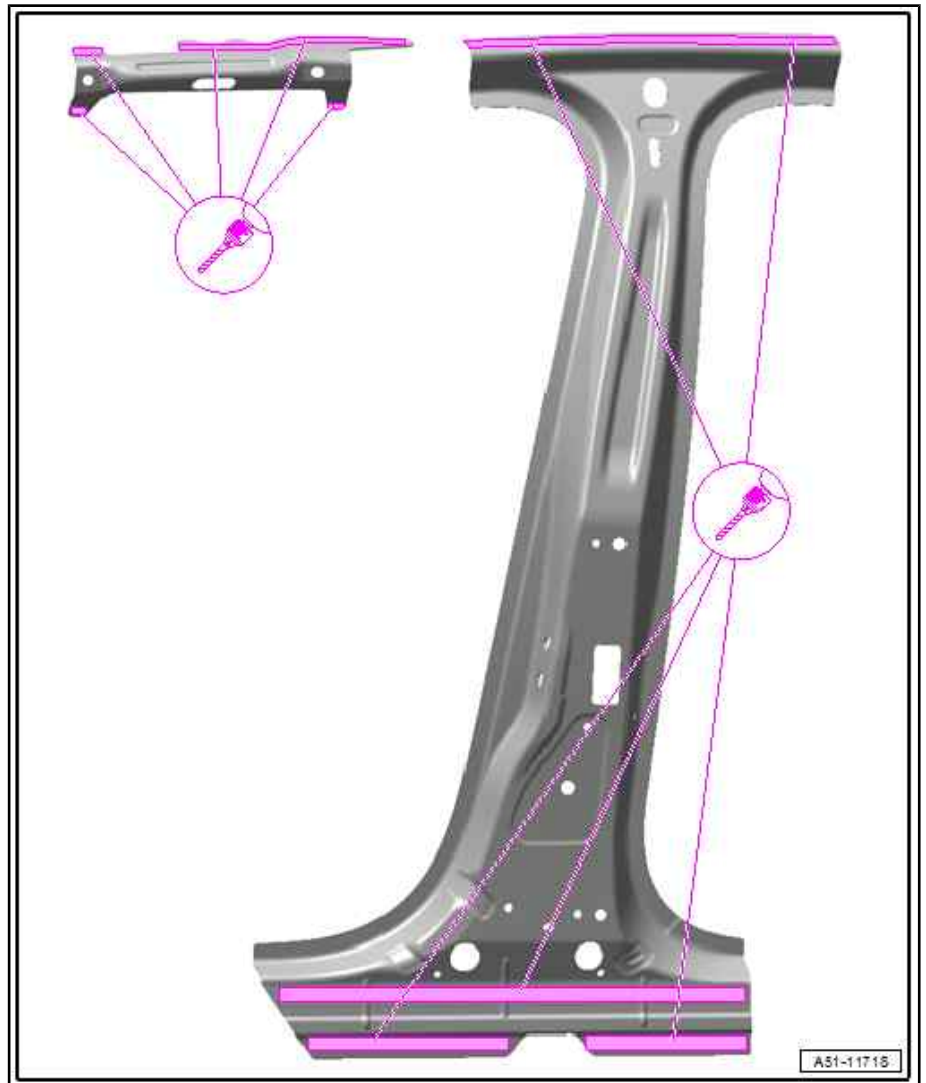


### Replacement parts

- ◆ Inner B-pillar

### Preparing new part

- Drill holes for SG plug weld seam using drill as shown (8 mm  $\varnothing$ ).
- Prepare flanges on new part for welding.



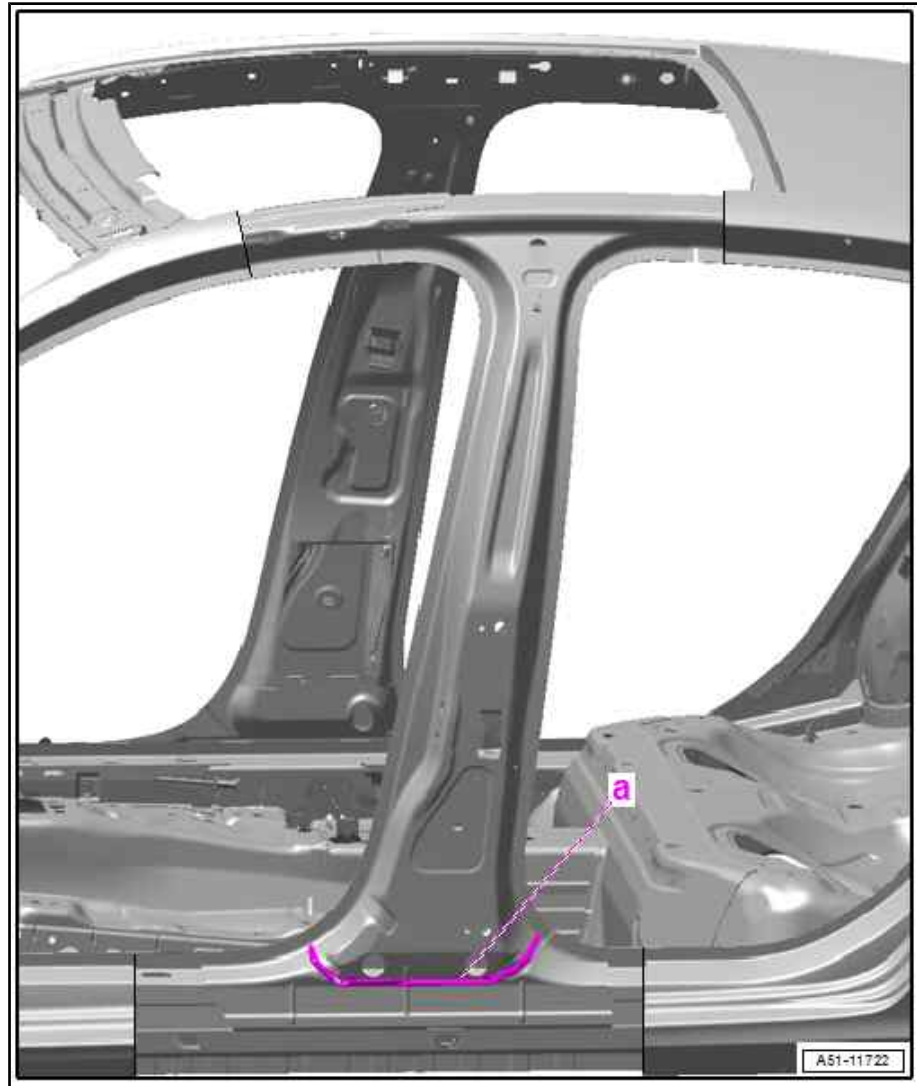
**!** NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

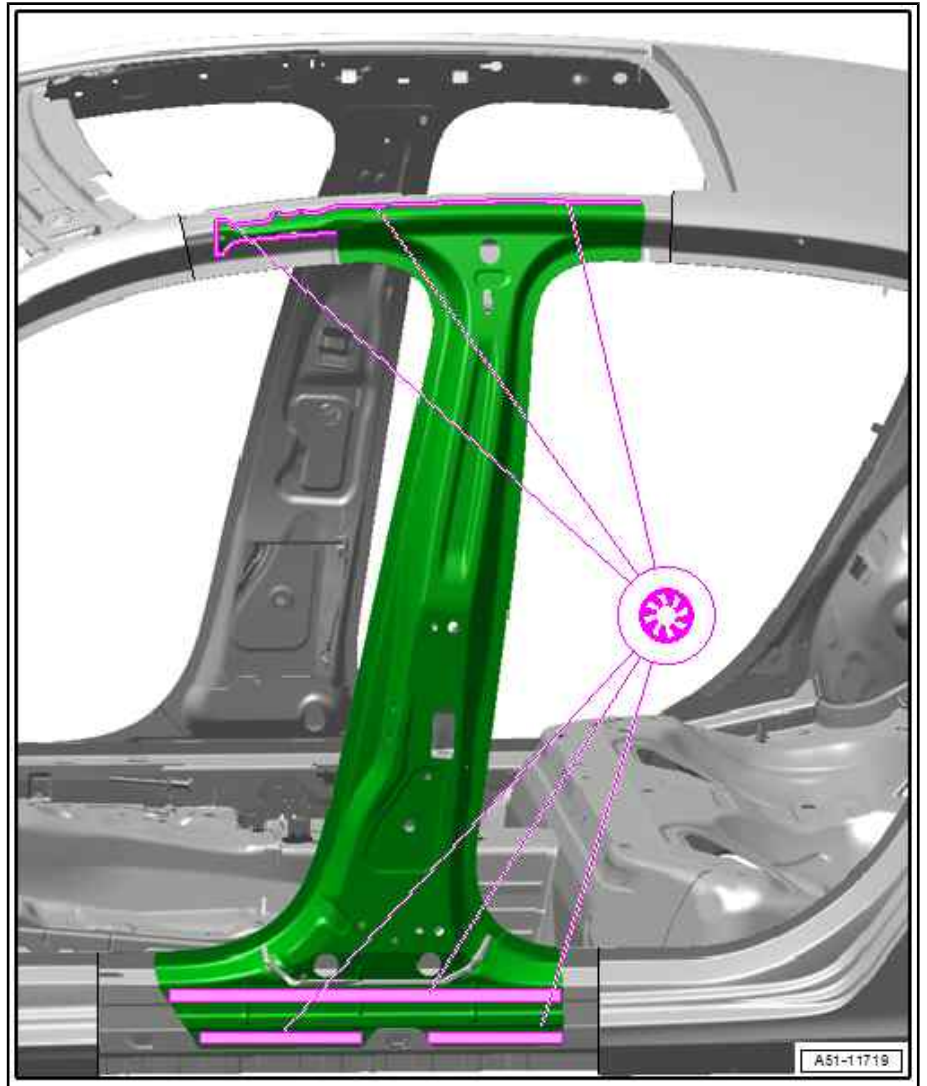
- Match up outer B-pillar with no load on vehicle and fix in position.

**Welding in**

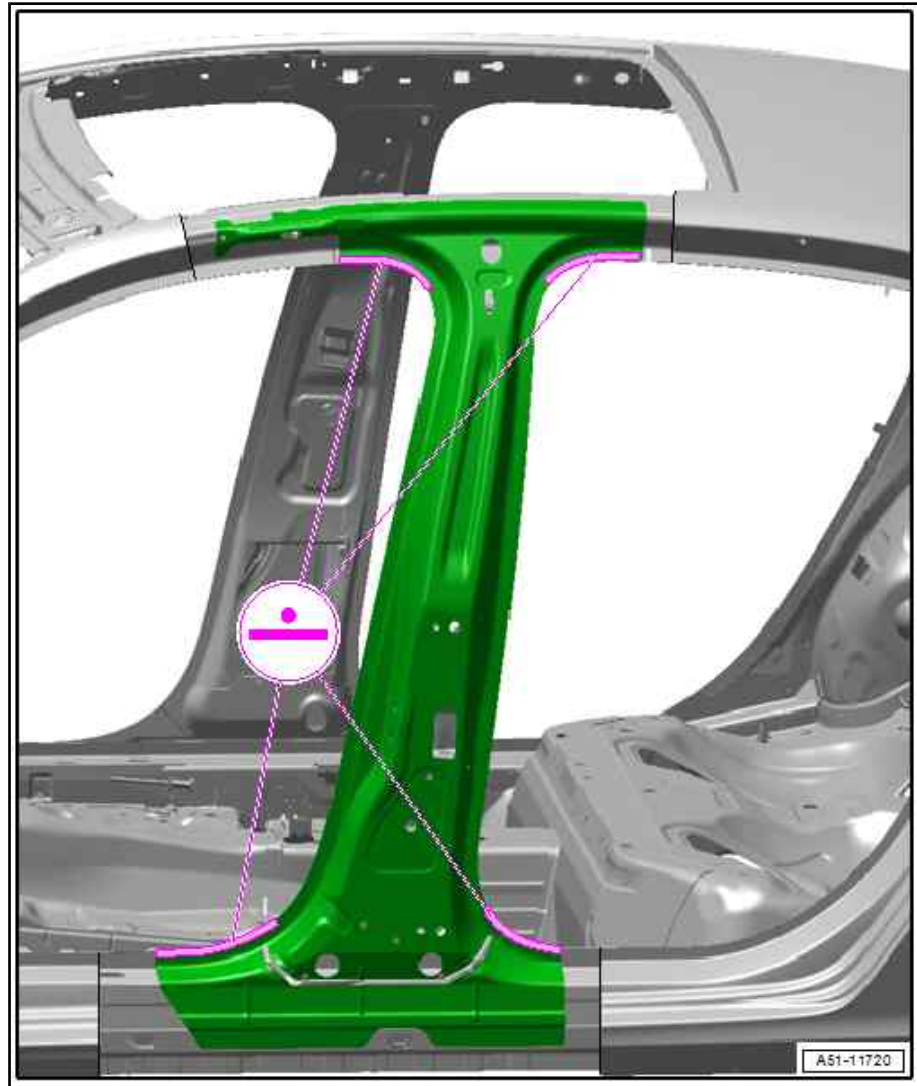
Inserting moulded foam insert -a- ⇒ [page 18](#)



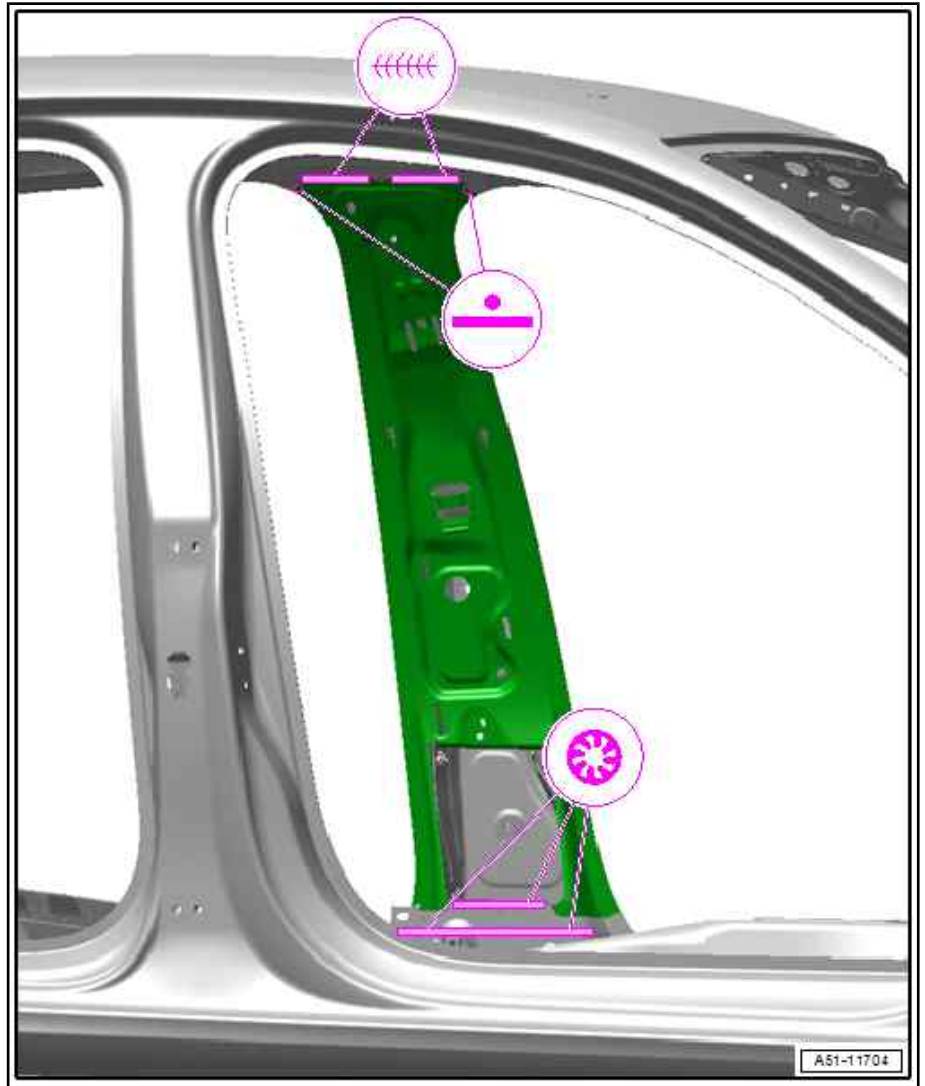
- Match up inner B-pillar with no load on vehicle and fix in position.
- Weld in inner B-pillar using shielded arc welding equipment : SG plug weld seam.



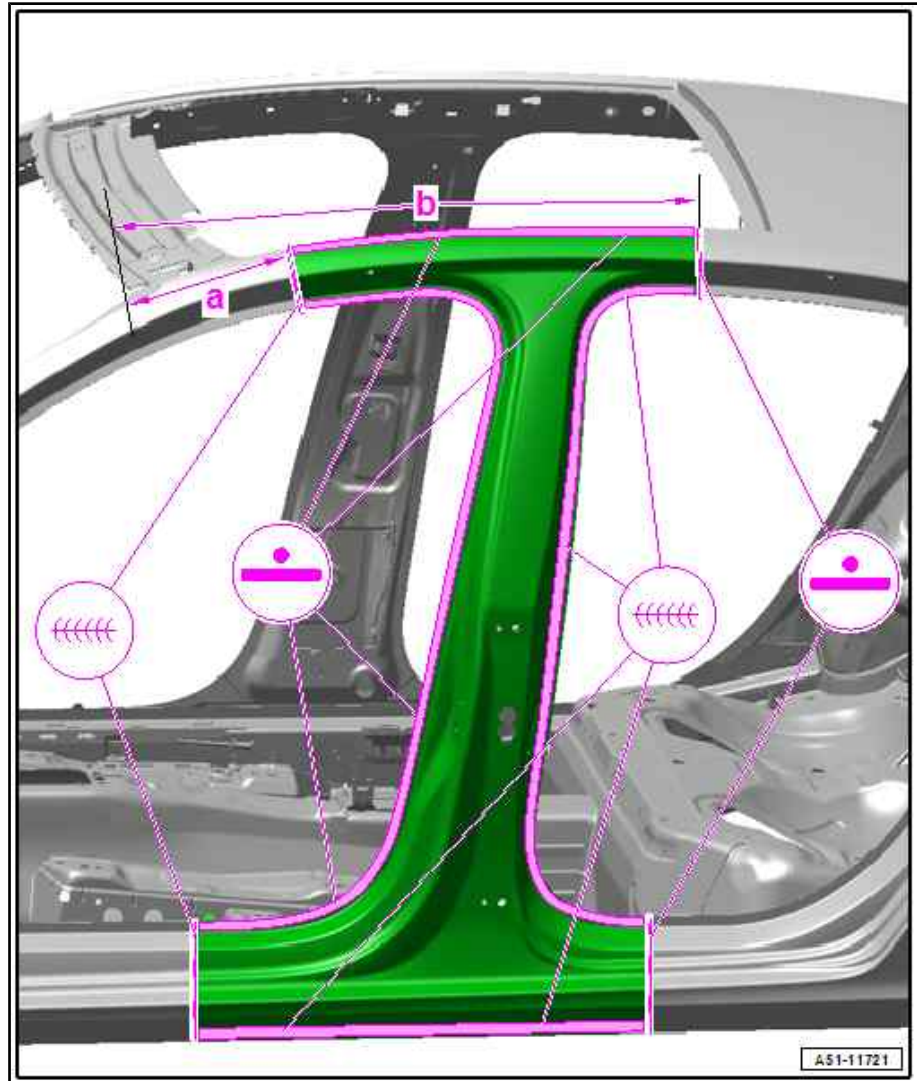
- Weld in inner B-pillar using resistance spot welder : RP spot weld seam.



- Weld in closure plate using resistance spot welder : RP spot weld seam.
- Weld in closure plate (top) using shielded arc welding equipment : SG continuous seam.
- Weld in closure plate (bottom) using shielded arc welding equipment : SG plug weld seam.



- Weld in outer B-pillar at separating cuts using shielded arc welding equipment : SG continuous seam.
- Weld in outer B-pillar using resistance spot welder : RP spot weld seam.



- Welding in standard roof (A3) ⇒ [page 218](#)
- Welding in panoramic sunroof ⇒ [page 241](#)



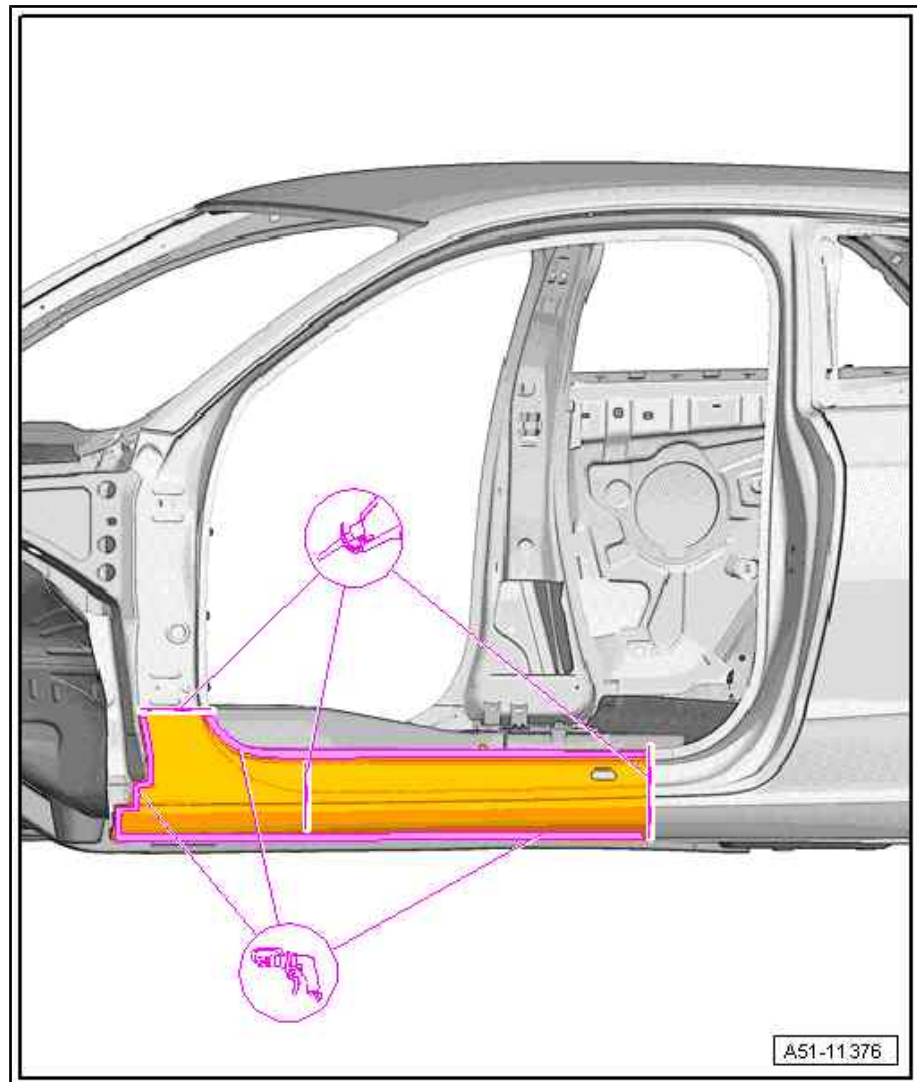


## 28.2 Procedure

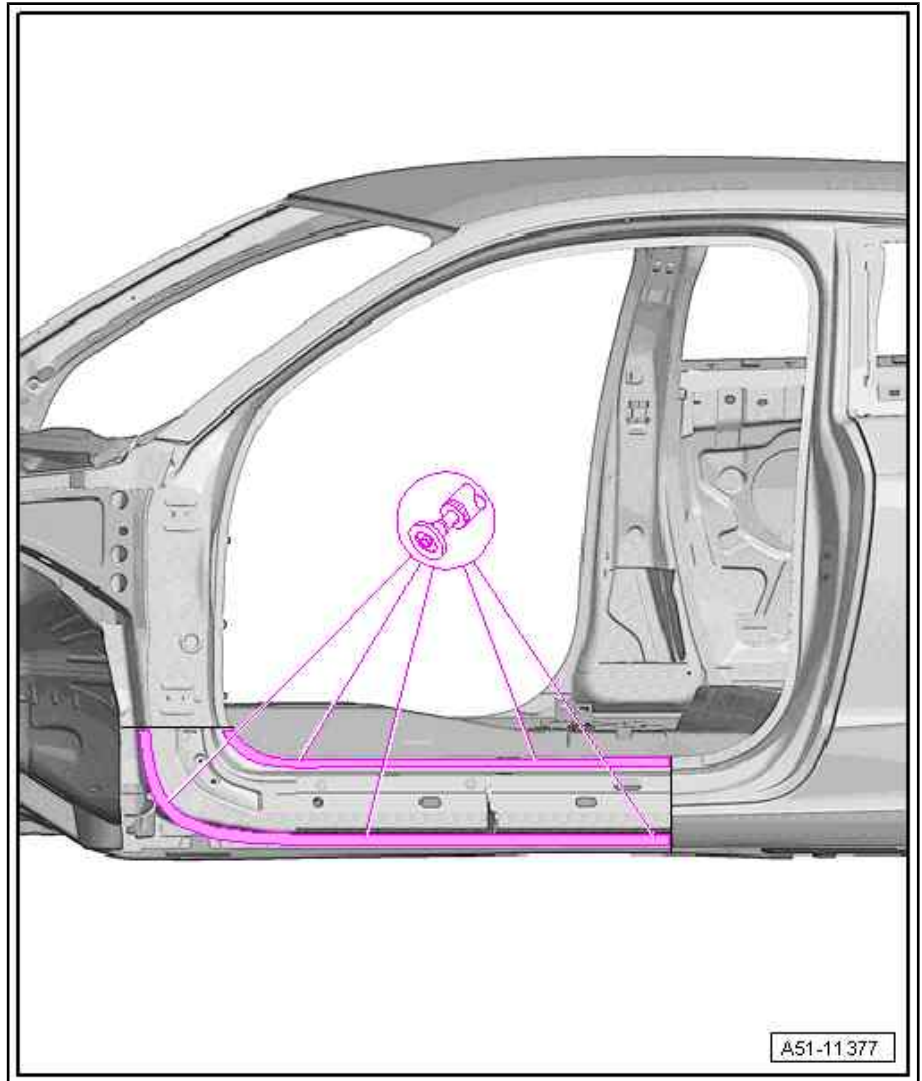
### Cutting locations

Permitted separating cuts on complete side panel ⇒ [page 125](#) .

- Mark off separating cuts according to degree of damage and make cuts using body saw .
- Drill out original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .

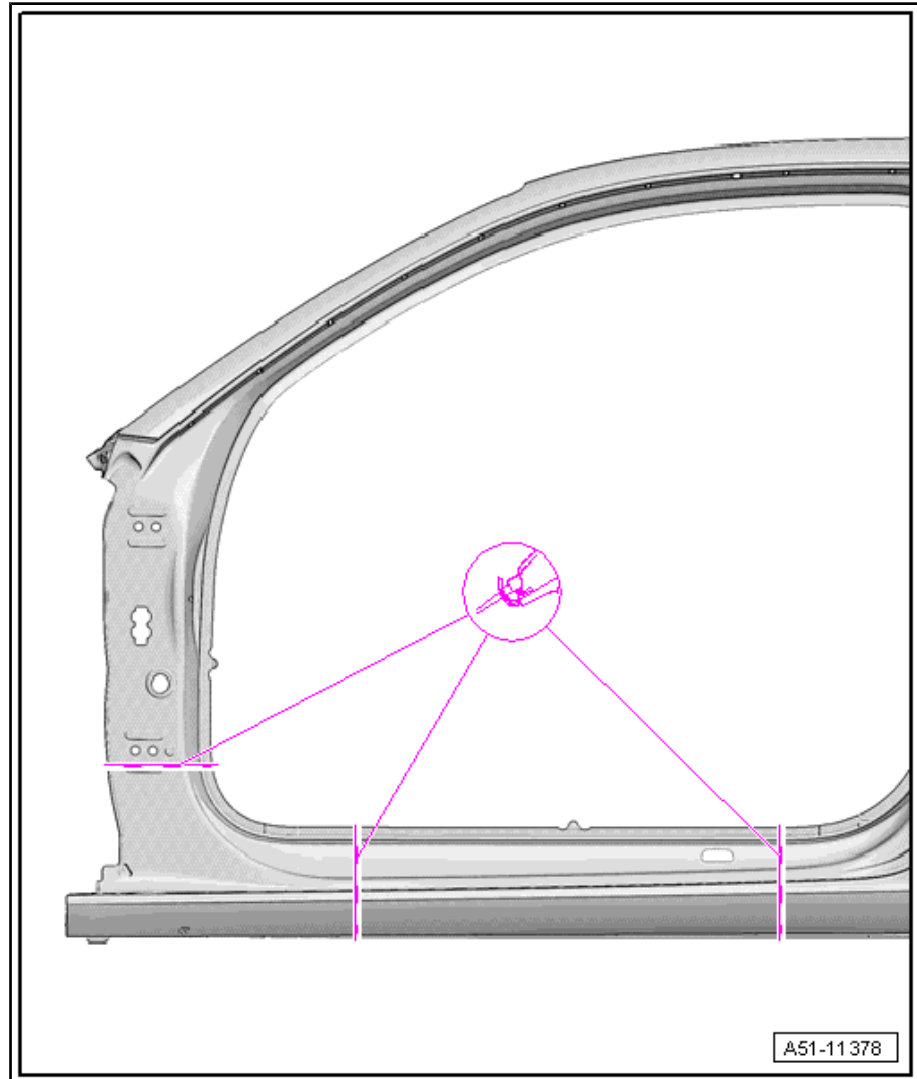


#### Replacement part

- ◆ Outer side member (sub-part)

#### Preparing new part

- Transfer separating cuts to new part and cut to size using body saw .
- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.

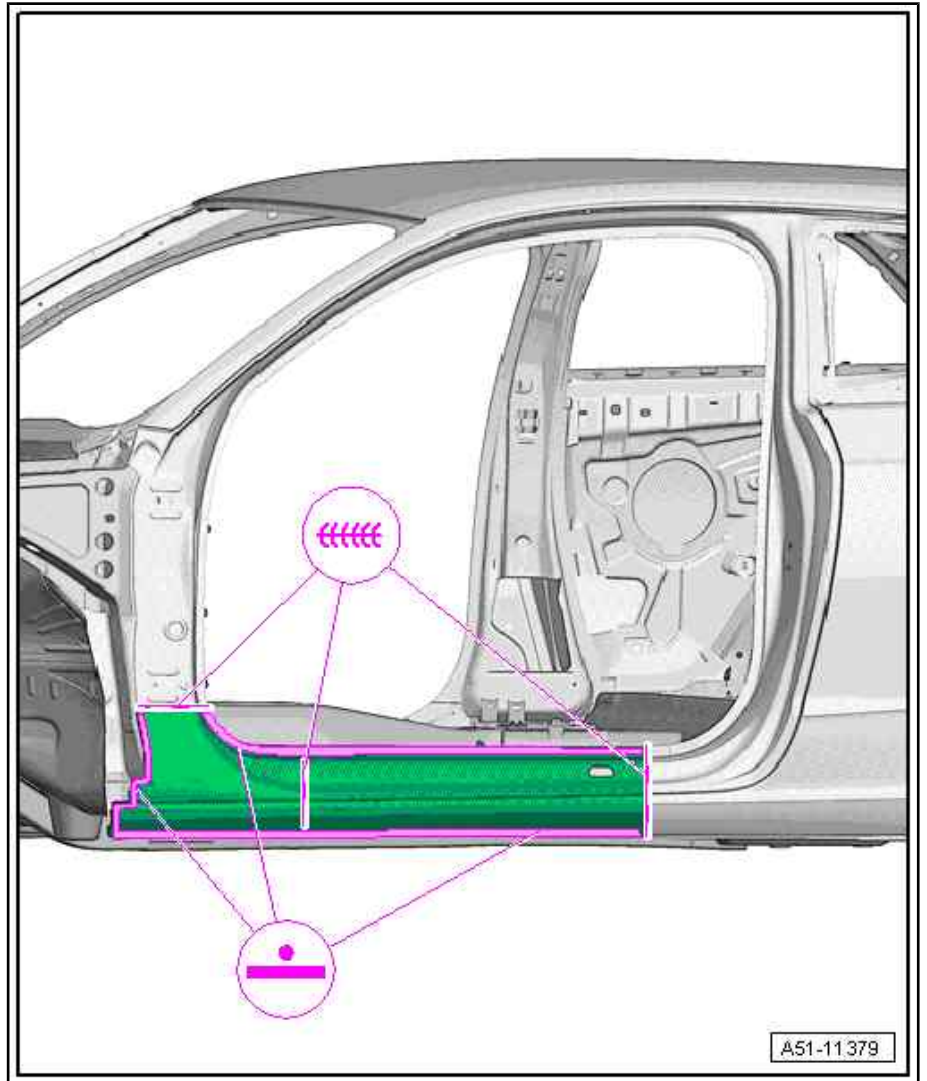


**!** NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Match up and fix new part in position.
- Check fit relative to bolt-on parts.
- Weld in side member using resistance spot welder : RP spot weld seam.
- Weld at separating cuts using shielded arc welding equipment : SG continuous seam.





RO: 51 45 55 00

## 29 Outer side member - Renewal

Sportback and Saloon identical

1 - Separating cut in A-pillar

2 - Separating cut in side member (front)

Partial renewal

*Partial renewal is possible with this separating cut.*

*Make separating cut according to extent of damage.*

3 - Separating cut in B-pillar

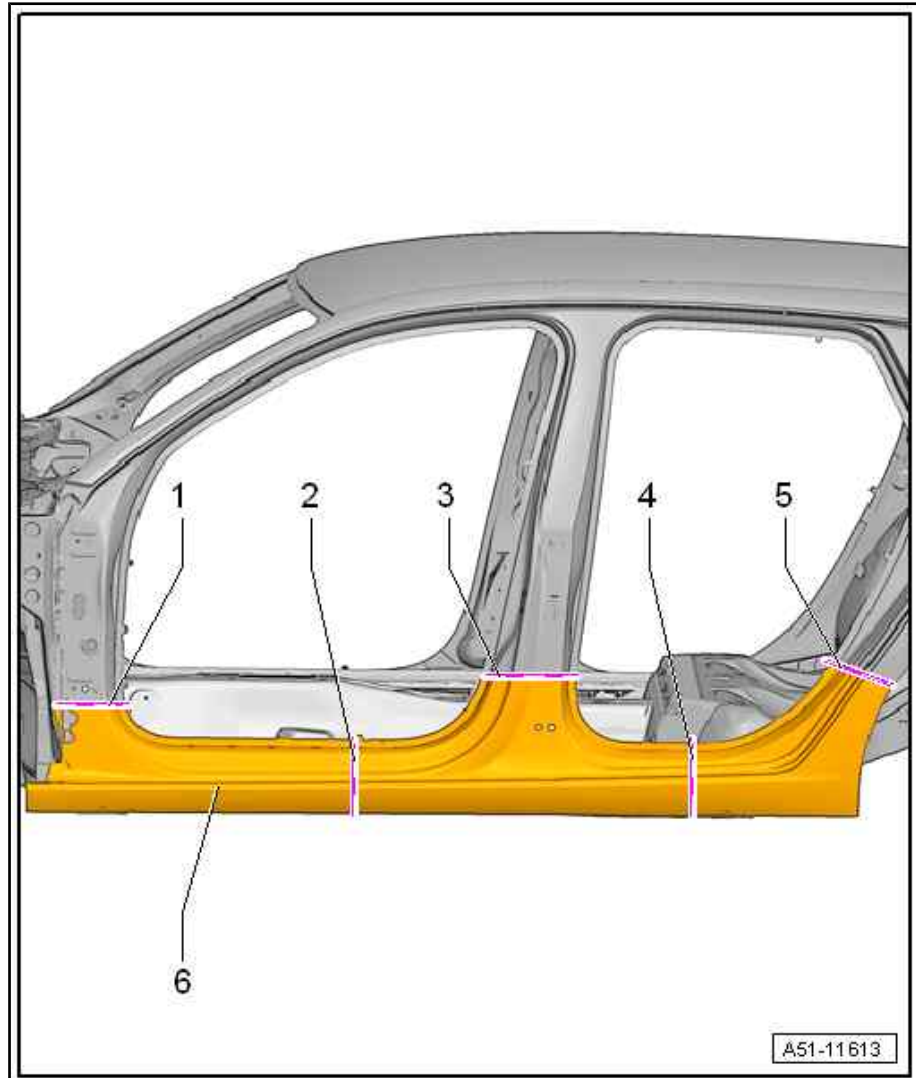
4 - Separating cut in side member (rear)

Partial renewal

*Partial renewal is possible with this separating cut.*

5 - Separating cut at wheel arch

6 - Outer side member



### 29.1 Tools

Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker



#### NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

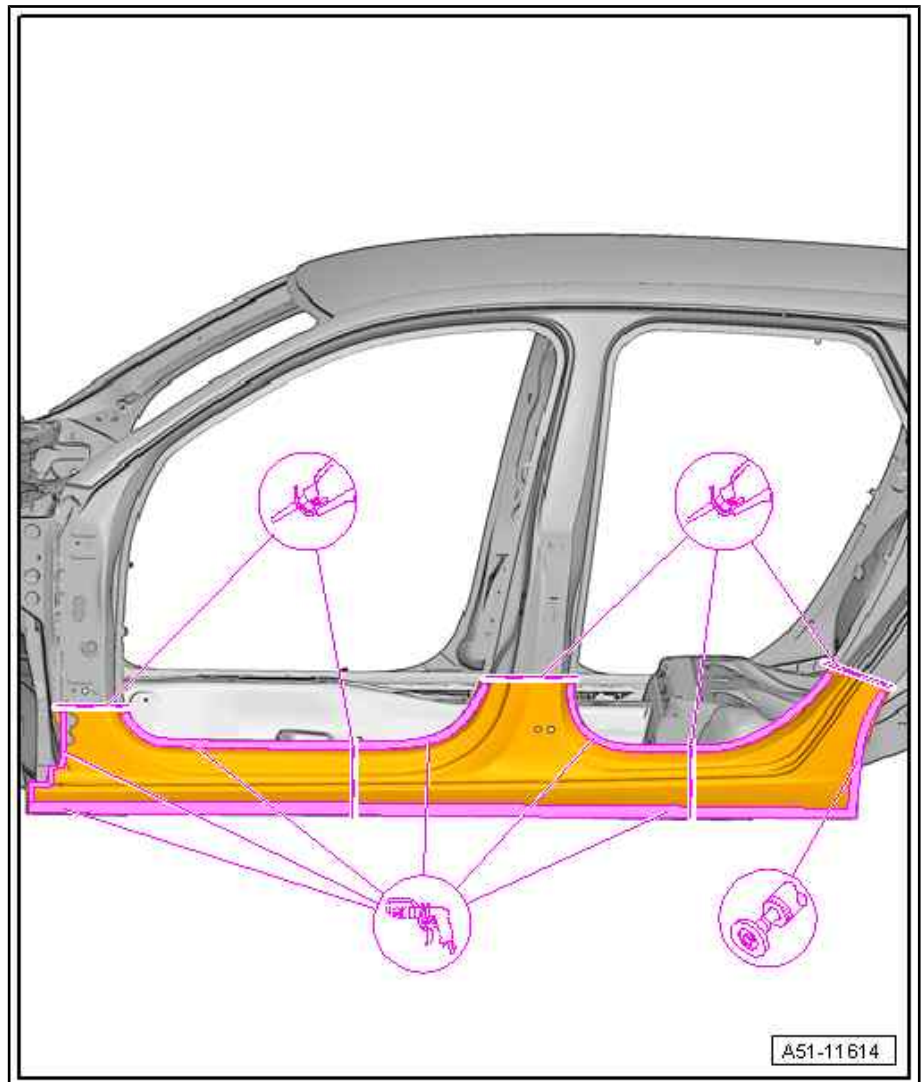


## 29.2 Procedure

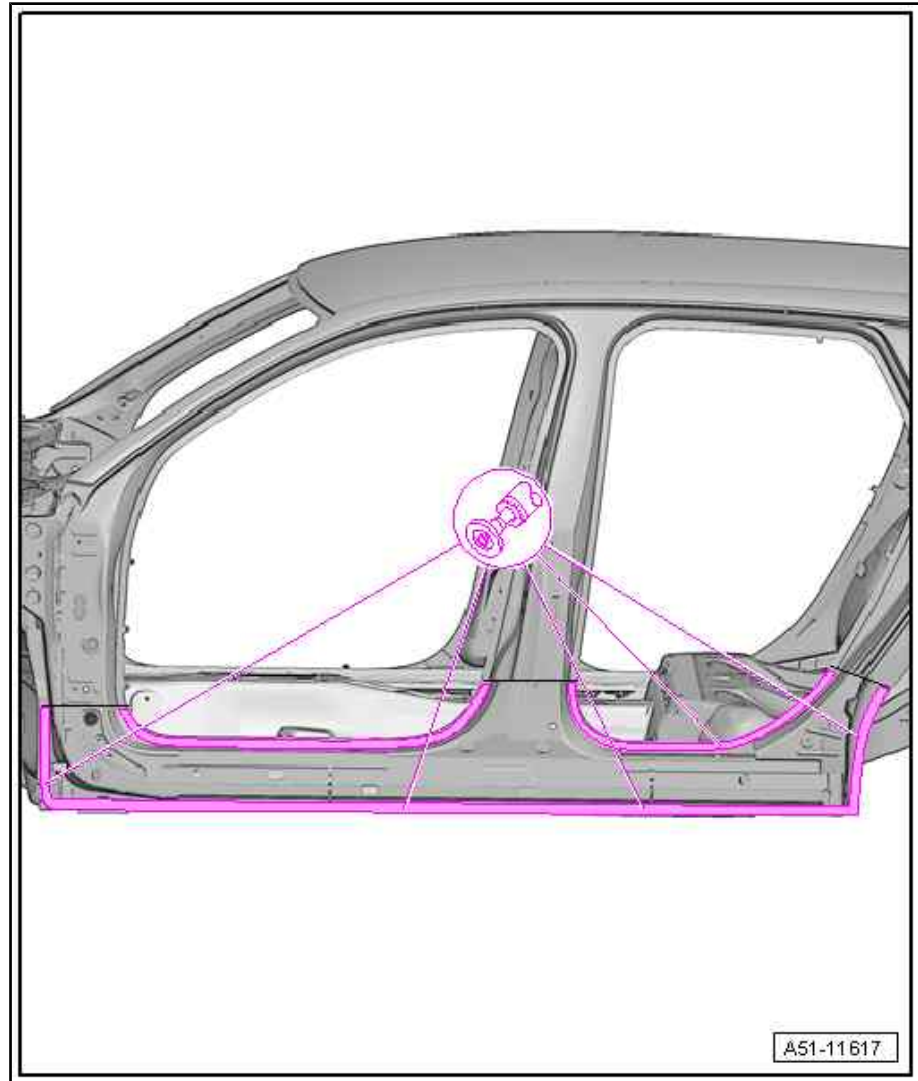
### Cutting locations

Permitted separating cuts on complete side panel ⇒ [page 125](#) .

- Mark off separating cuts according to degree of damage and make cuts using body saw .
- Drill out original joint using spot weld breaker .
- Grind through outer edge at wheel arch using compact angle grinder .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.

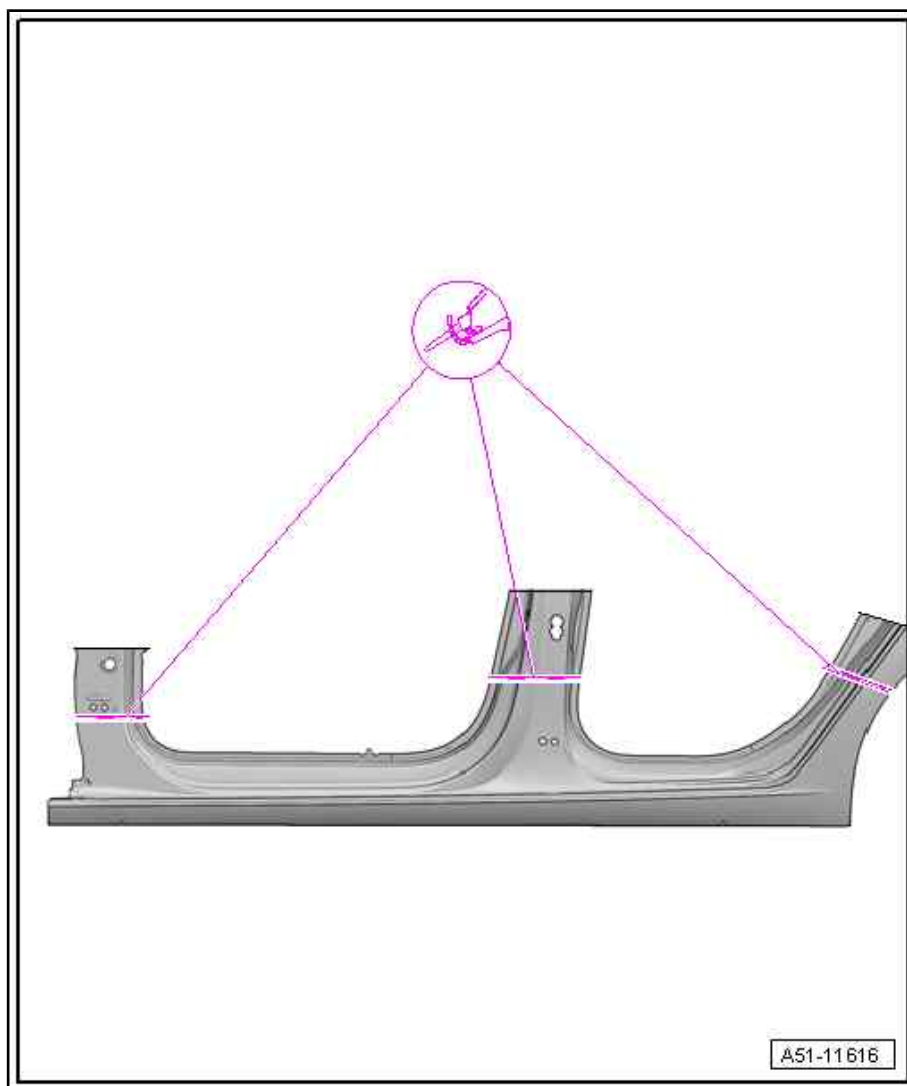


### Replacement part

- ◆ Outer side member

### Preparing new part

- Transfer separating cuts to new part and cut to size using body saw .
- Prepare flanges on new part for welding.
- Grind welding surfaces down to bare metal.

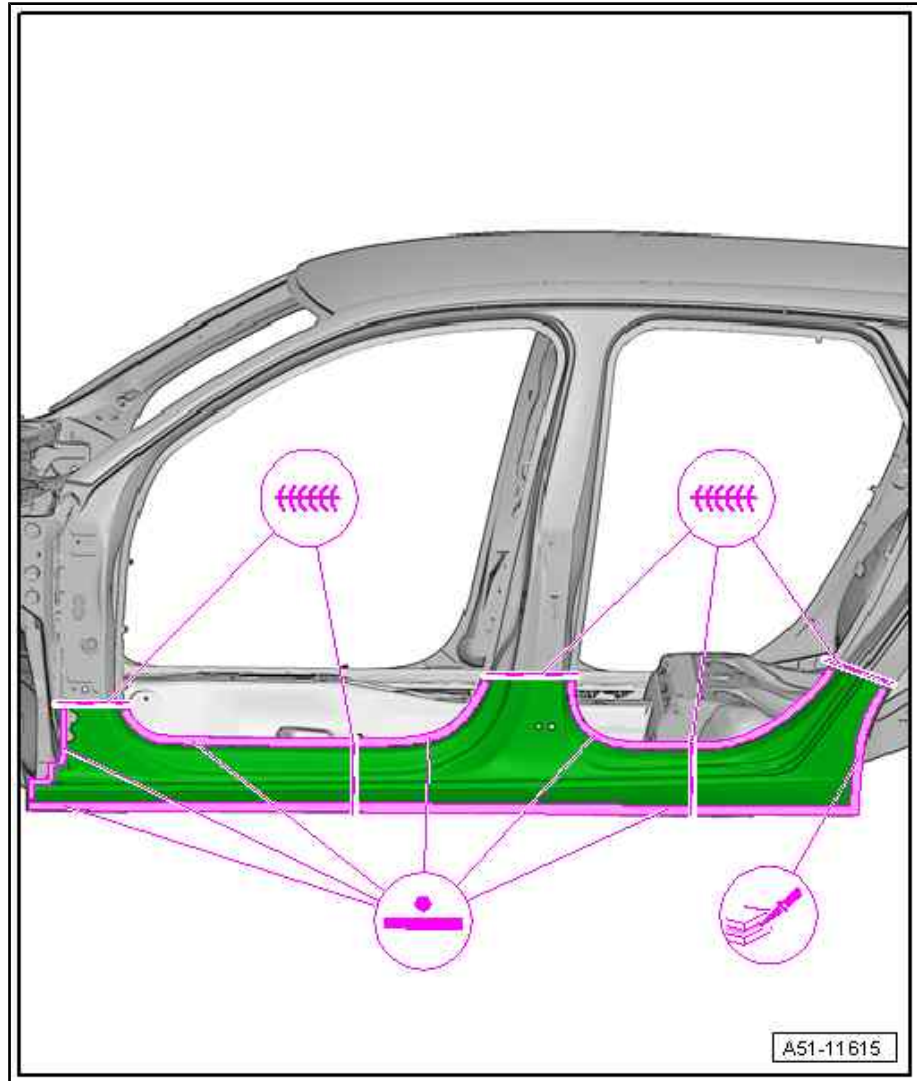


**!** NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Match up and fix new part in position.
- Check fit relative to bolt-on parts.
- Weld in side member using resistance spot welder : RP spot weld seam.
- Weld at separating cuts using shielded arc welding equipment : SG continuous seam.
- Apply 2-component epoxy adhesive - DA 001 730 A2- to side panel and flange area on wheel housing using pneumatic glue gun - V.A.G 2005 B- .





RO: 51 47 55 50

## 30 Inner side member - Renewal (A3)

1 - Inner A-pillar reinforcement

2 - Inner side member

3 - Rear wheel housing

4 - Separating cut

Partial renewal  
*Partial renewal is possible with this separating cut.*

5 - Separating cut

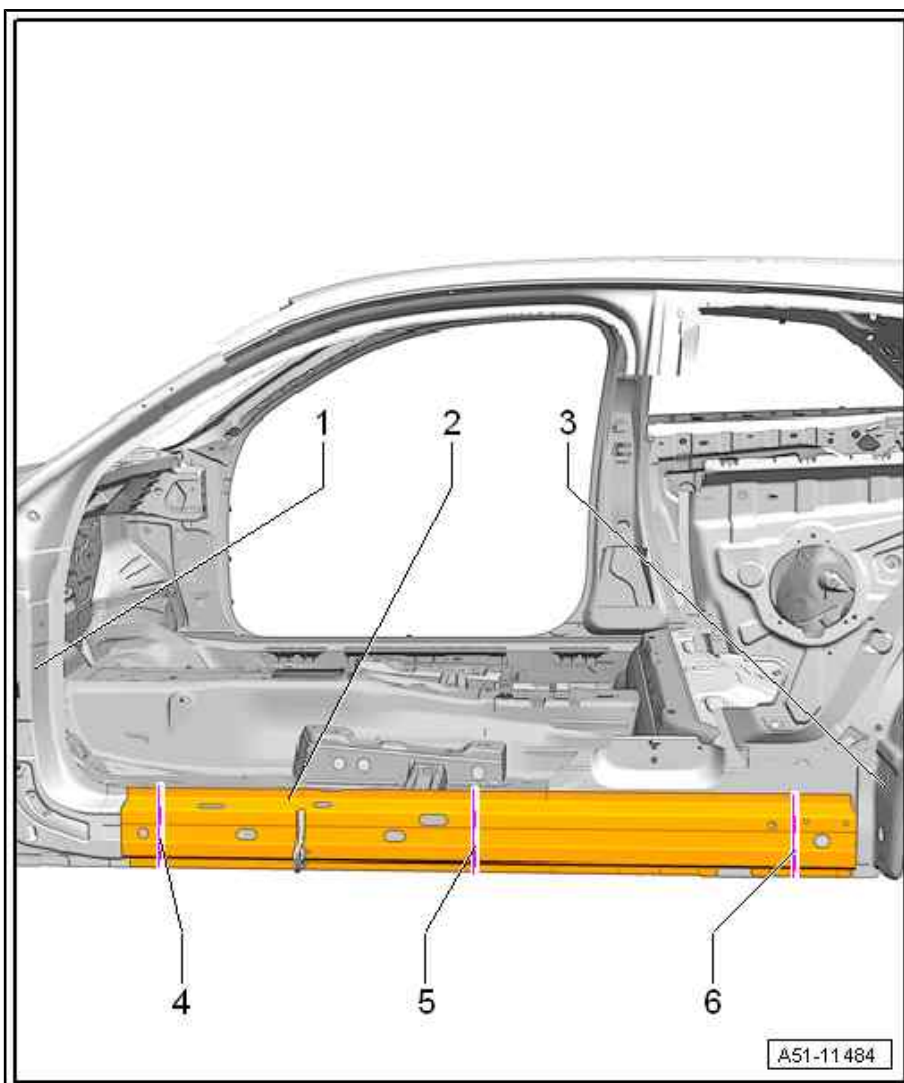
Partial renewal  
*Partial renewal is possible with this separating cut.*

*Make separating cuts according to extent of damage.*

6 - Separating cut

Partial renewal  
*Partial renewal is possible with this separating cut.*

*Make separating cuts according to extent of damage.*



### 30.1 Tools

#### Special tools and workshop equipment required

- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker



One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

### 30.2 Procedure

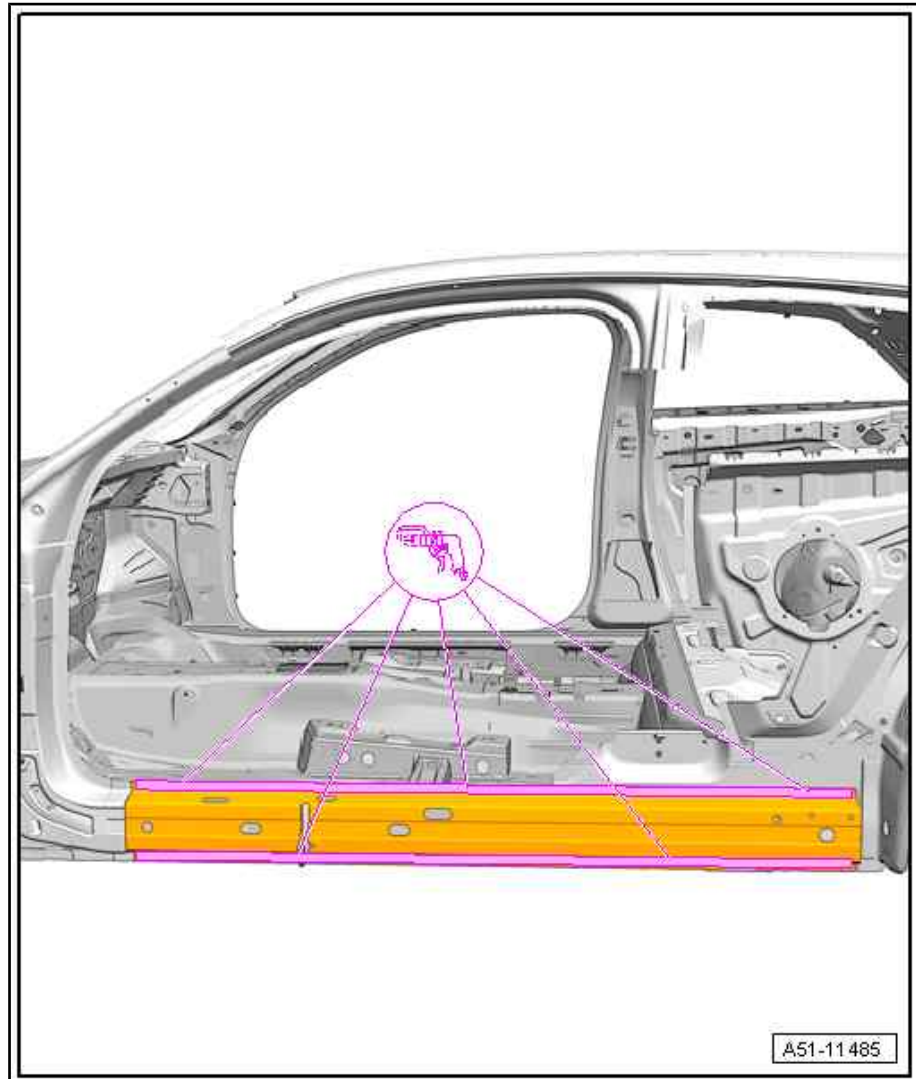
- Removing outer side member ⇒ [page 428](#)



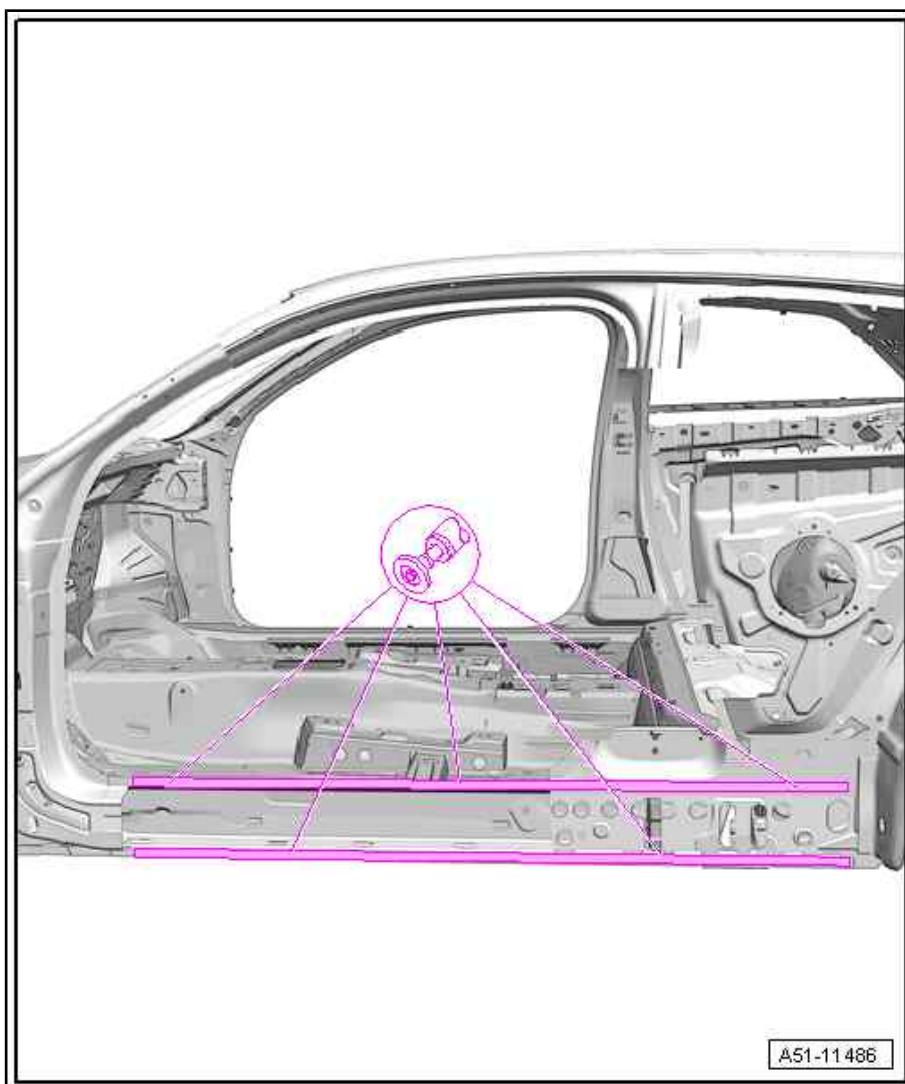
- Removing side panel ⇒ [page 511](#)
- Removing inner B-pillar (part section) ⇒ [page 370](#)

#### Cutting locations

- Make separating cuts according to extent of damage using body saw .
- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.



### Replacement part

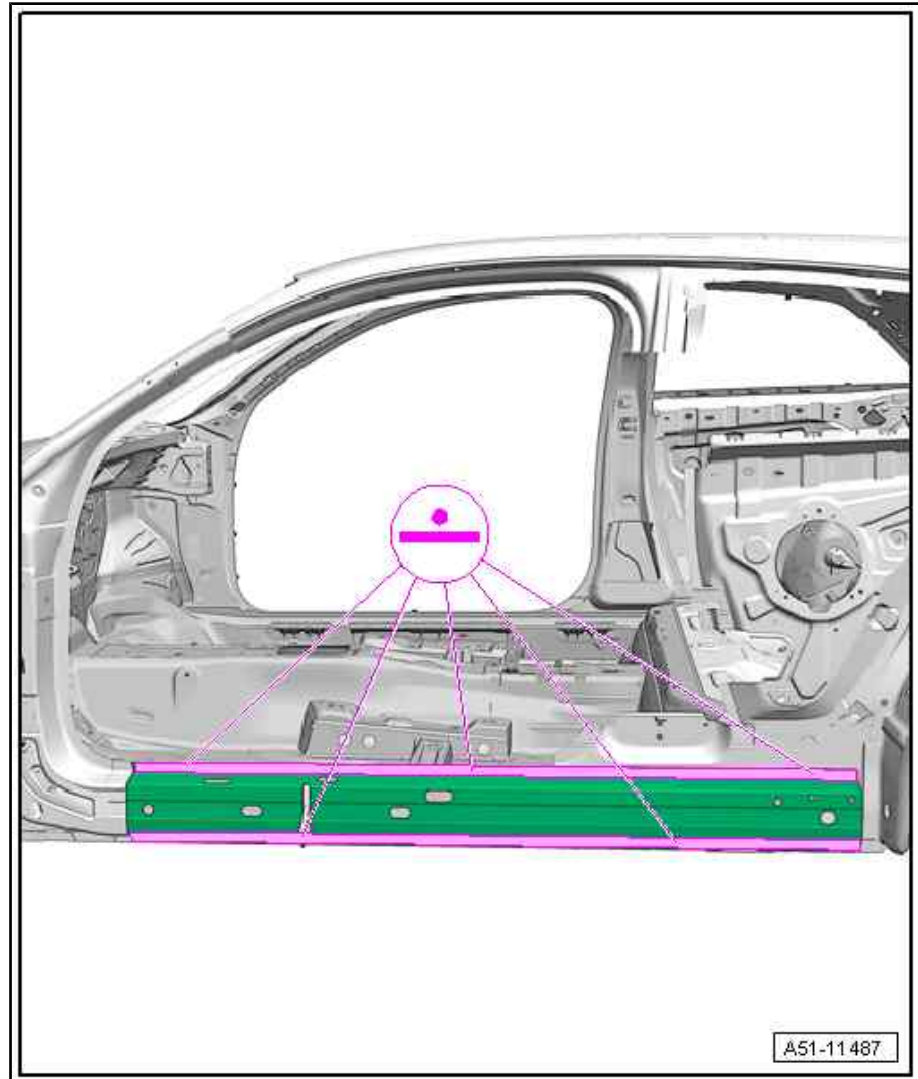
- ◆ Inner side member

#### NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

### Welding in

- Weld in inner side member using resistance spot welder : RP spot weld seam.



- Welding in inner B-pillar ⇒ [page 349](#)
- Welding in side panel ⇒ [page 499](#)
- Welding in outer side member ⇒ [page 423](#)



RO: 51 47 55 50

## 31 Inner side member - Renewal

Sportback and Saloon identical

1 - Inner A-pillar reinforcement

2 - Inner side member

3 - Moulded foam insert

4 - Wheel housing reinforcement

5 - Separating cut

Partial renewal

*Partial renewal is possible with this separating cut.*

6 - Separating cut

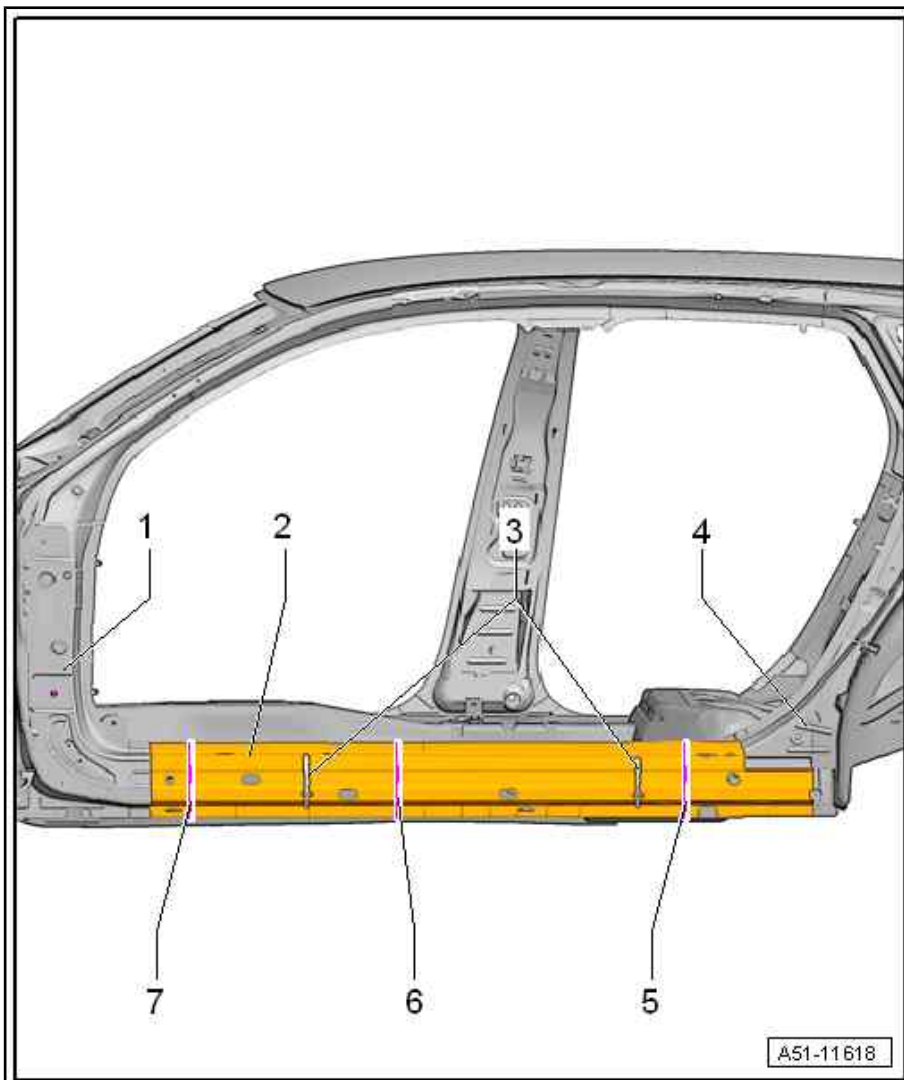
Partial renewal

*Partial renewal is possible with this separating cut.*

7 - Separating cut

Partial renewal

*Partial renewal is possible with this separating cut.*



### 31.1 Tools

Special tools and workshop equipment required

- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker

#### NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

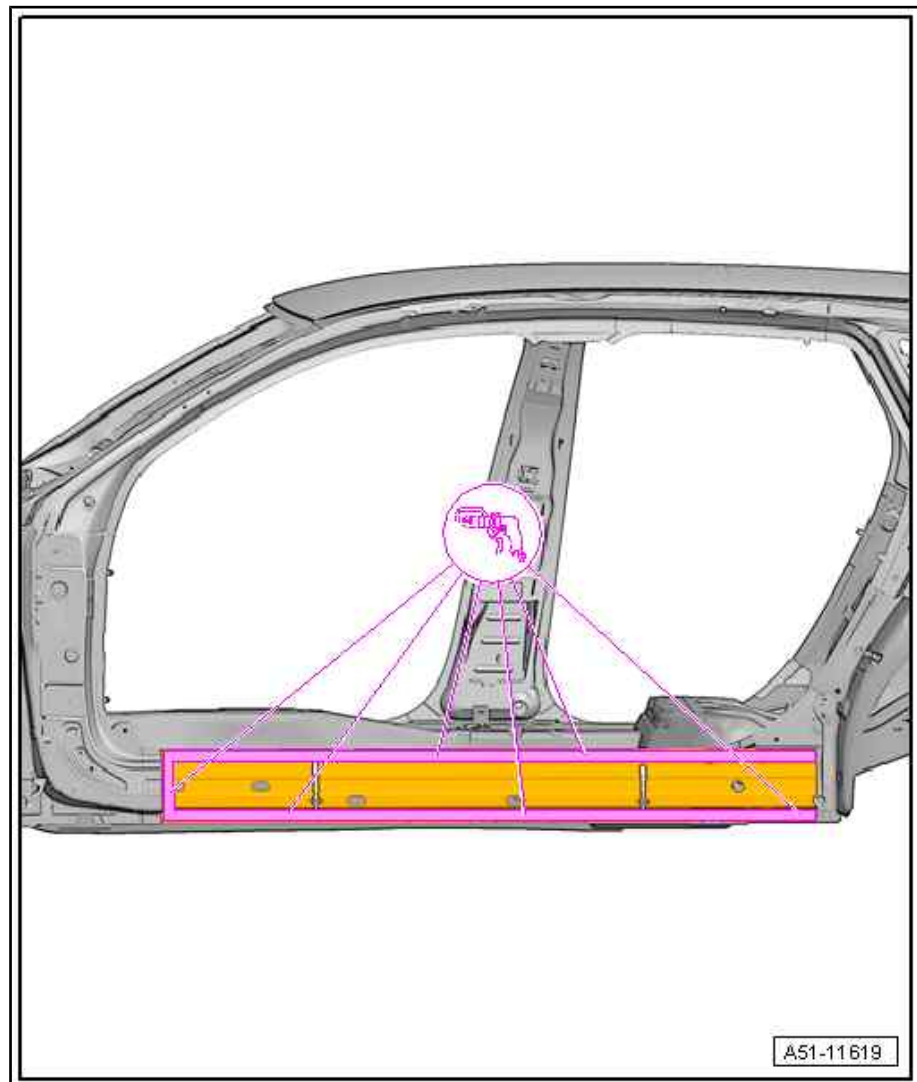


## 31.2 Procedure

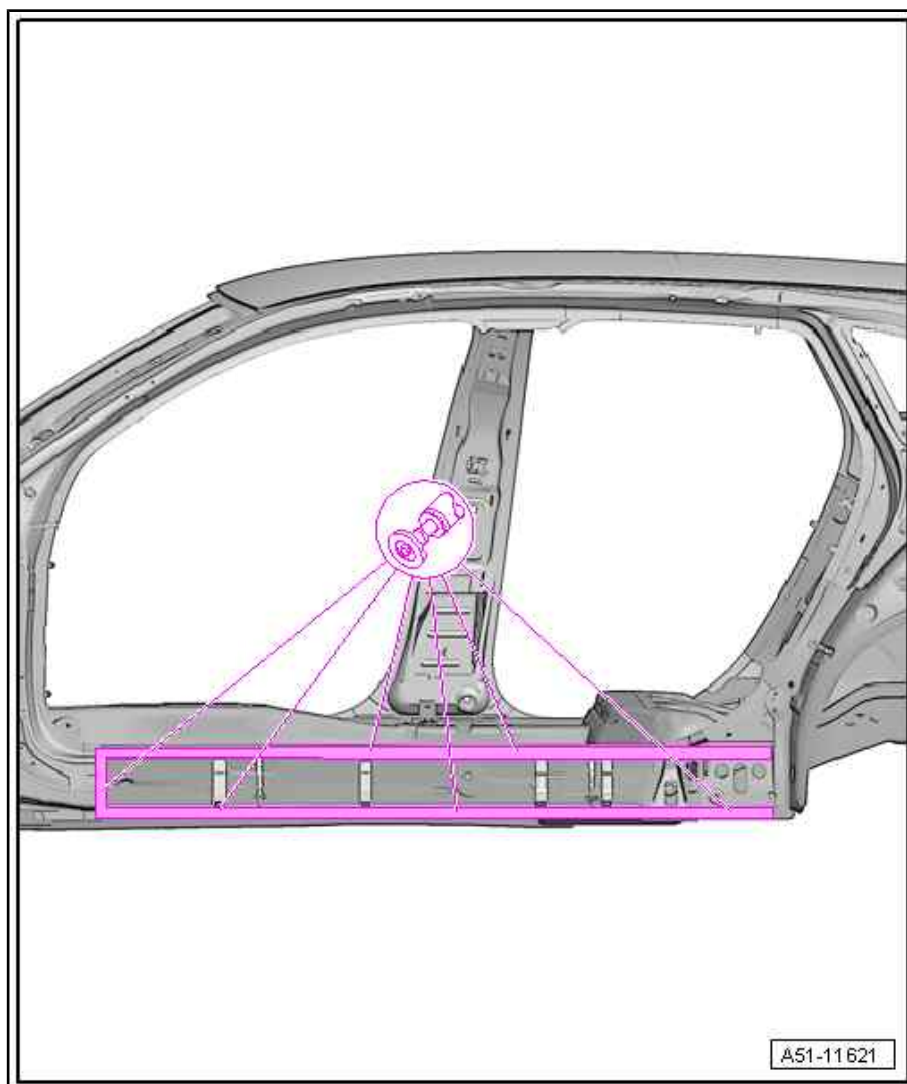
- Removing outer side member ⇒ [page 428](#)
- Removing inner B-pillar (part section) ⇒ [page 370](#)
- Removing A-pillar ⇒ [page 310](#)

### Cutting locations

- Make separating cuts according to extent of damage using body saw .
- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.



### Replacement part

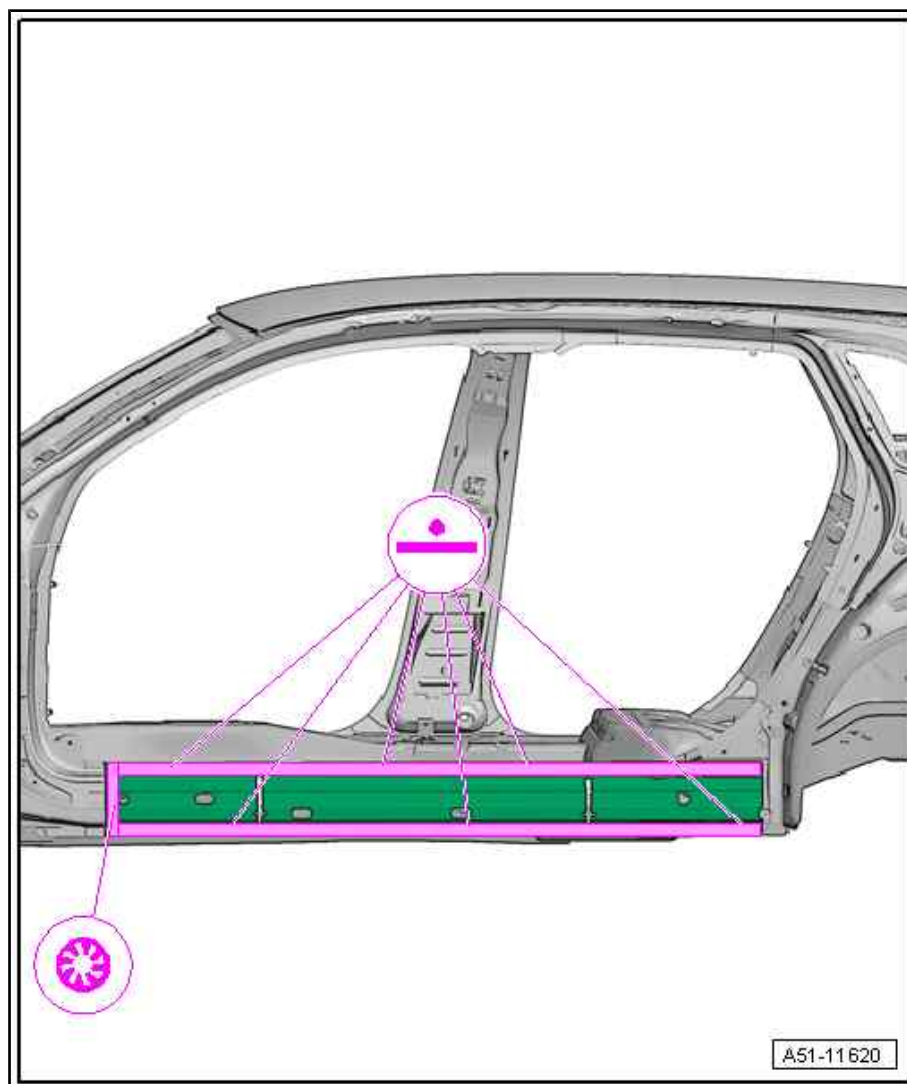
- ◆ Inner side member

#### NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

### Welding in

- Weld in inner side member using resistance spot welder : RP spot weld seam.
- Weld in inner side member using shielded arc welding equipment : SG plug weld seam.



- Welding in inner B-pillar ⇒ [page 349](#)
- Welding in side panel ⇒ [page 499](#)
- Welding in outer A-pillar ⇒ [page 310](#)
- Welding in outer side member ⇒ [page 423](#)

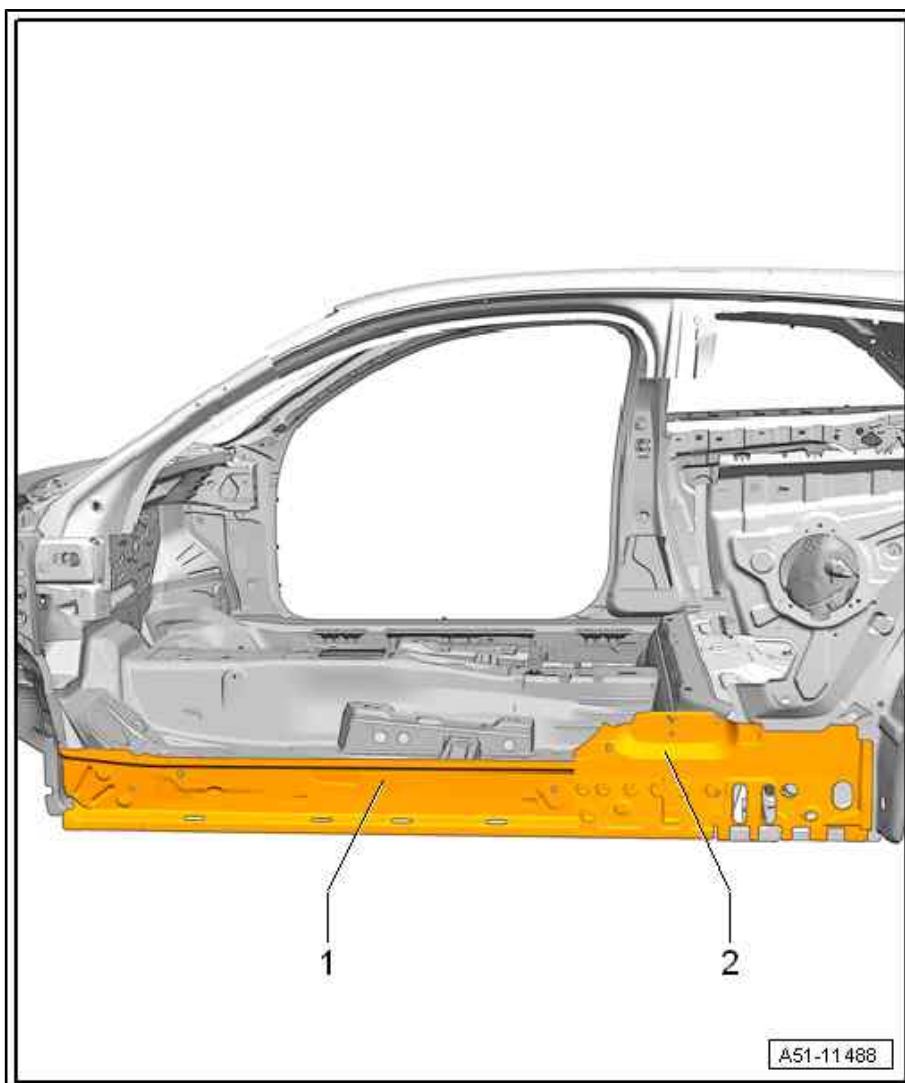


RO: 51 47 55 50

## 32 Inner side member reinforcement - Renewal

1 - Inner side member reinforcement

2 - Reinforcement for belt retractor



### 32.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker

#### NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .



## 32.2 Procedure

- Removing outer side member ⇒ [page 428](#)
- Removing side panel ⇒ [page 511](#)
- Removing inner B-pillar (part section) ⇒ [page 349](#)
- Removing A-pillar ⇒ [page 310](#)
- Removing inner A-pillar ⇒ [page 340](#)
- Removing inner A-pillar reinforcement ⇒ [page 345](#)

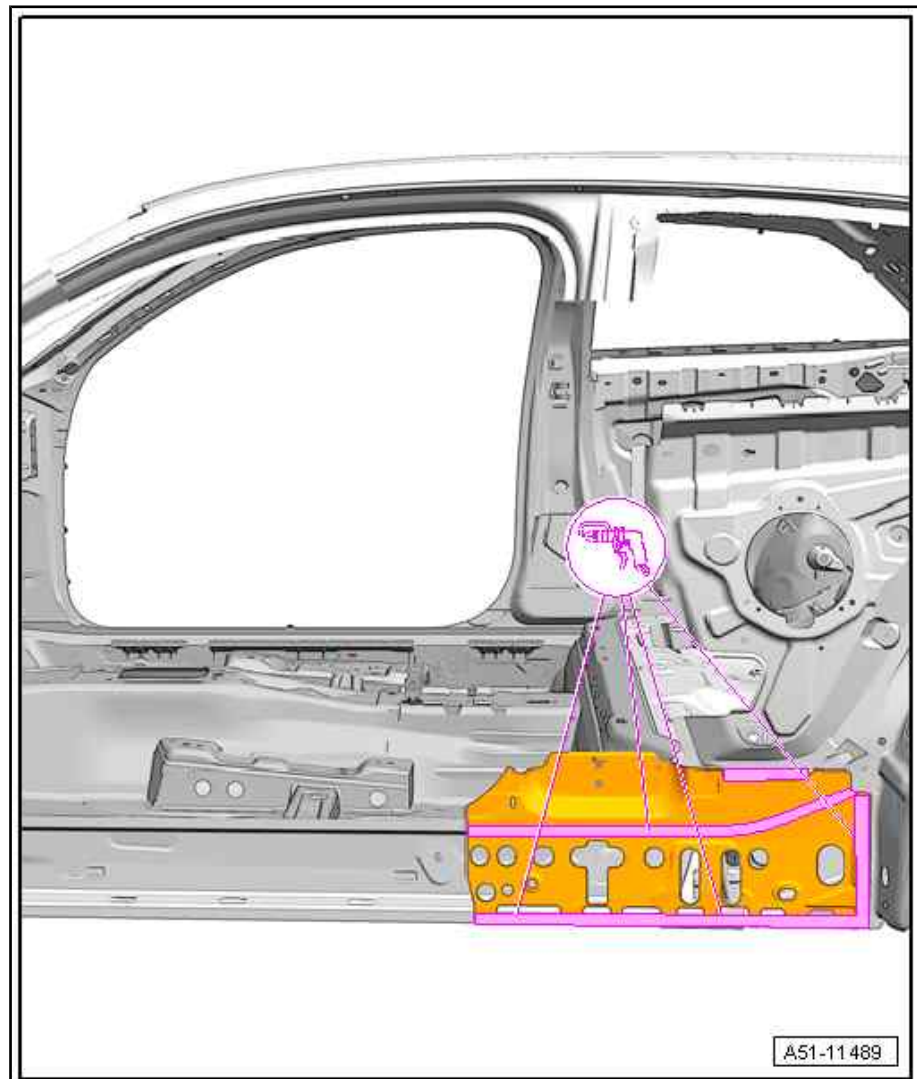


### Note

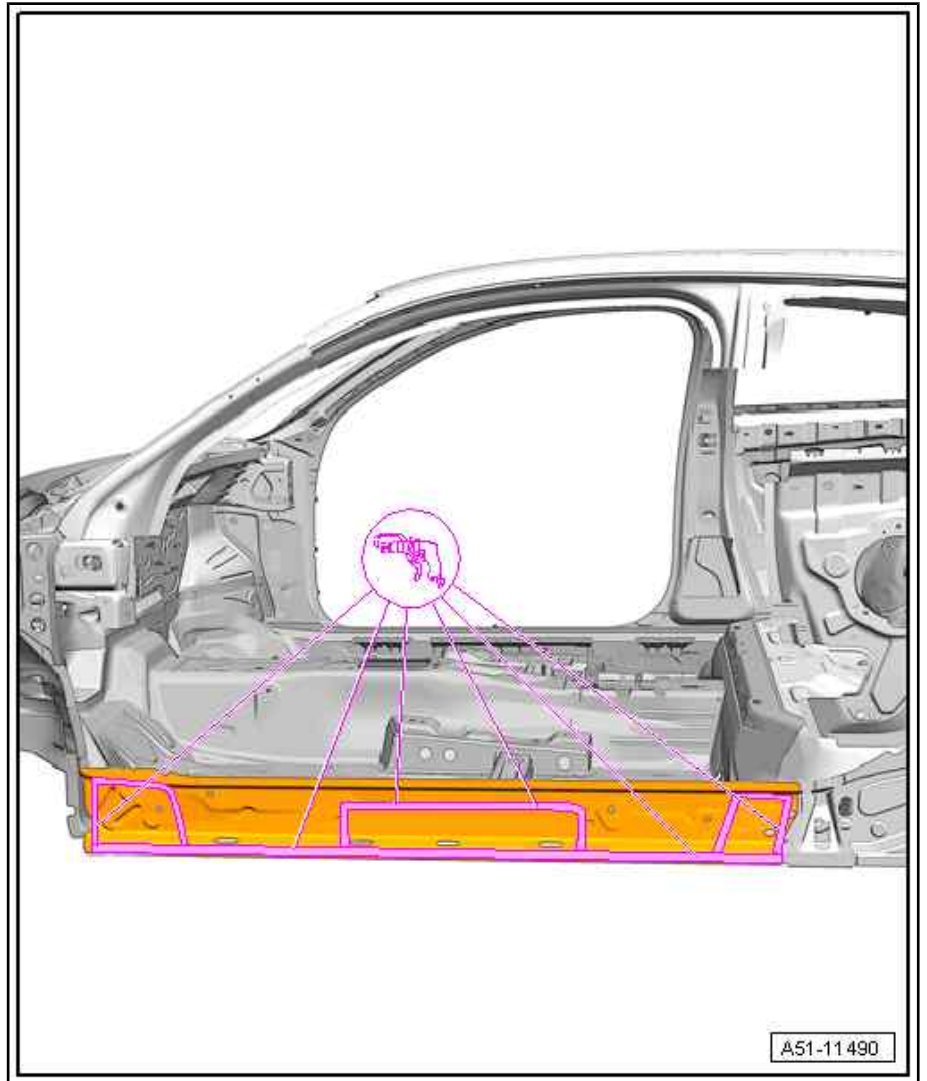
*The inner side member reinforcement consists of ultra-high-strength hot-formed steel.*

### Cutting locations

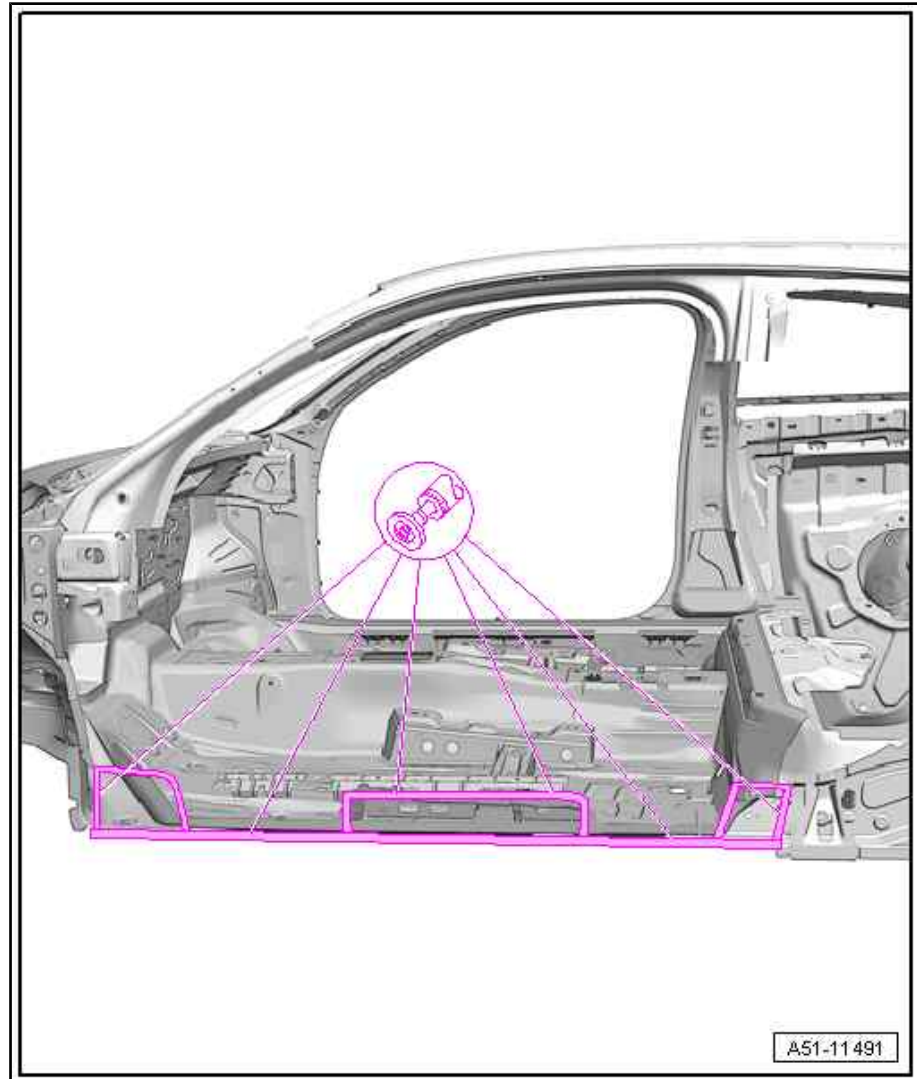
- Separate original joint using spot weld breaker .



- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.



### Replacement part

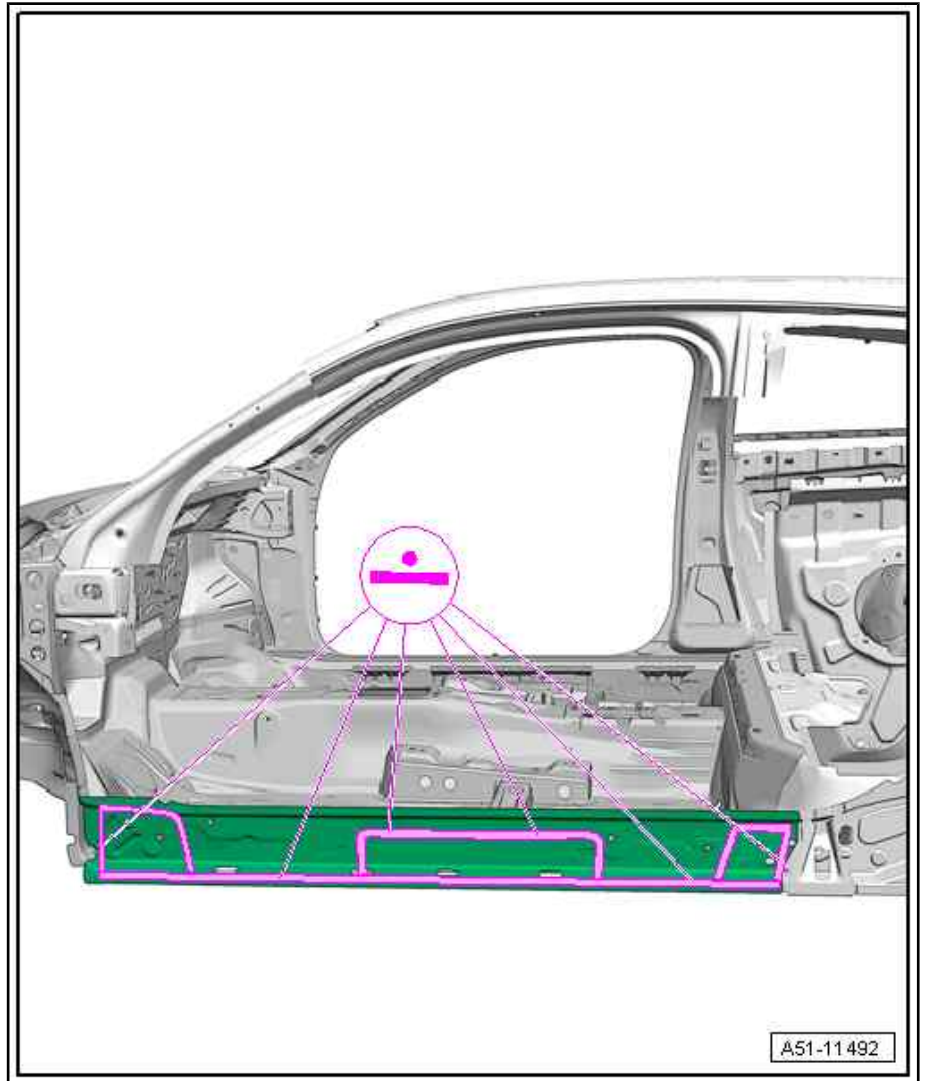
- ◆ Inner side member reinforcement
- ◆ Reinforcement for belt retractor

### NOTICE

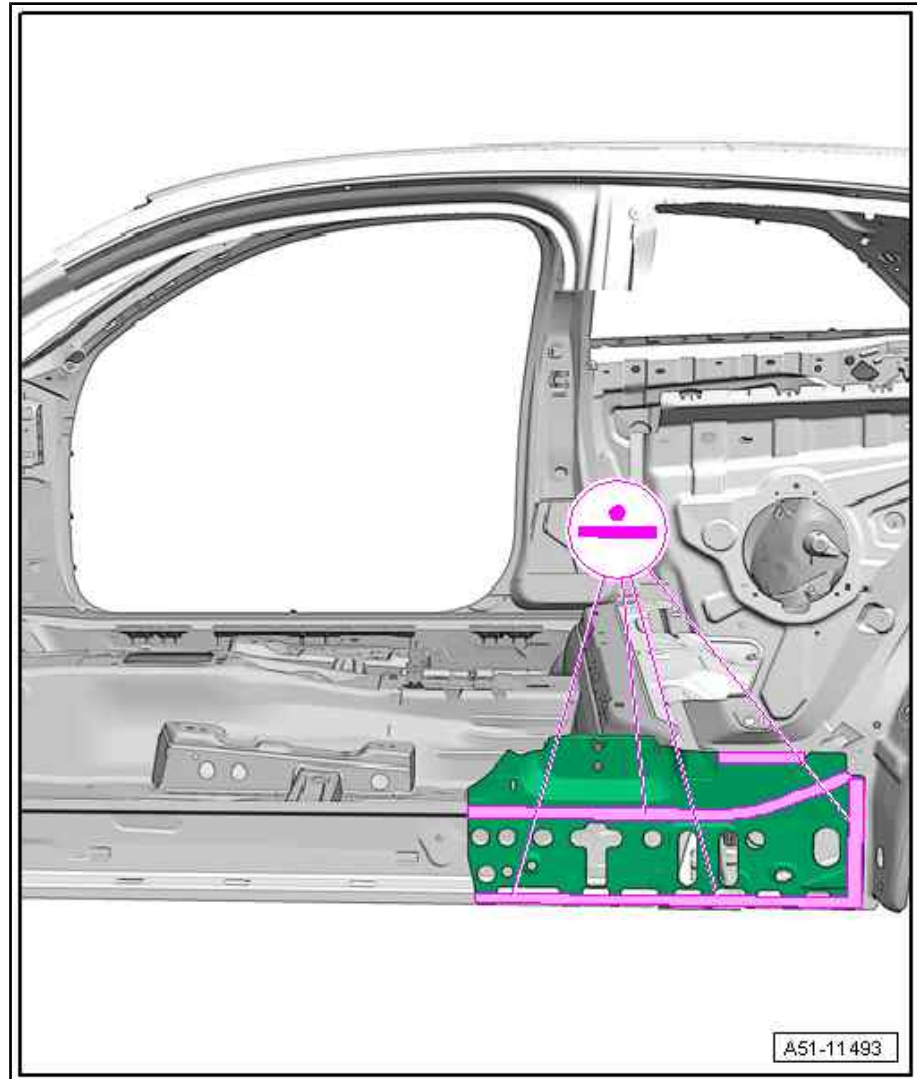
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

### Welding in

- Weld in inner side member reinforcement using resistance spot welder : RP spot weld seam.



- Weld in reinforcement for belt retractor using resistance spot welder : RP spot weld seam.



- Welding in side member ⇒ [page 433](#)
- Welding in side panel ⇒ [page 499](#)
- Welding in inner B-pillar ⇒ [page 349](#)
- Welding in inner A-pillar ⇒ [page 340](#)
- Welding in A-pillar reinforcement ⇒ [page 345](#)



RO: 51 46 55 00

## 33 Mounting for seat cross member (outer) - Renewal

A3, Sportback and Saloon identical



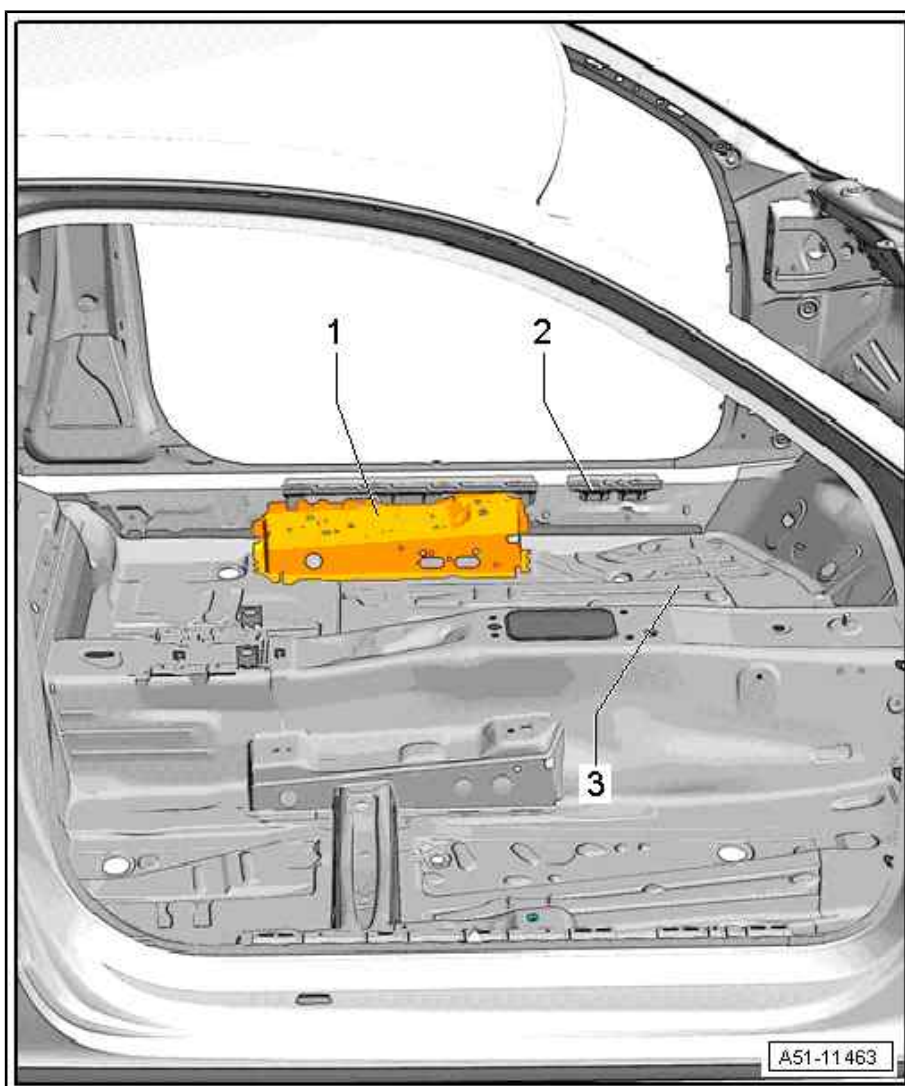
### Note

- ◆ *If one of the threads in the mounting for the seat cross member (outer) is damaged, the component must be renewed.*
- ◆ *If the mounting for the seat cross member (outer) is renewed, the repairs must be documented according to the relevant national legislation.*

1 - Mounting for seat cross member (outer)

2 - Inner side member

3 - Floor panel



### 33.1 Tools

Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment



- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker

**!** NOTICE

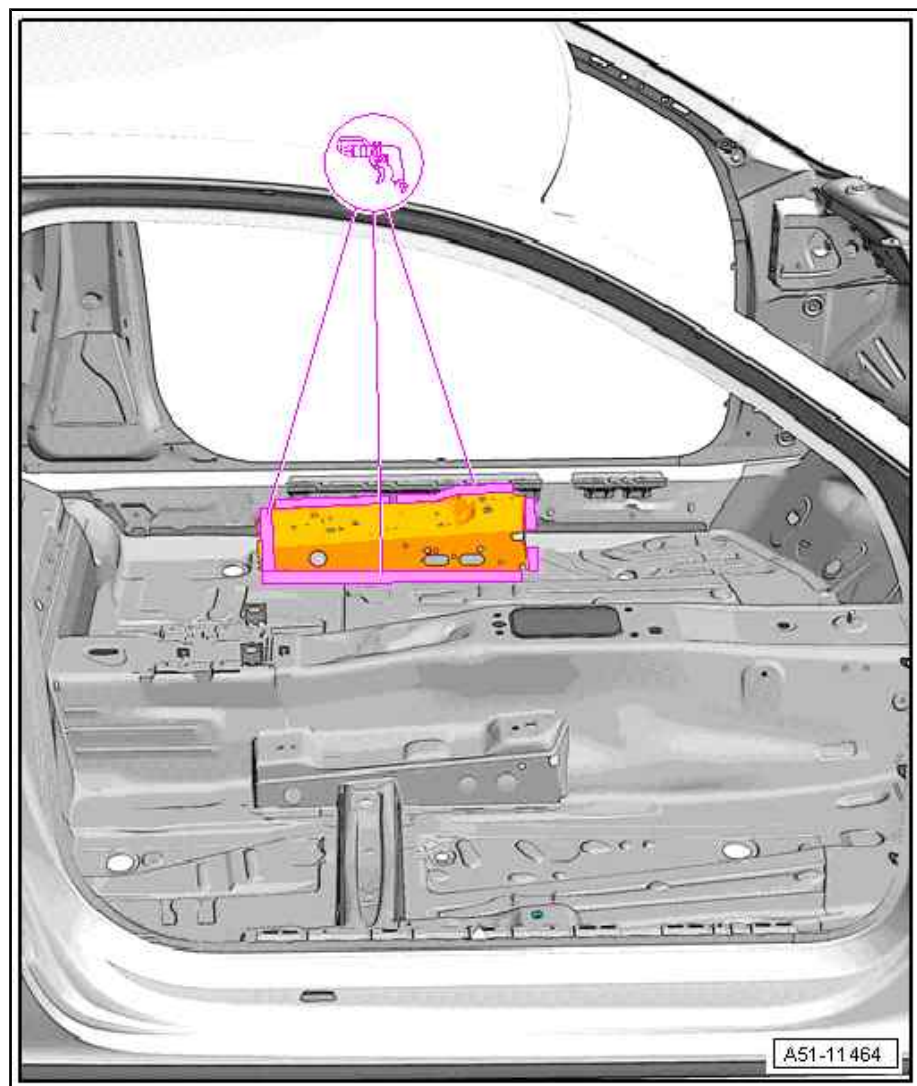
One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

## 33.2 Procedure

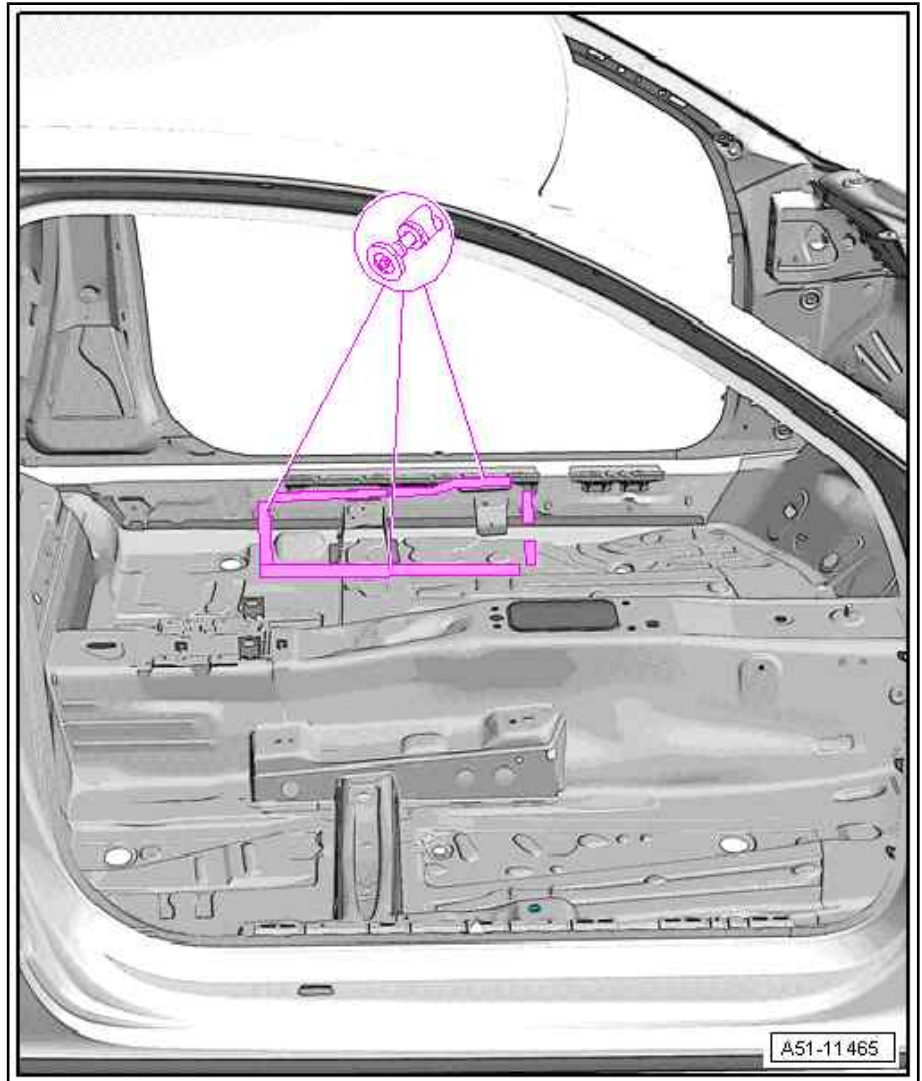
- Removing centre seat cross member ⇒ [page 452](#)

### Cutting locations

- Separate original joint to inner side member and floor panel using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.

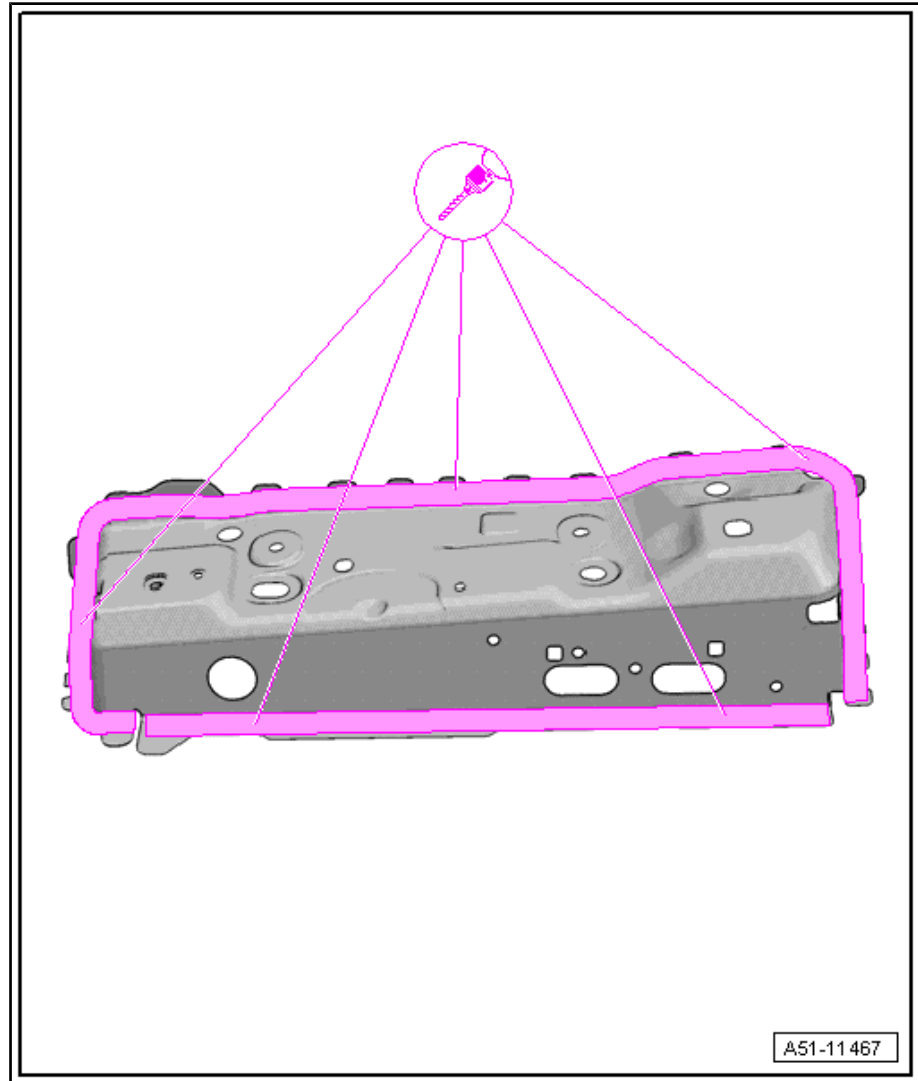


#### Replacement part

- ◆ Mounting for seat cross member (outer)

#### Preparing new parts

- Drill holes for SG plug weld seam, 8 mm  $\varnothing$  using drill .
- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.



- Match up and fix new part in position.
- Check fit relative to seat.

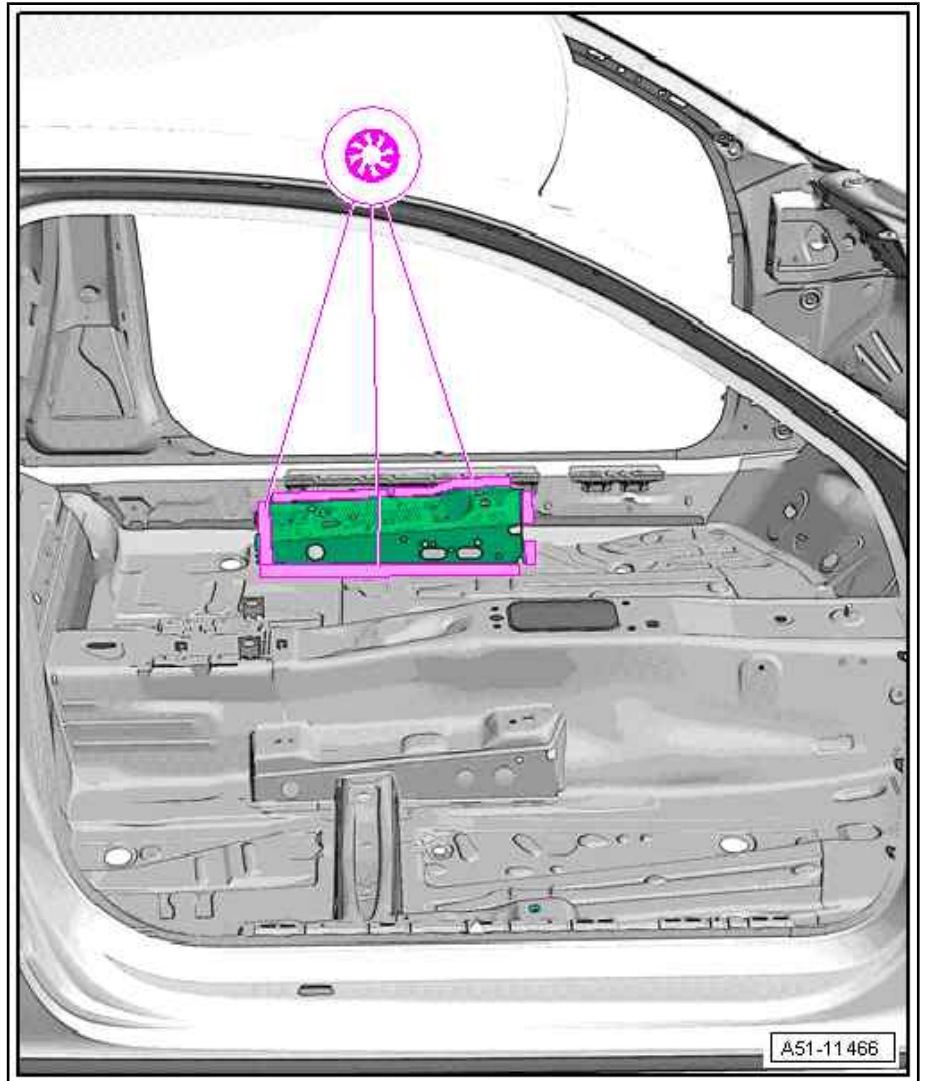


#### NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

#### Welding in

- Weld mounting for seat cross member (outer) to inner side member and floor panel using shielded arc welding equipment : SG plug weld seam.



- Welding in centre seat cross member ⇒ [page 452](#)

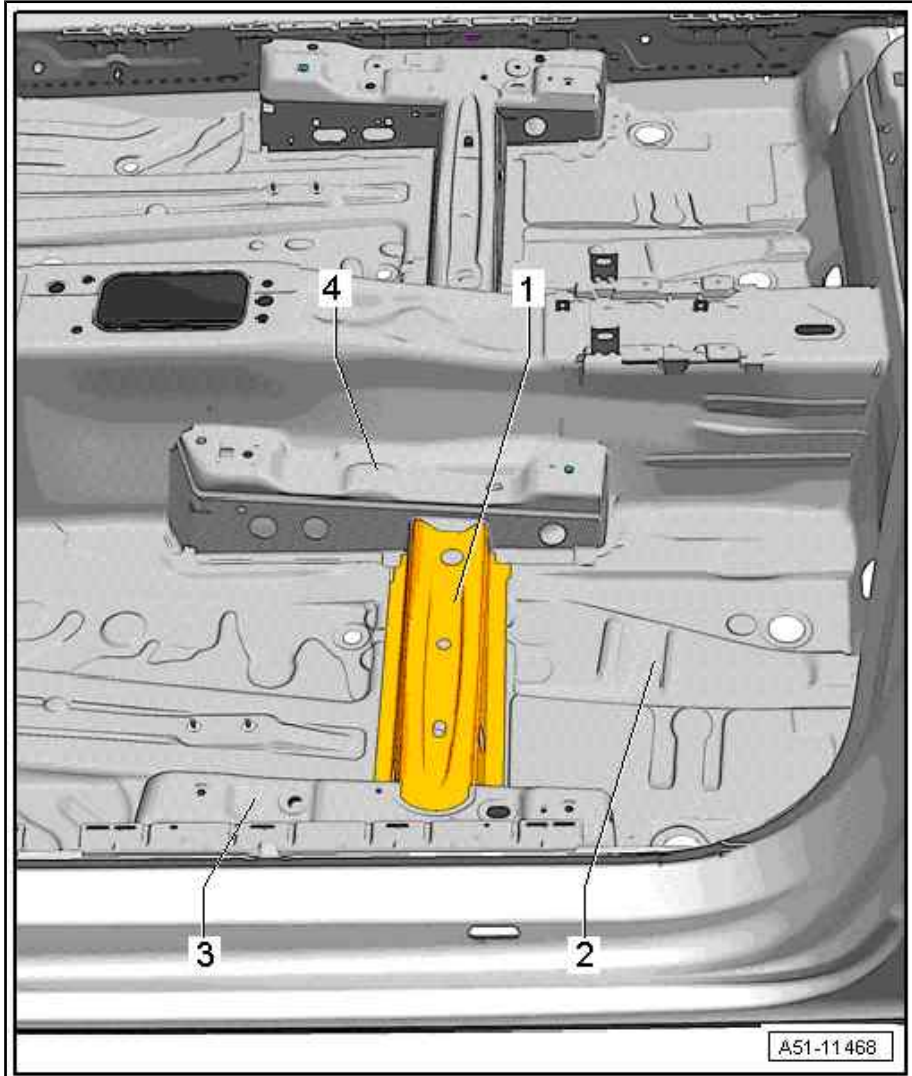


RO: 51 87 55 00

## 34 Centre seat cross member - Renewal

A3, Sportback and Saloon identical

- 1 - Centre seat cross member
- 2 - Floor panel
- 3 - Outer seat cross member
- 4 - Inner seat cross member



### 34.1 Tools

Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker



**NOTICE**

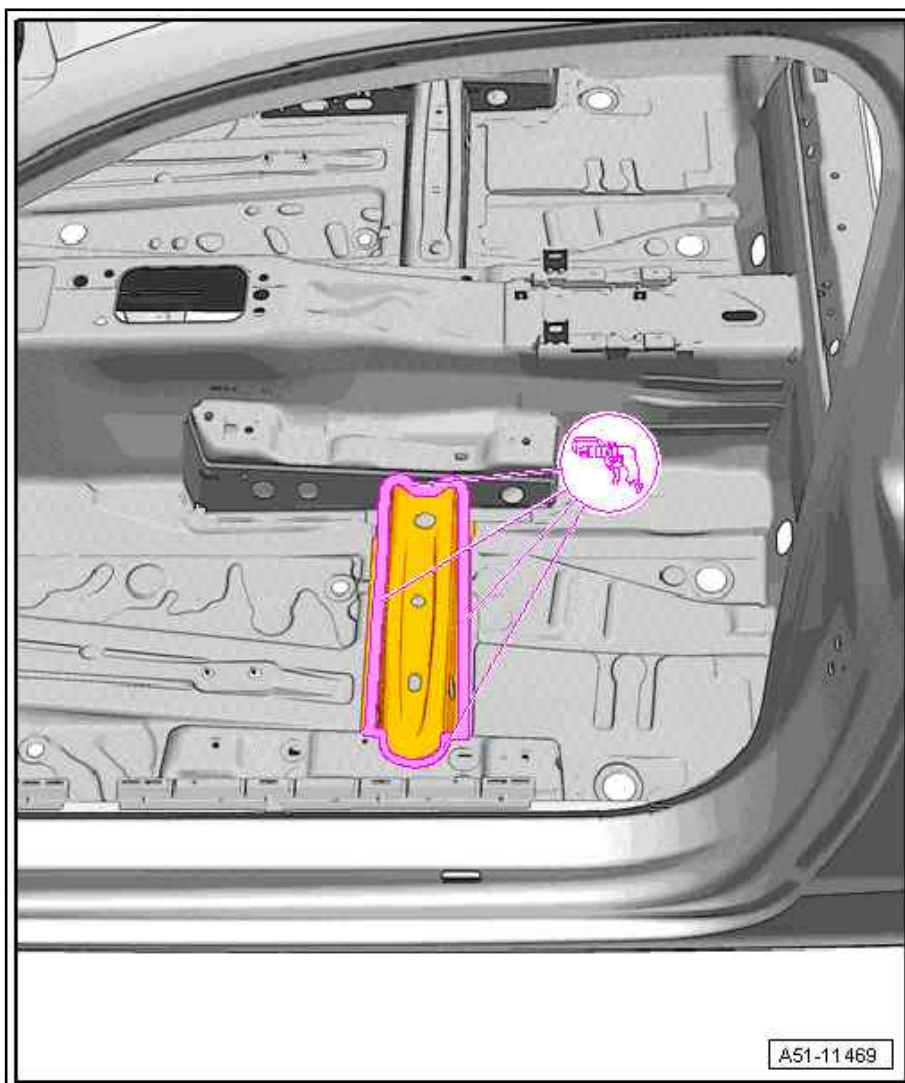
One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .



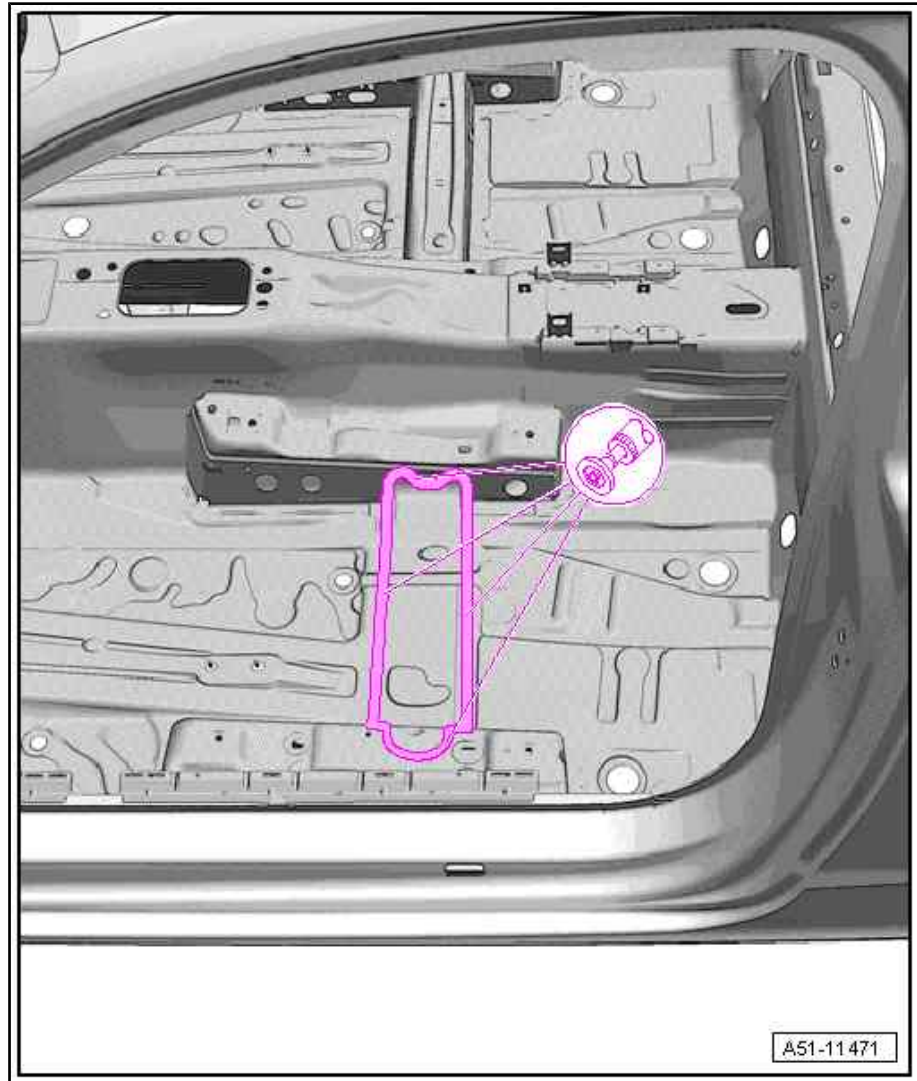
## 34.2 Procedure

### Cutting locations

- Separate original joint at mounting for seat cross member (inner) and floor panel using spot weld breaker .
- Separate joint at mounting for seat cross member (inner) using spot weld breaker .
- Pull seat cross member out of mounting for seat cross member (inner).



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.

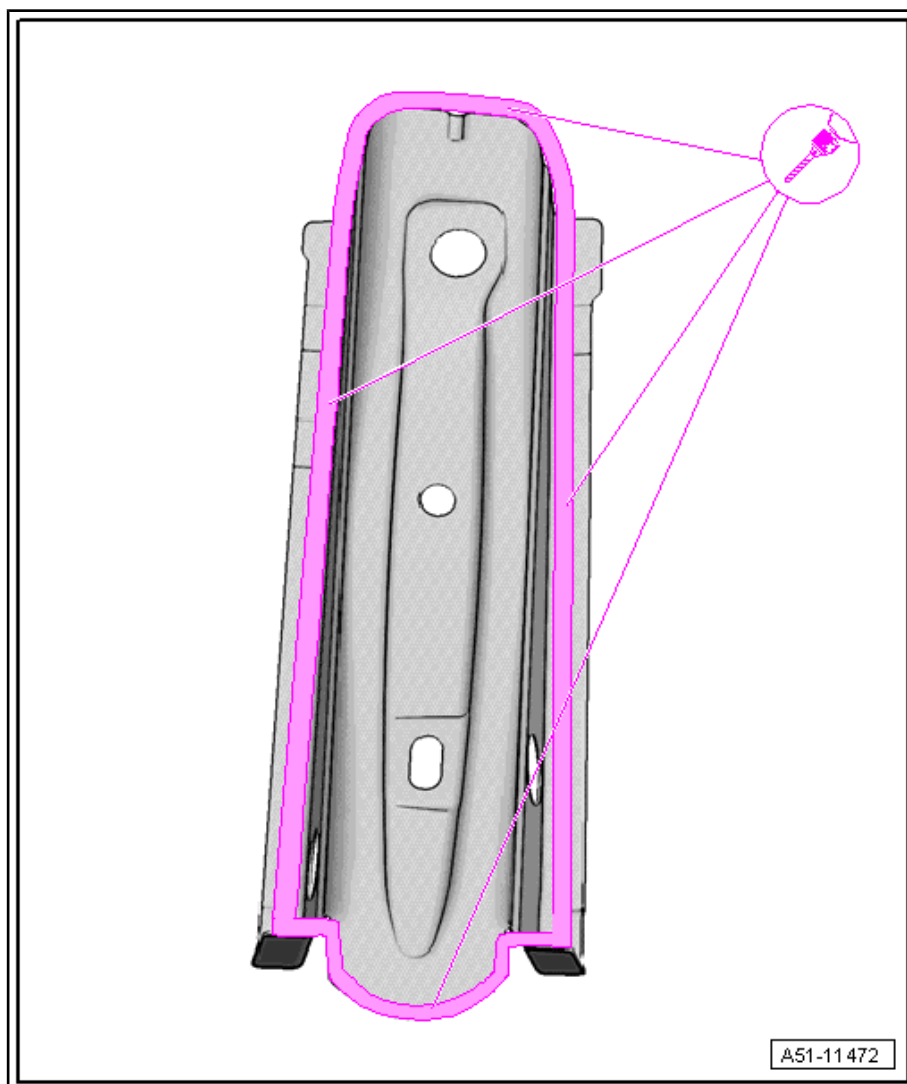


### Replacement part

- ◆ Seat cross member

### Preparing new part

- Drill holes for SG plug weld seam, 8 mm Ø using drill .
- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.

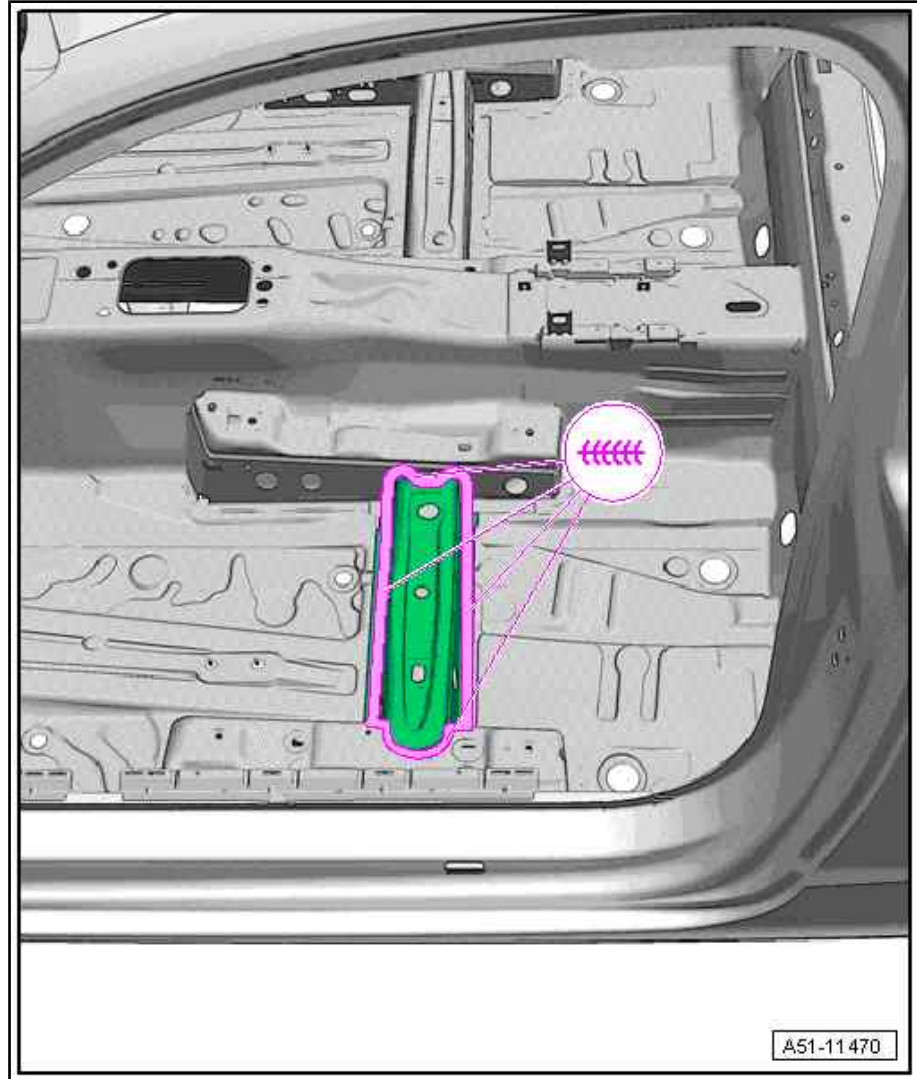


**!** NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Match up new parts and fix in position.
- Weld seat cross member to mounting for seat cross member (inner) and floor panel using shielded arc welding equipment : SG plug weld seam.





RO: 51 46 55 58

## 35 Mounting for seat cross member (inner) - Renewal

A3, Sportback and Saloon identical



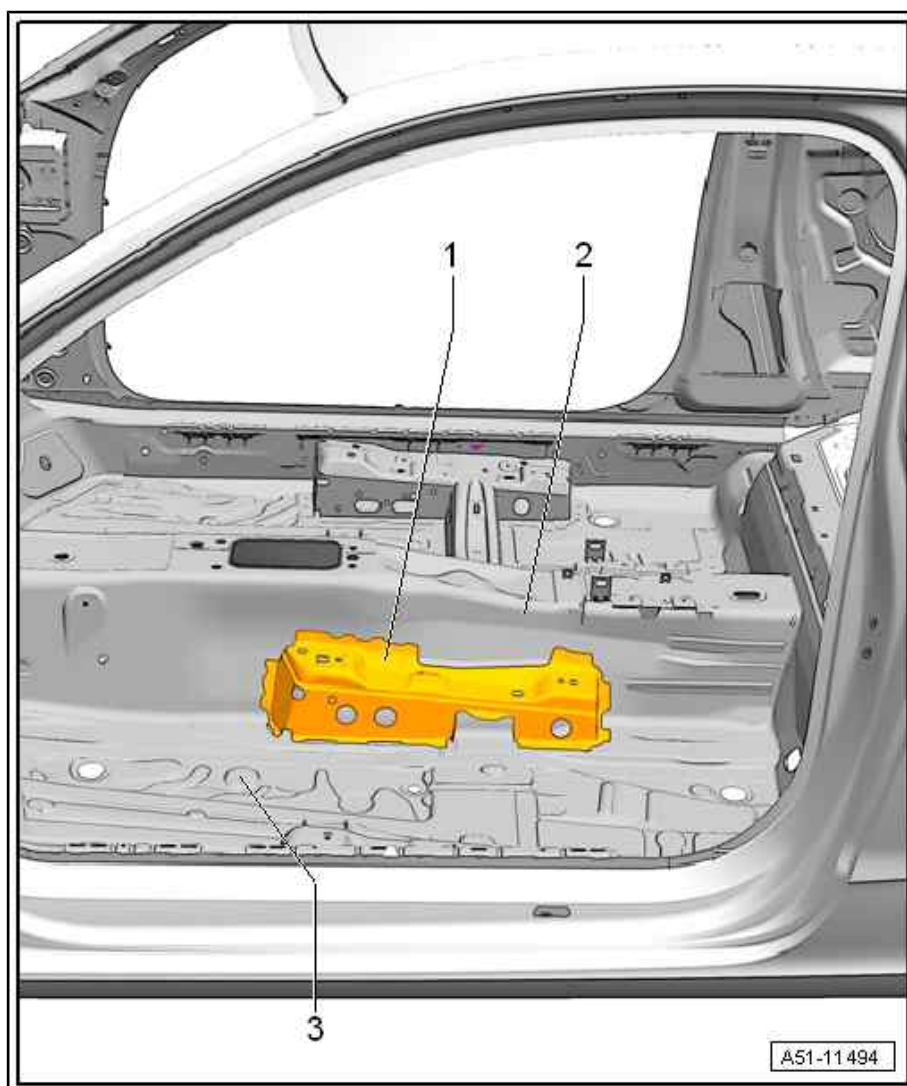
### Note

*If one of the threads in the mounting for the seat cross member is damaged, the component must be renewed.*

1 - Mounting for seat cross member (inner)

2 - Centre tunnel

3 - Floor panel



### 35.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder



- ◆ Body saw
- ◆ Spot weld breaker

**!** NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

## 35.2 Procedure

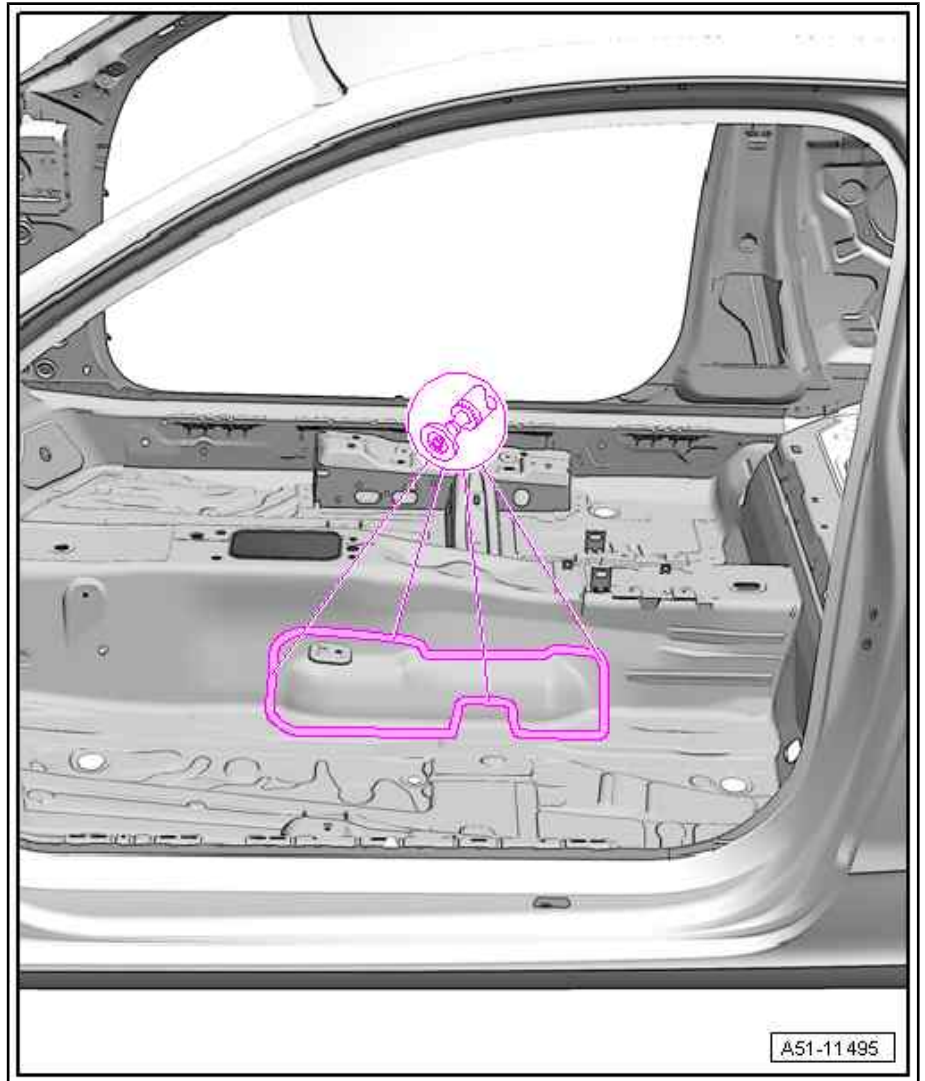
- Removing centre seat cross member ⇒ [page 452](#)

### Cutting locations

- Separate original joint to centre tunnel and floor panel using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.

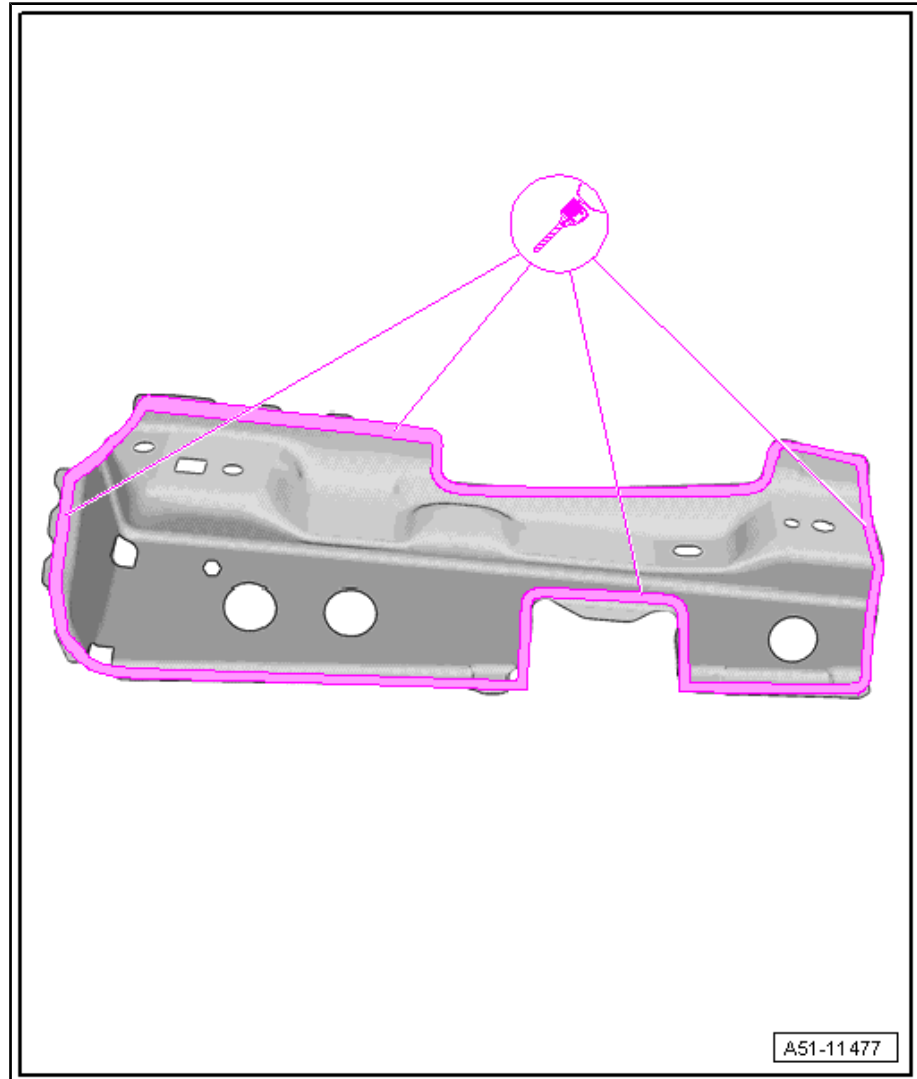


#### Replacement part

- ◆ Mounting for seat cross member (inner)

#### Preparing new part

- Drill holes for SG plug weld seam, 8 mm  $\varnothing$  using drill .
- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.



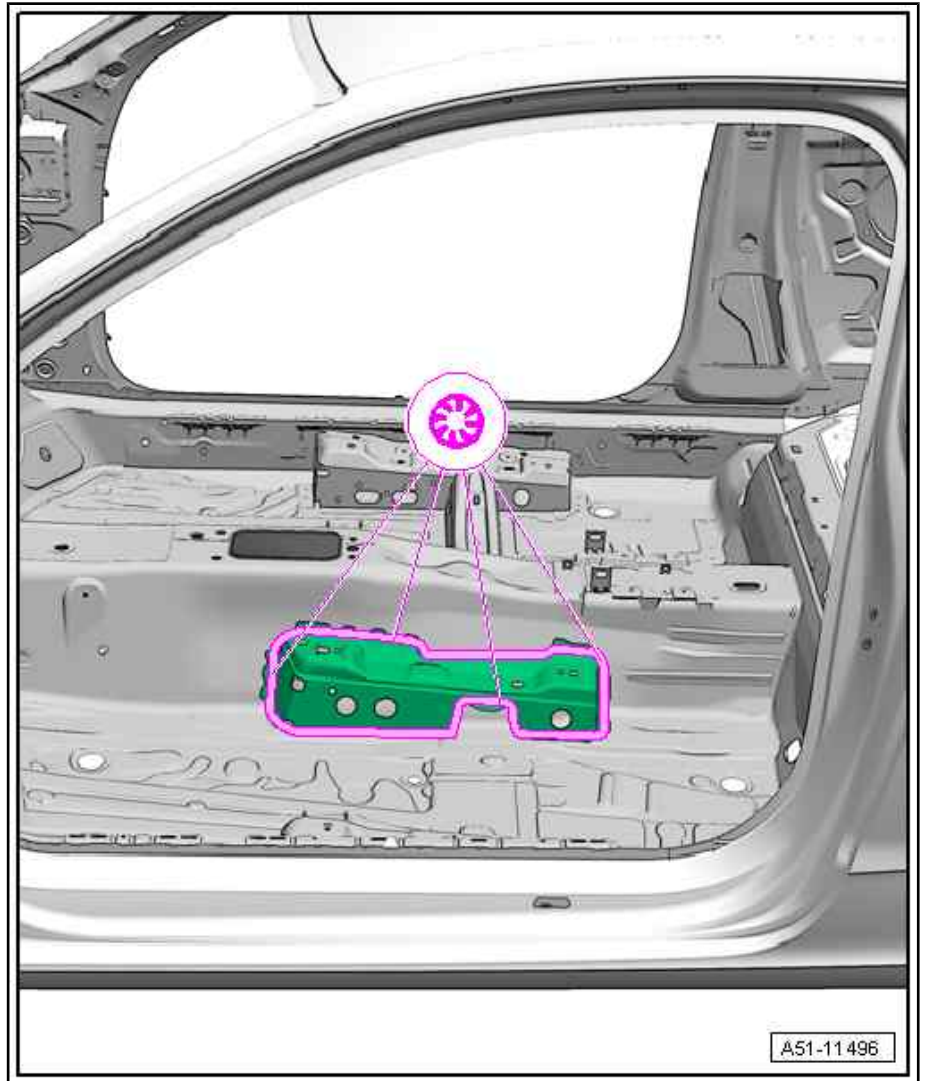
**!** NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

- Match up new parts and fix in position.
- Check fit relative to seat.

**Welding in**

- Weld mounting for seat cross member (inner) to centre tunnel and floor panel using shielded arc welding equipment : SG plug weld seam.



- Welding in centre seat cross member ⇒ [page 452](#)



## 53 – Body - rear

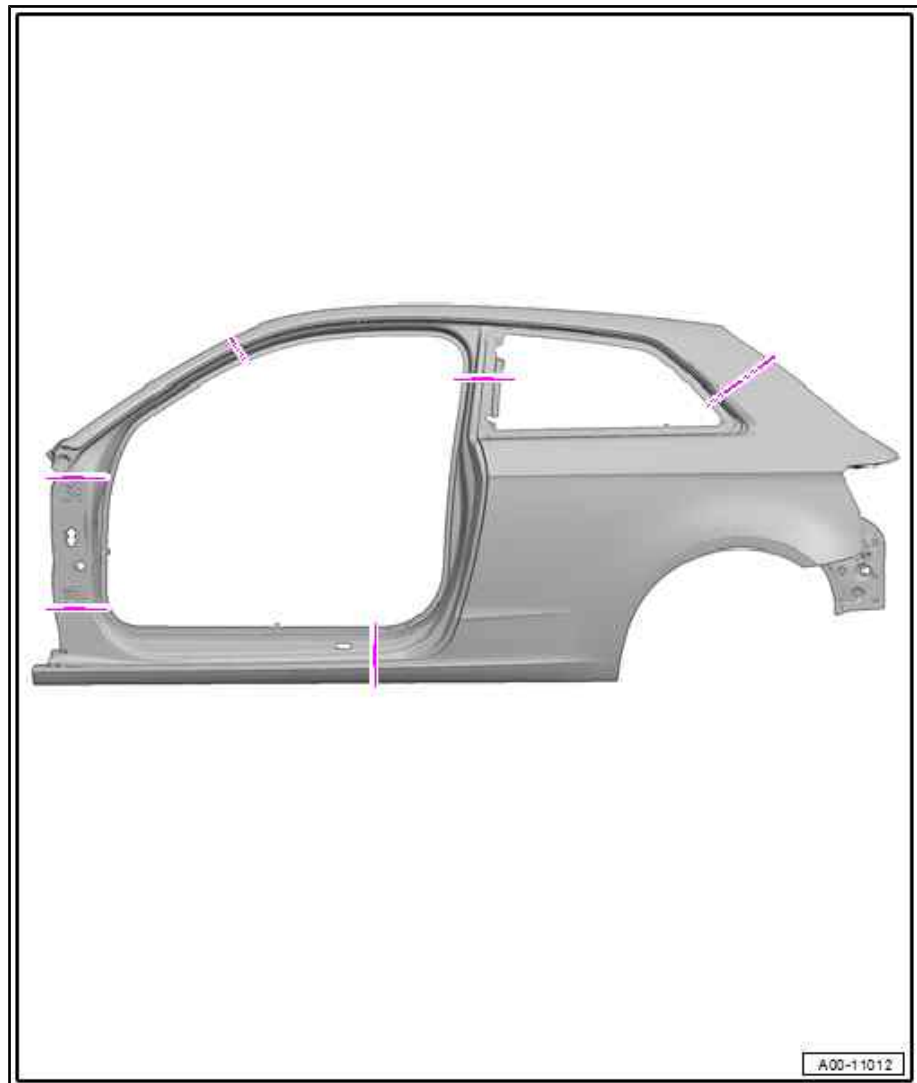
### 1 Permitted separating cuts on complete side panel



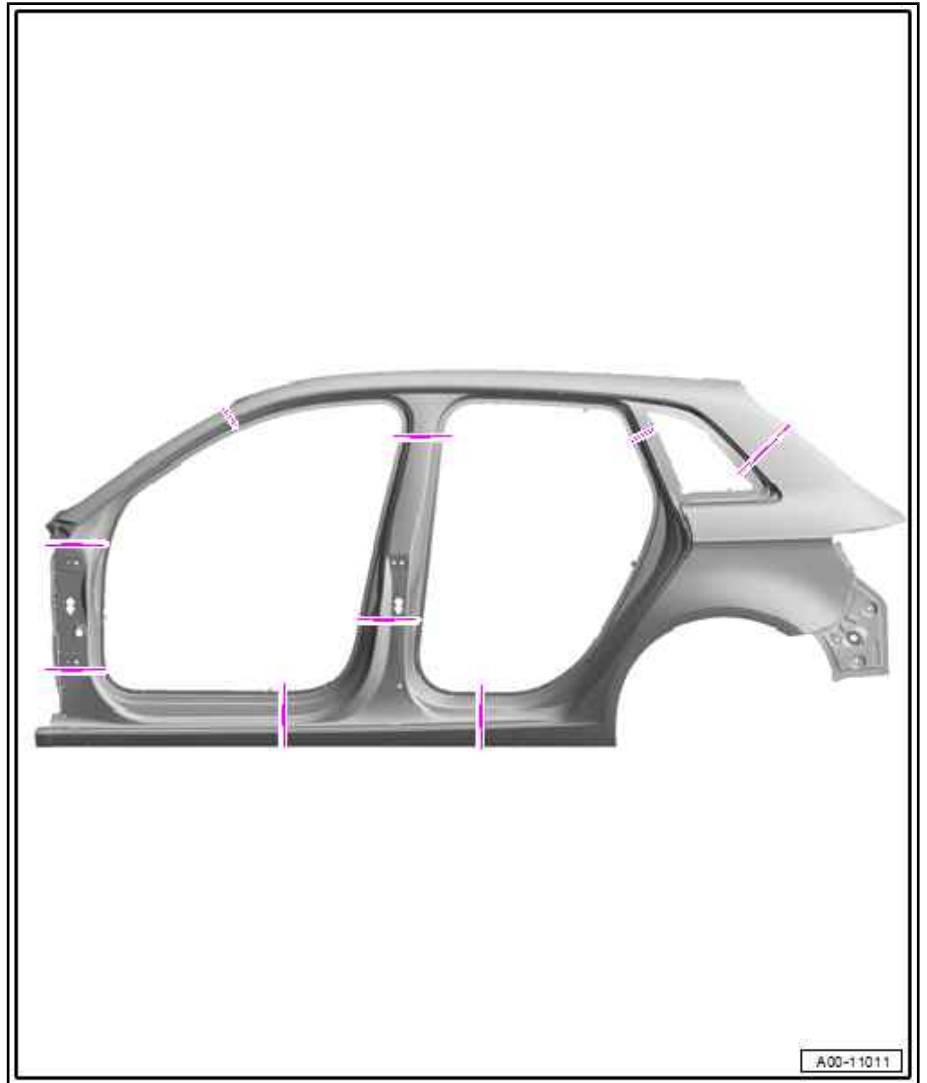
#### Note

- ◆ Use only welding equipment approved by AUDI AG.
- ◆ SG continuous weld seams are approved for the separating cuts shown in the illustration.

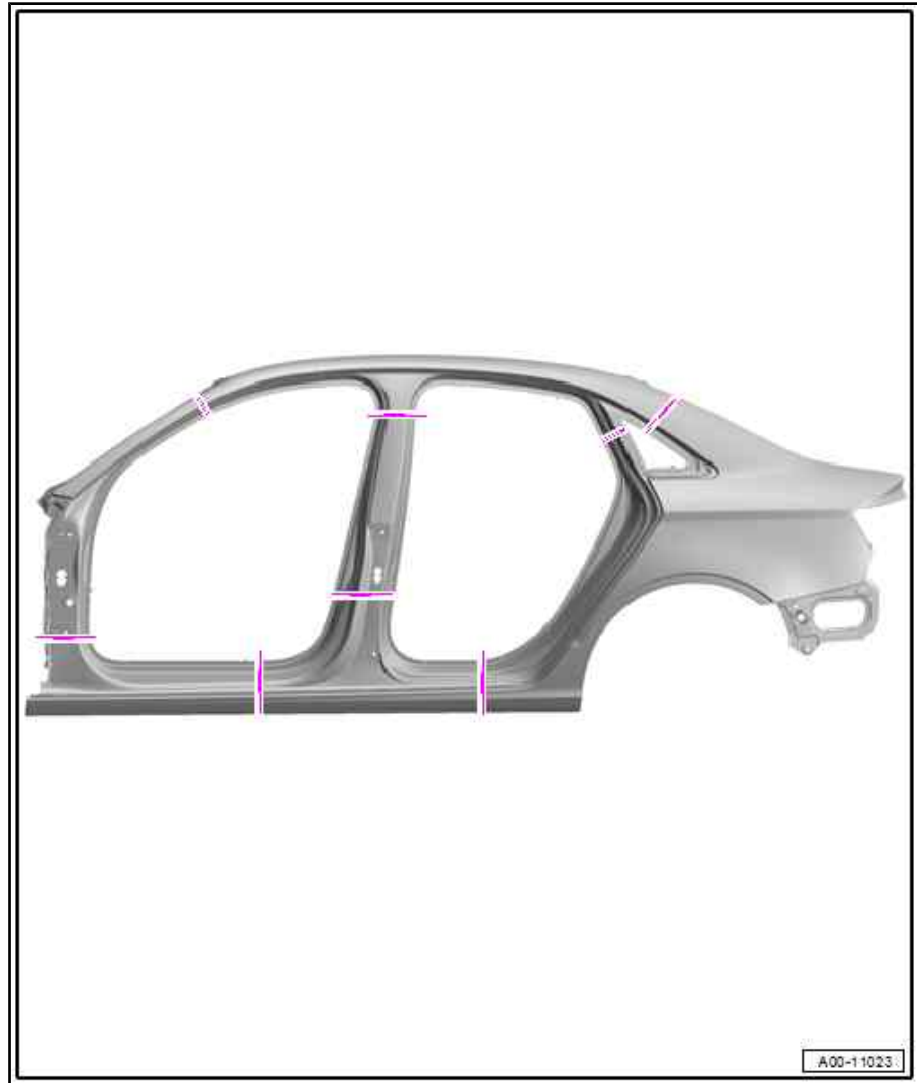
A3



A3 Sportback



A3 Saloon





RO: 53 16 55 00

## 2 Rear upper cross panel - Renewal

A3 and Sportback identical

### DANGER

Damaged natural gas fuel tanks constitute an explosion risk - risk of death!

- If components at the rear and/or rear side of the vehicle (e.g. bumper cover, rear lid, underbody trim, longitudinal member, rear cross panel, etc.) are removed due to accident damage, the natural gas fuel tanks must be checked for damage.
- Carry out assessment of damage to fuel tanks made of composite fibre materials ⇒ Natural gas engines - general information; Rep. gr. 20 ; Assessing damage to fuel tanks made of composite fibre materials; Assessing damage to fuel tanks made of composite fibre materials .

### DANGER

Only for vehicles with natural gas technology

When performing welding, cutting or drilling work in the vicinity of components that convey gas, these components must either be removed or safely covered up before performing repairs.



## 1 - Separating cuts in cross panel

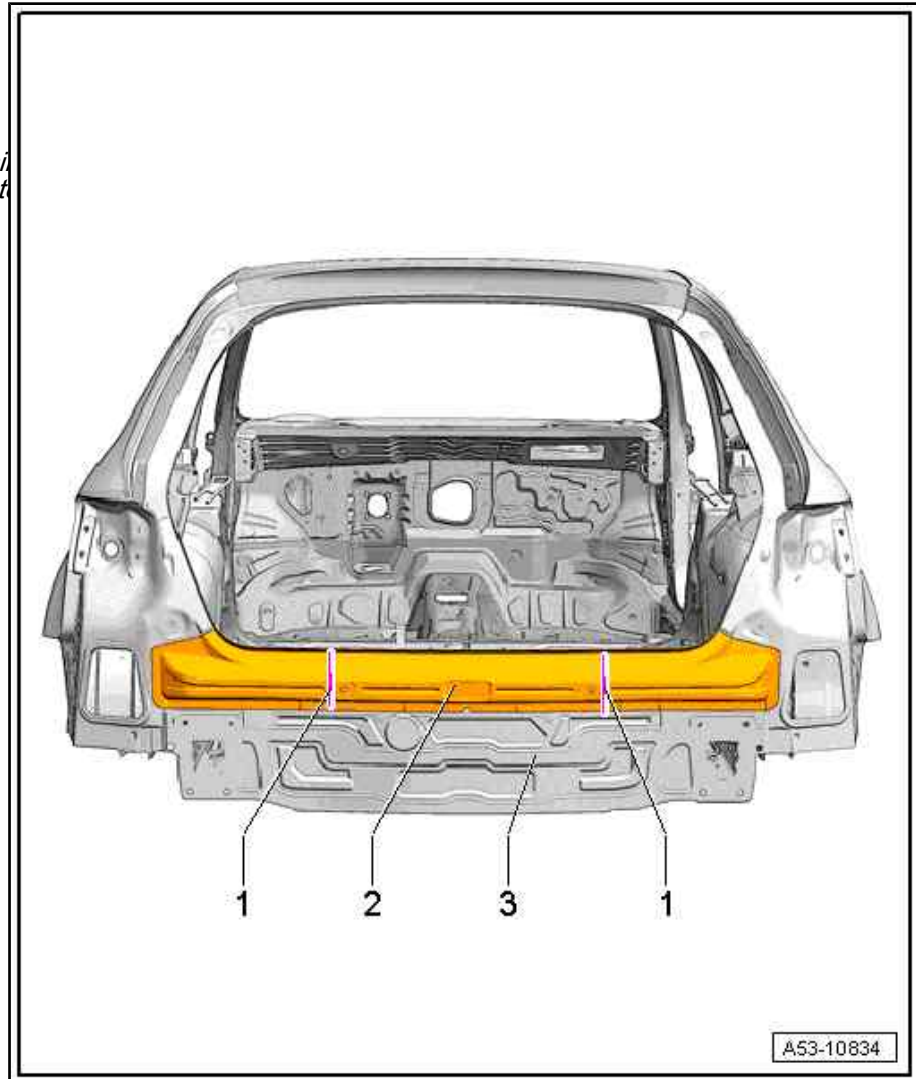


### Note

*Partial renewal is possible  
separating cuts illustrated*

## 2 - Rear upper cross panel

## 3 - Lower cross panel



## 2.1 Tools

### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker



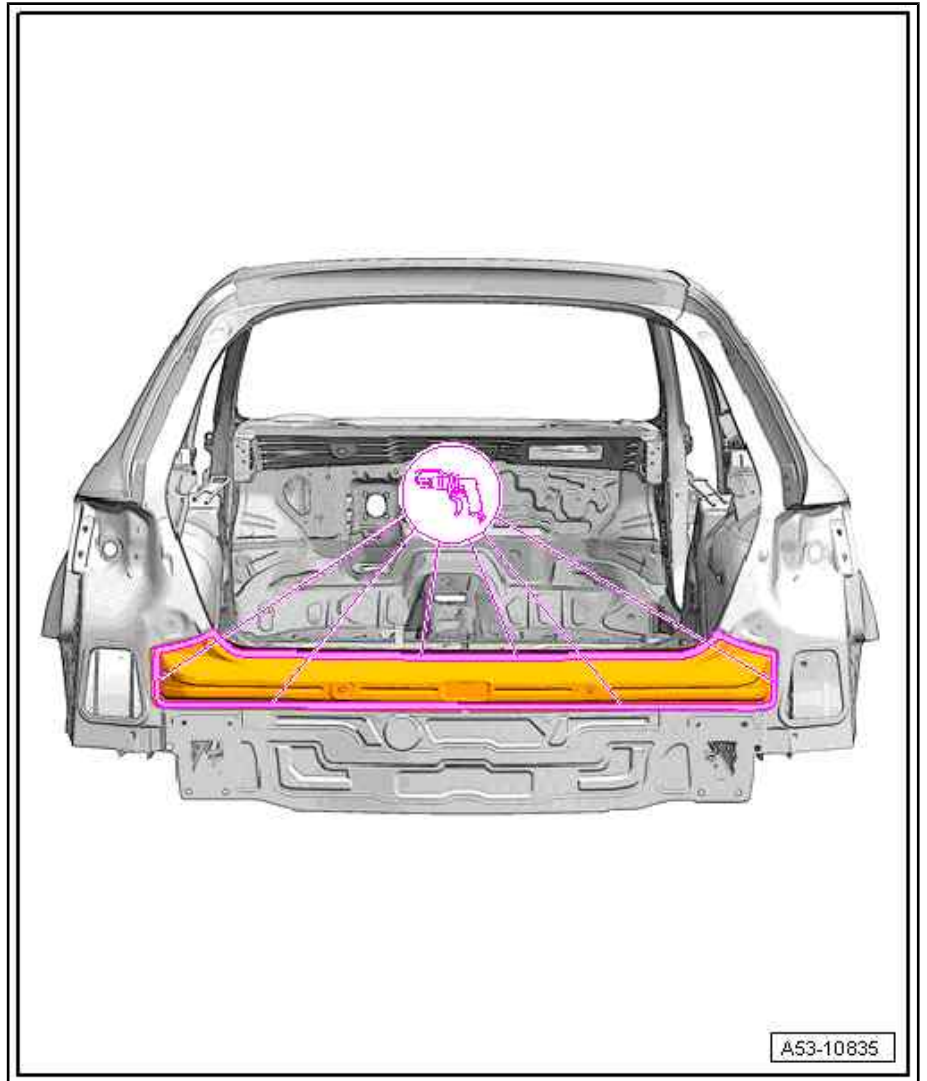
### NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

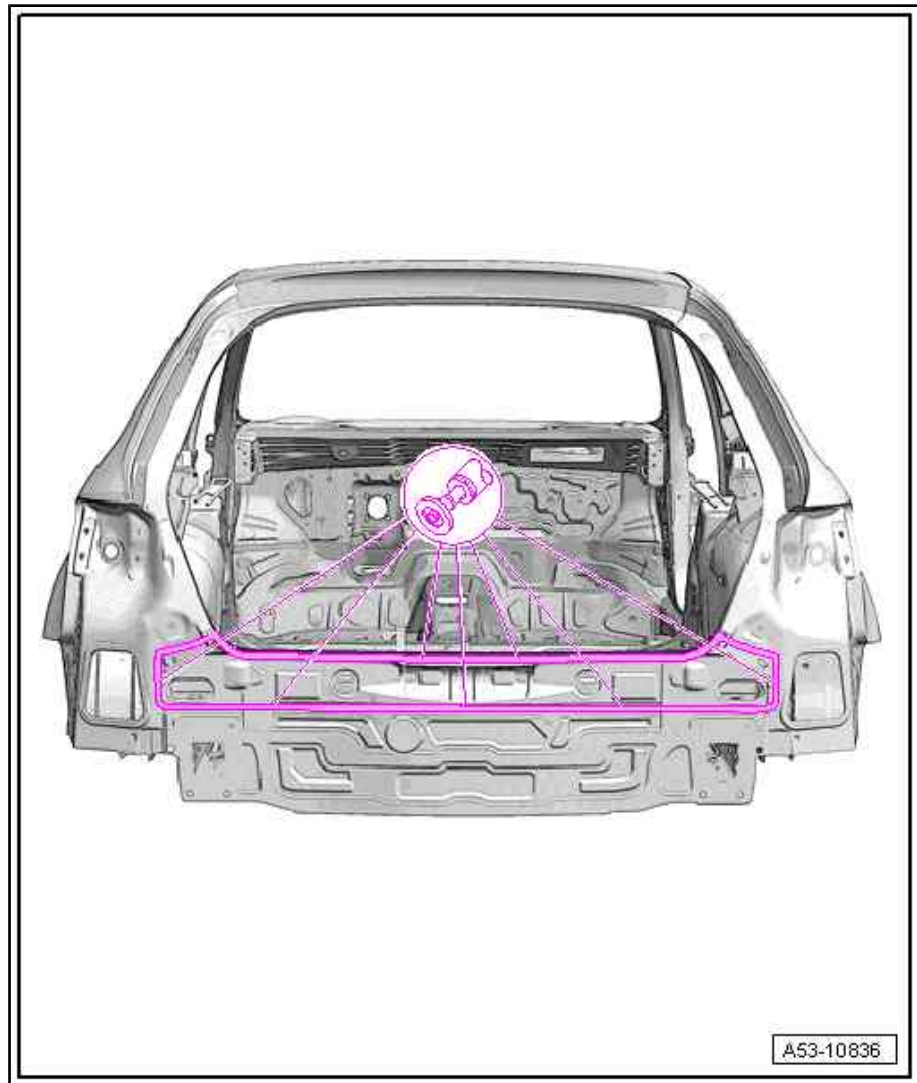
## 2.2 Procedure

### Cutting locations

- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.

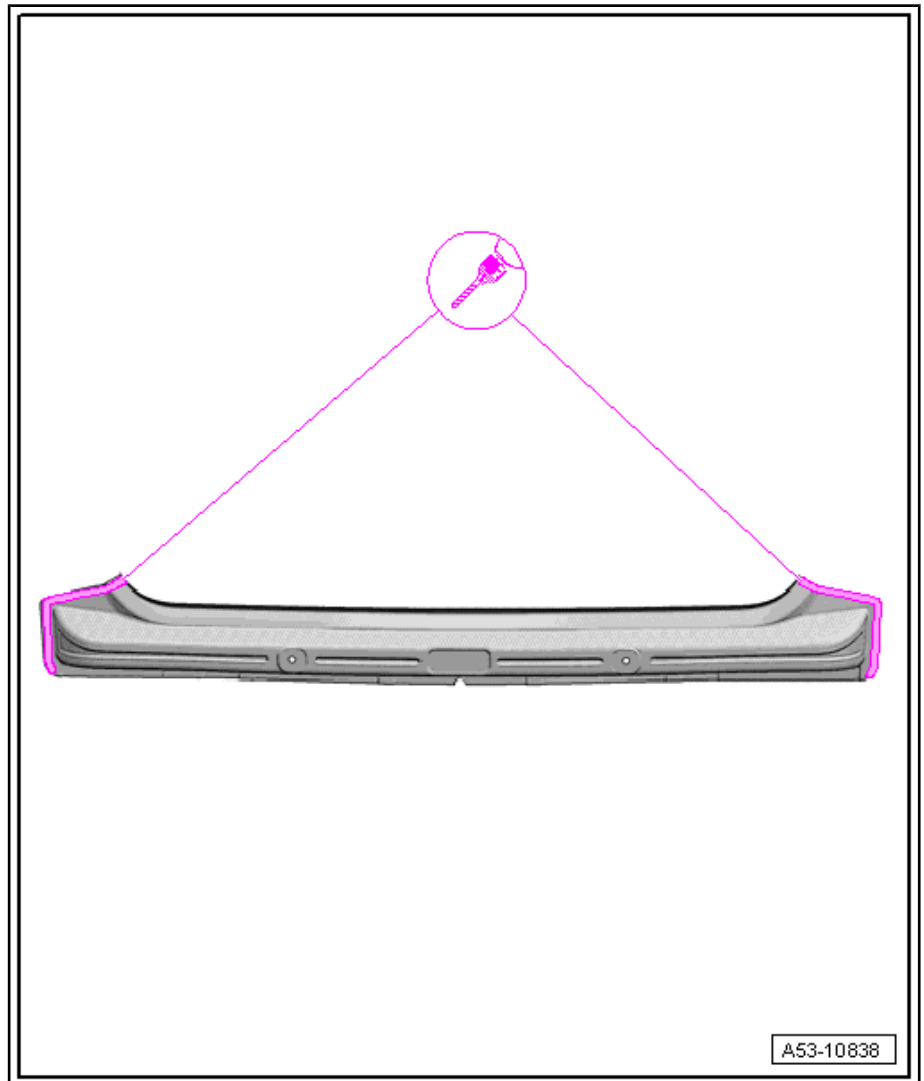


### Replacement part

- ◆ Rear upper cross panel

### Preparing new part

- Drill holes for SG plug weld seam, 8 mm  $\varnothing$  using drill .
- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.

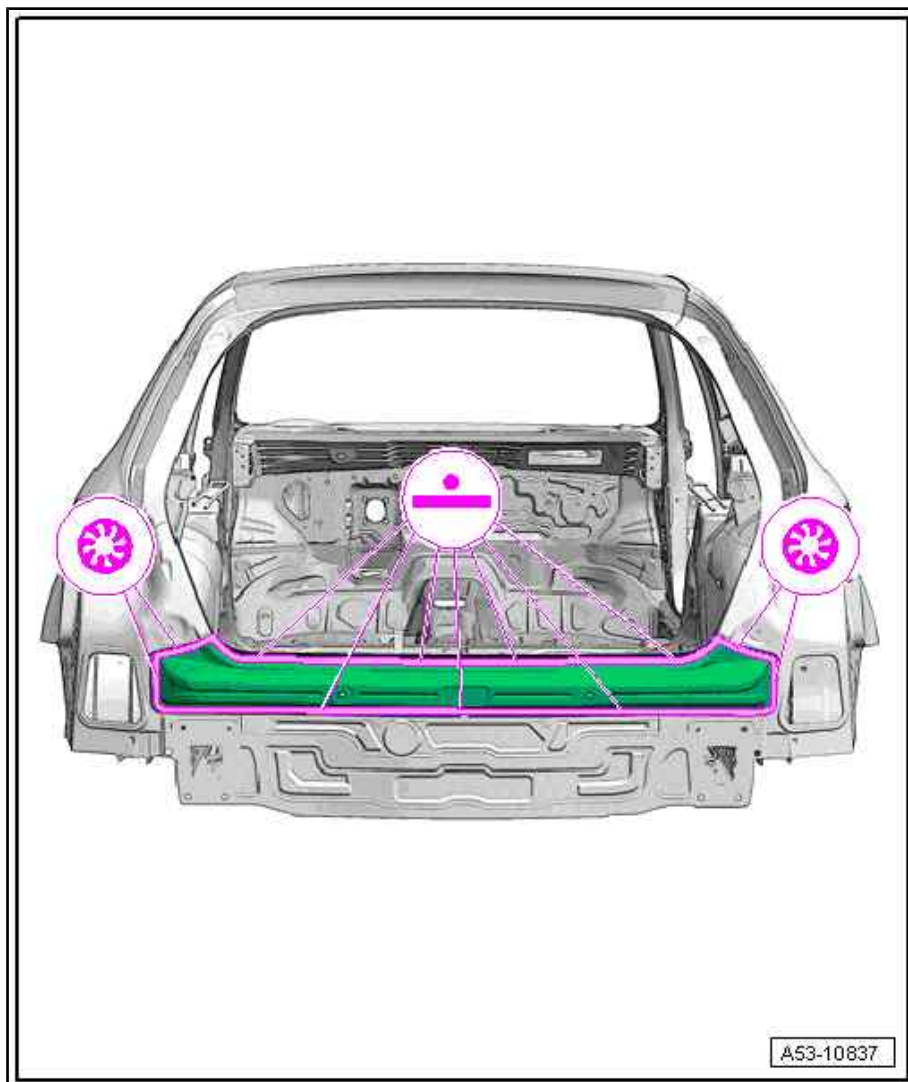


**!** NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Weld in cross panel using resistance spot welder : RP spot weld seam.
- Weld in cross panel using shielded arc welding equipment : SG plug weld seam.





RO: 53 16 55 00

### 3 Rear upper cross panel - Renewal (Saloon)

#### 1 - Separating cuts in cross panel



##### Note

*Partial renewal is possible with the separating cuts illustrated.*

#### 2 - Rear upper cross panel

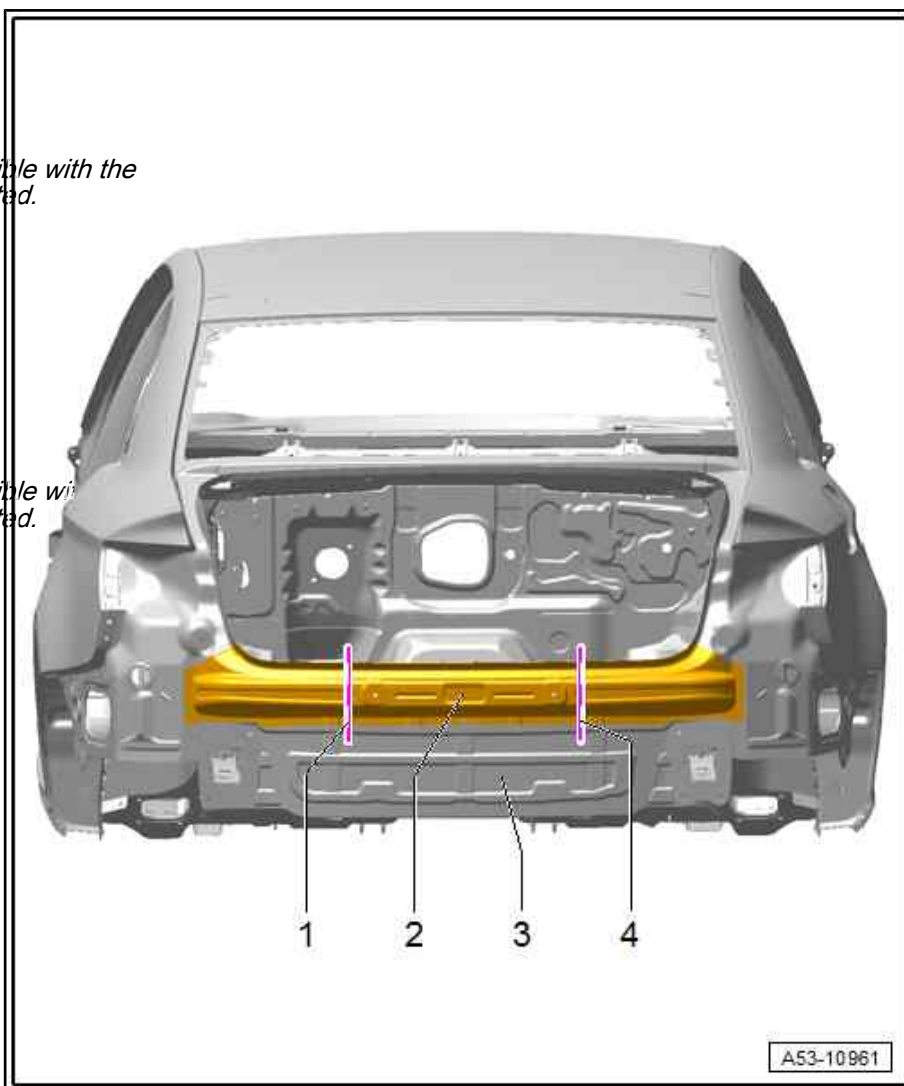
#### 3 - Lower cross panel

#### 4 - Separating cuts in cross panel



##### Note

*Partial renewal is possible with the separating cuts illustrated.*



### 3.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker



#### NOTICE

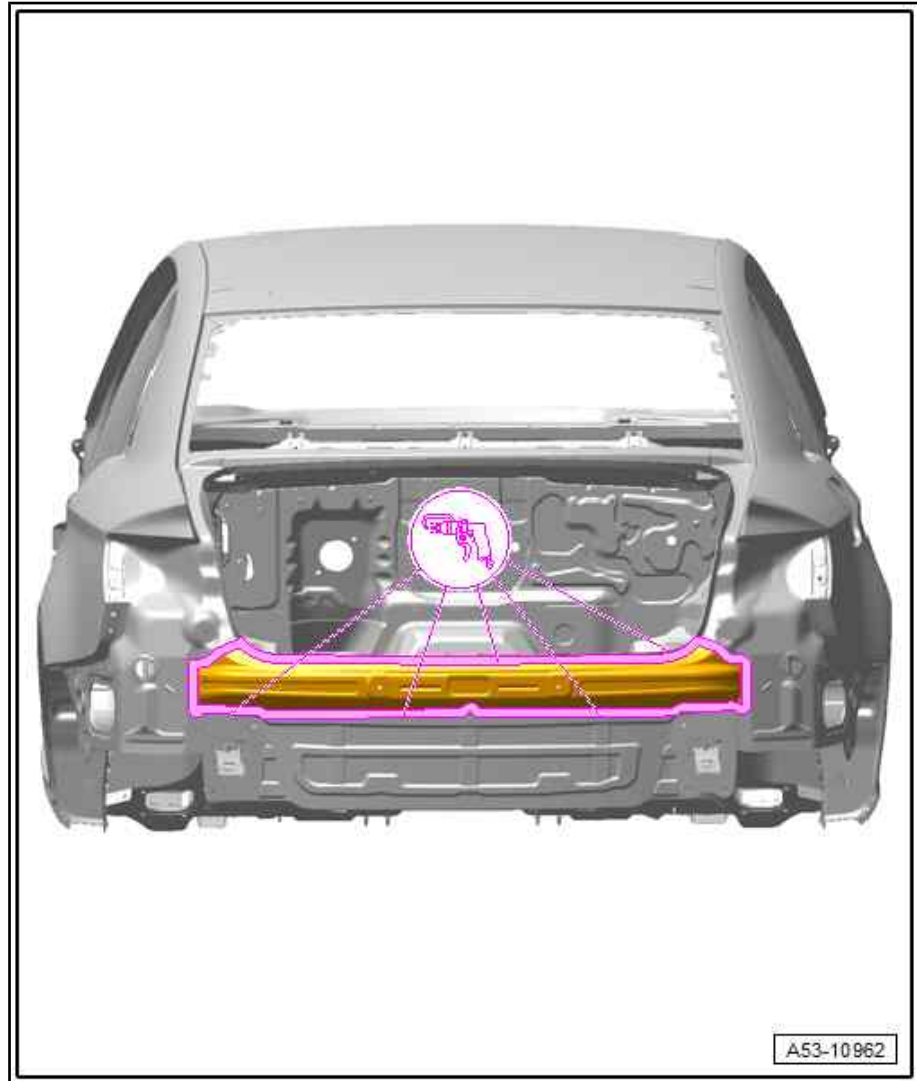
One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .



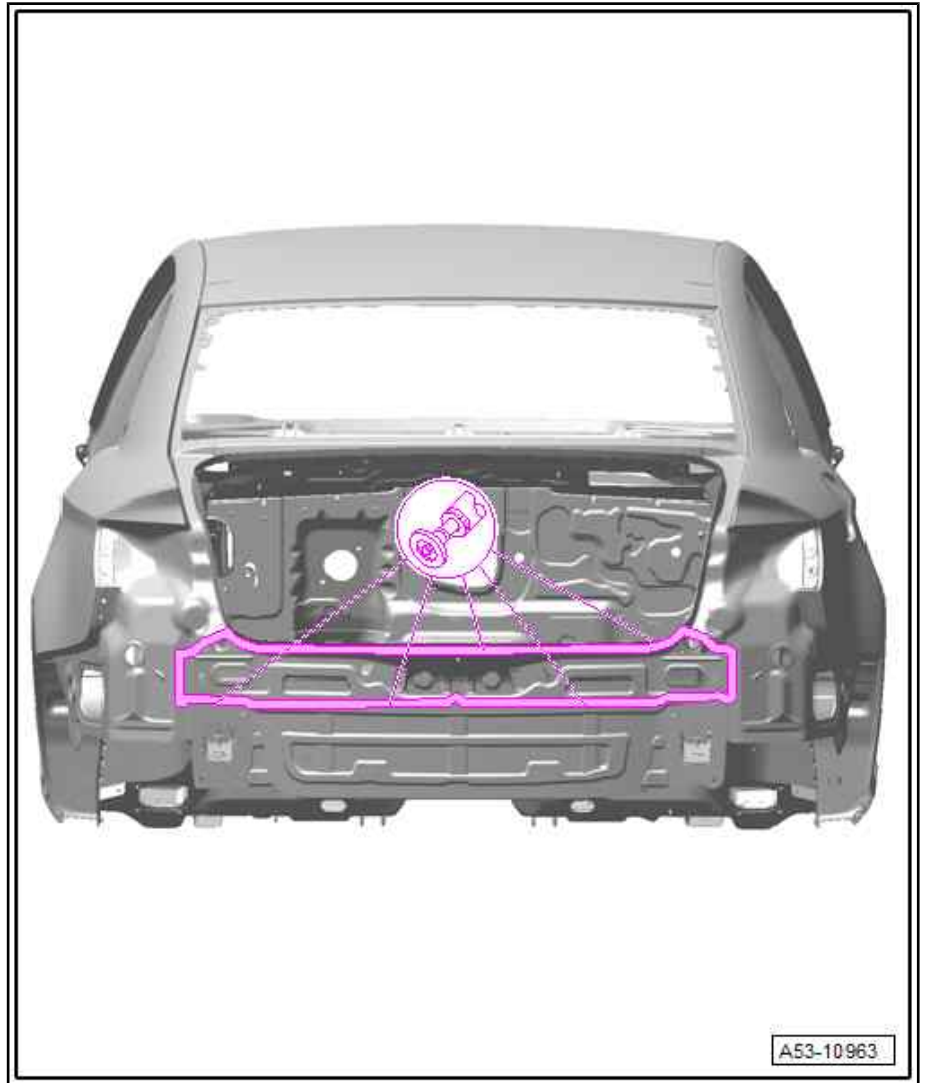
## 3.2 Procedure

### Cutting locations

- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .

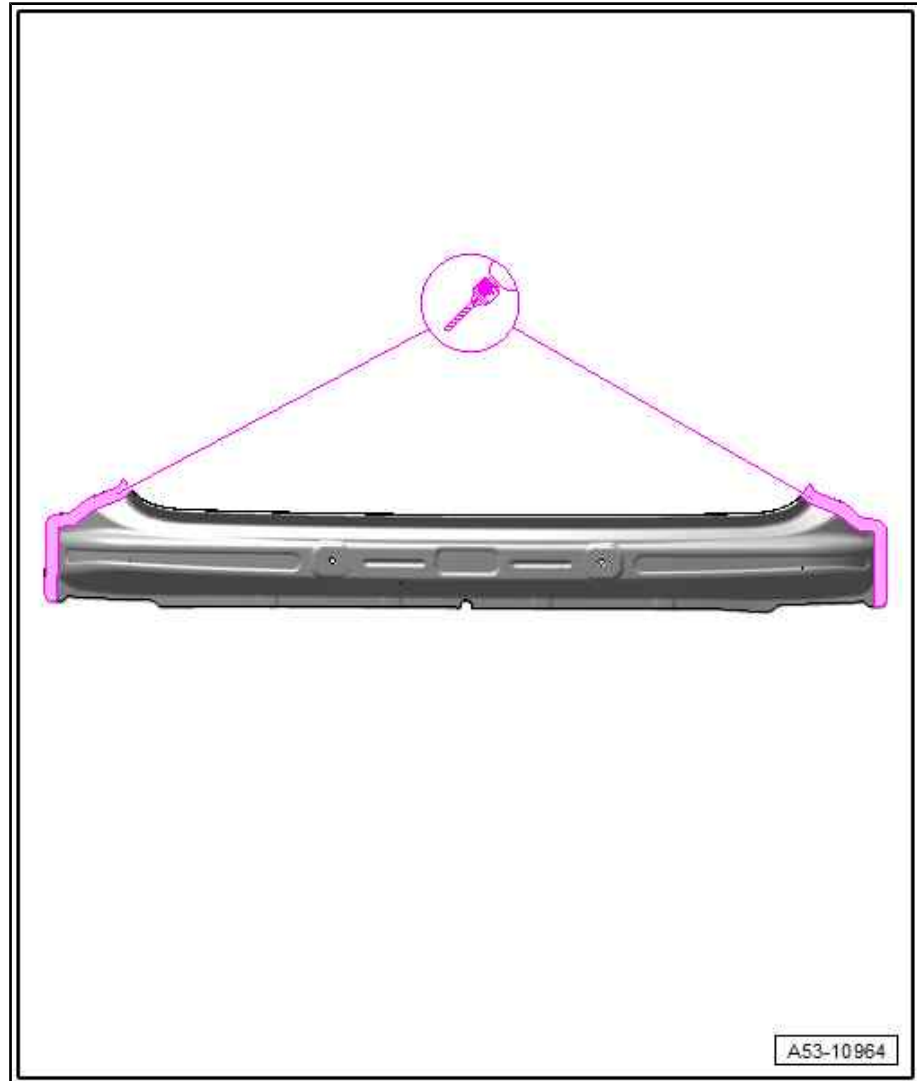


#### Replacement part

- ◆ Rear upper cross panel

#### Preparing new part

- Drill holes for SG plug weld seam, 8 mm Ø using drill .
- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.

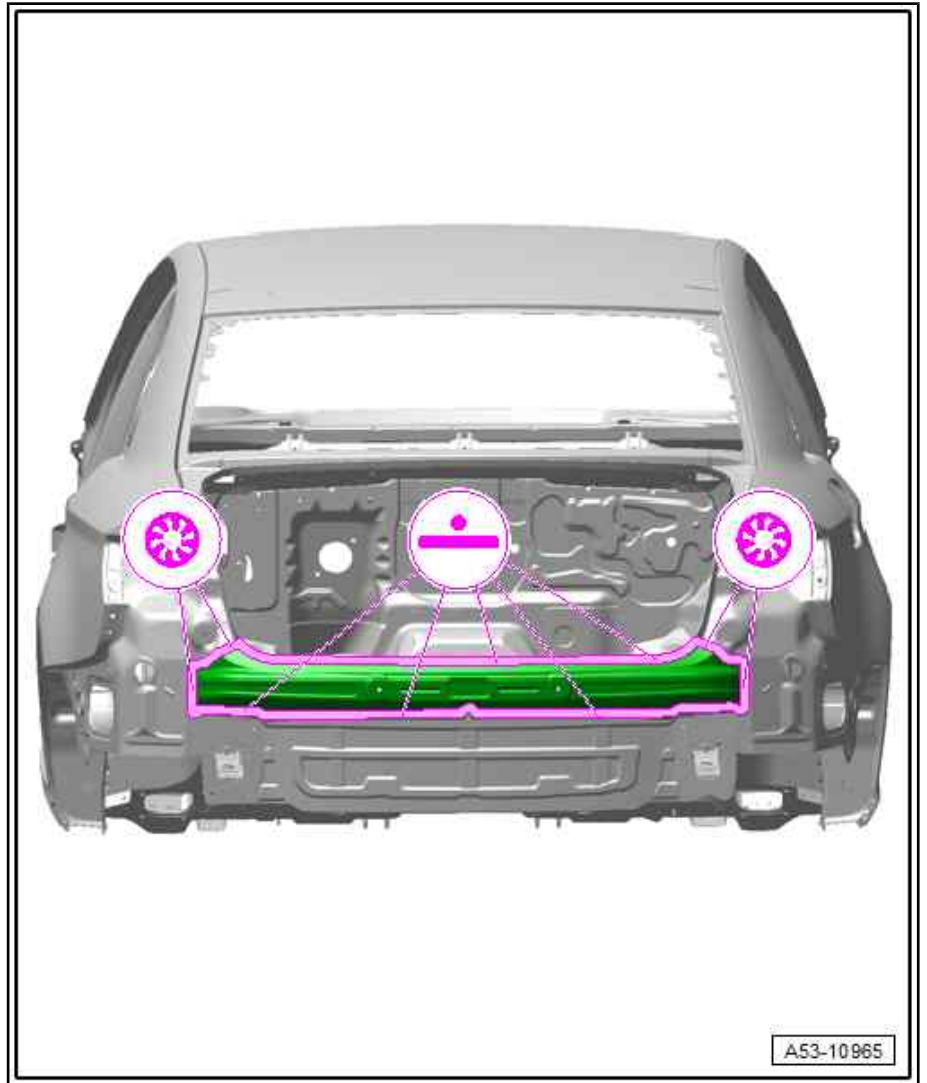


 **NOTICE**

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Weld in cross panel using resistance spot welder : RP spot weld seam.
- Weld in cross panel using shielded arc welding equipment : SG plug weld seam.





RO: 53 09 55 50

## 4 Rear cross panel - Renewal

A3 and Sportback identical

### DANGER

Damaged natural gas fuel tanks constitute an explosion risk - risk of death!

- If components at the rear and/or rear side of the vehicle (e.g. bumper cover, rear lid, underbody trim, longitudinal member, rear cross panel, etc.) are removed due to accident damage, the natural gas fuel tanks must be checked for damage.
- Carry out assessment of damage to fuel tanks made of composite fibre materials ⇒ Natural gas engines - general information; Rep. gr. 20 ; Assessing damage to fuel tanks made of composite fibre materials; Assessing damage to fuel tanks made of composite fibre materials .

### DANGER

Only for vehicles with natural gas technology

When performing welding, cutting or drilling work in the vicinity of components that convey gas, these components must either be removed or safely covered up before performing repairs.



1 - Tail light mounting (left and right)

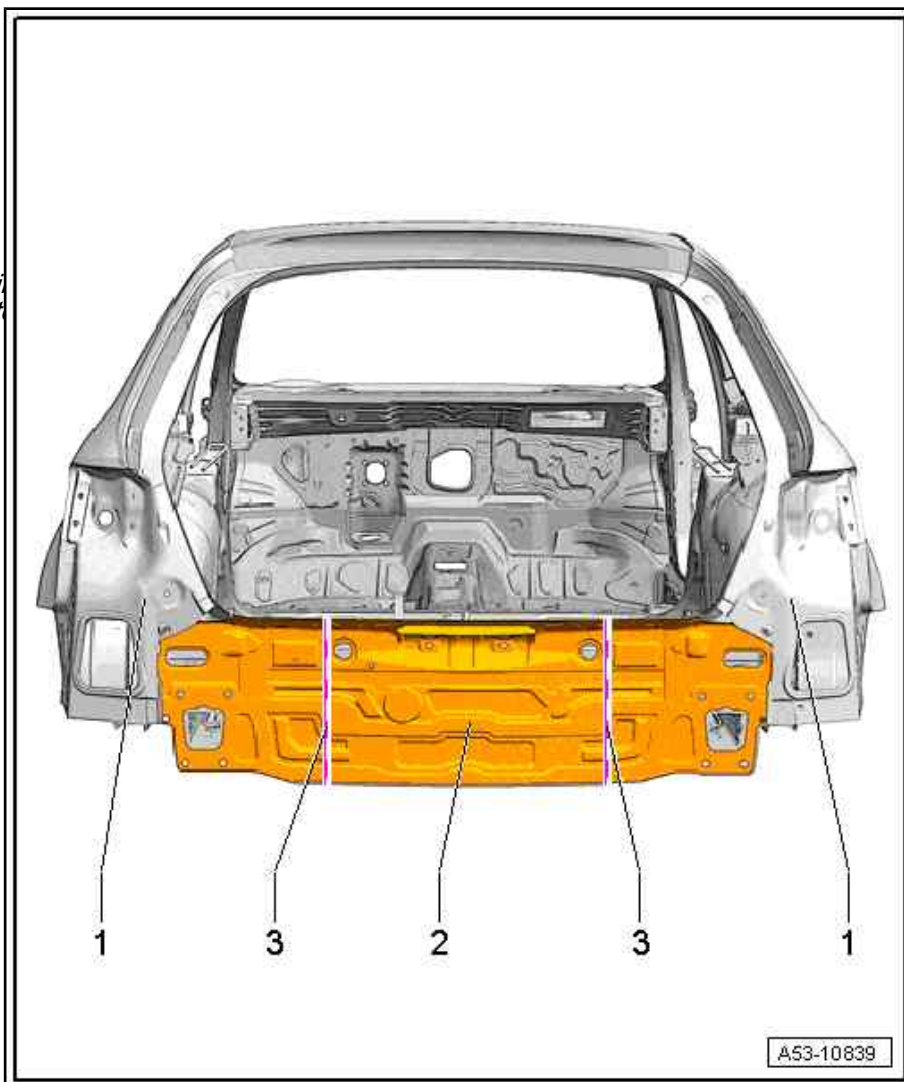
2 - Cross panel

3 - Separating cuts in cross panel



Note

*Partial renewal is possible using the separating cuts illustrated.*



## 4.1 Tools

### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker

### ! NOTICE

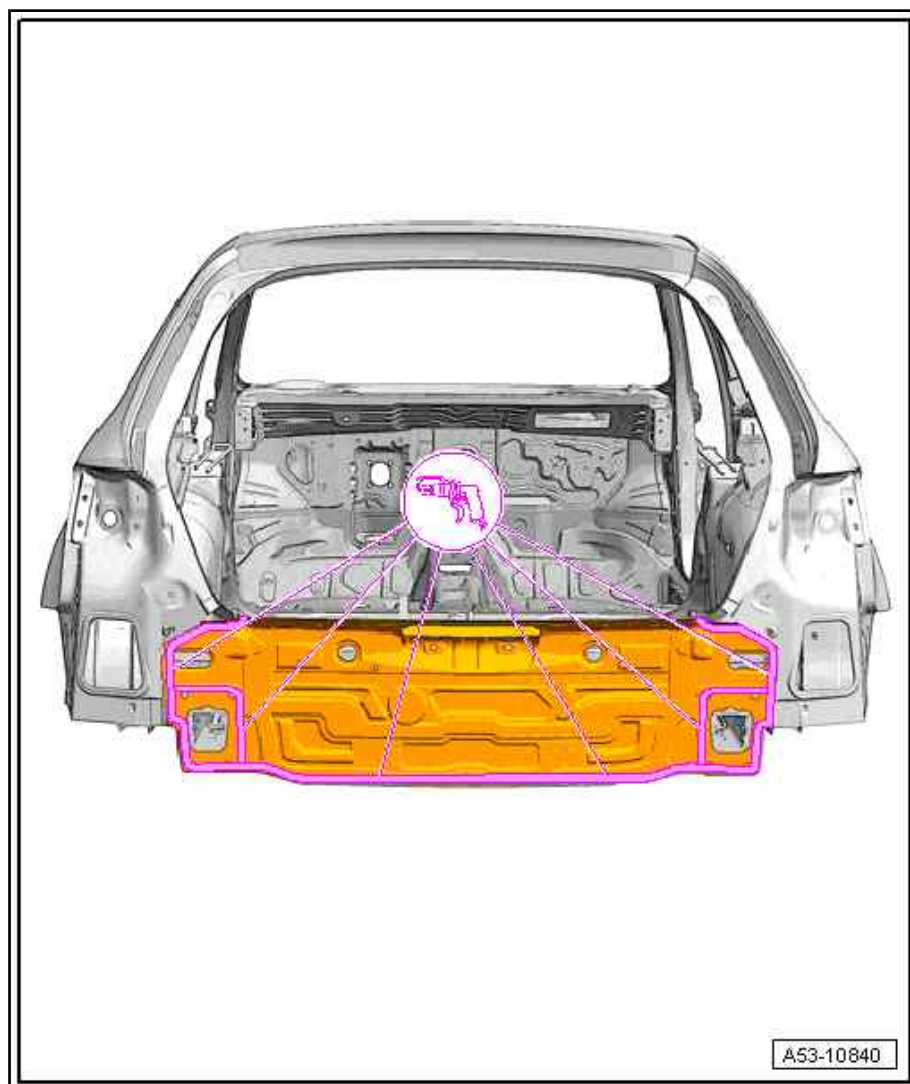
One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

## 4.2 Procedure

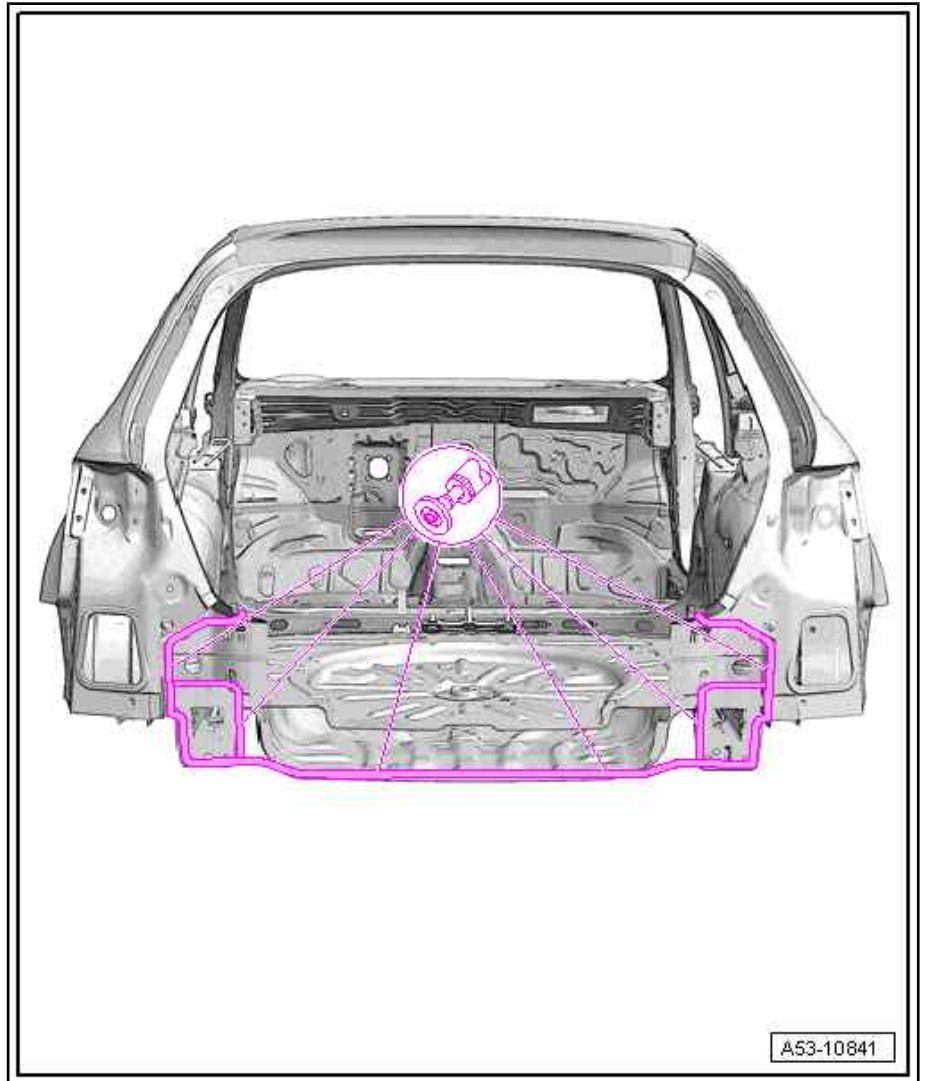
- Removing rear upper cross panel ⇒ [page 465](#)

### Cutting locations

- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.

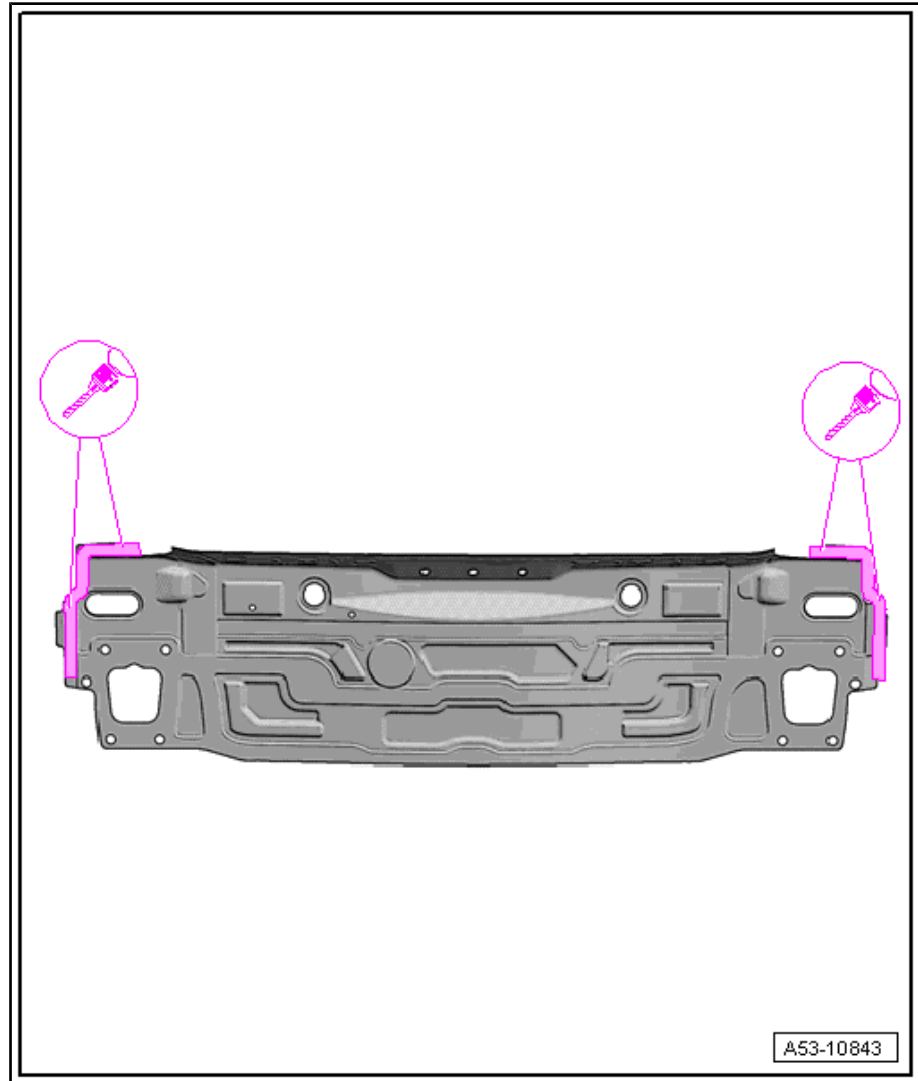


#### Replacement part

- ◆ Rear cross panel

#### Preparing new part

- Drill holes for SG plug weld seam, 8 mm  $\varnothing$  using drill .
- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.

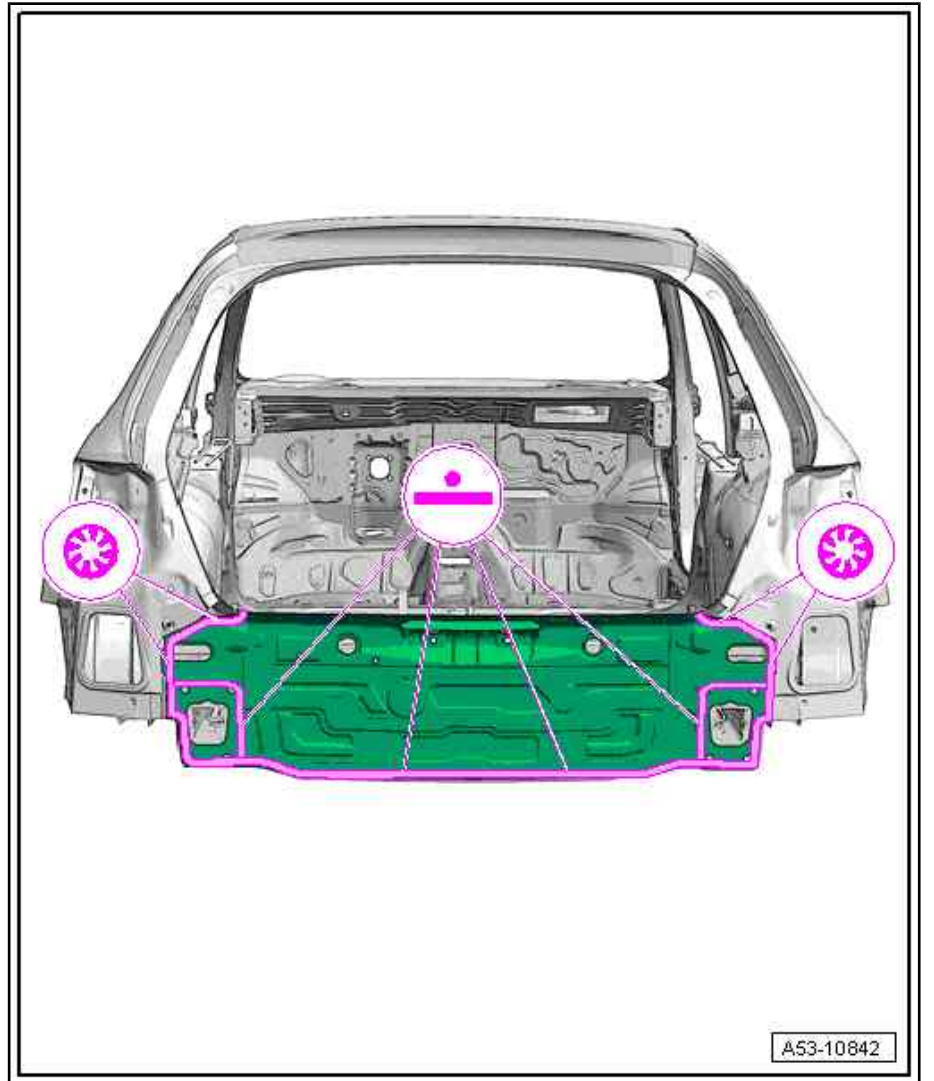


**!** NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Weld in cross panel using resistance spot welder : RP spot weld seam.
- Weld in cross panel using shielded arc welding equipment : SG plug weld seam.



- Welding in rear upper cross panel ⇒ [page 465](#)



RO: 53 09 55 50

## 5 Rear cross panel - Renewal (Saloon)

1 - Tail light mounting (left and right)

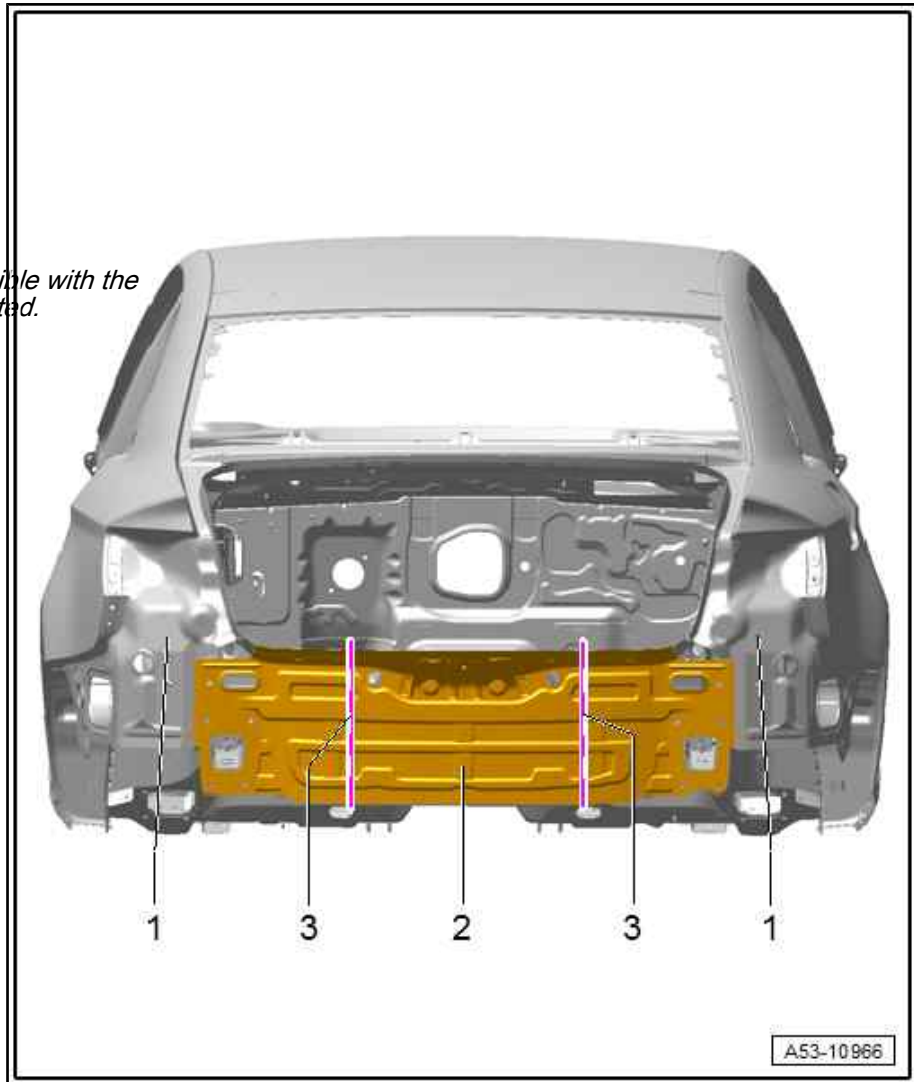
2 - Cross panel

3 - Separating cuts in cross panel



Note

*Partial renewal is possible with the separating cuts illustrated.*



### 5.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker



NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

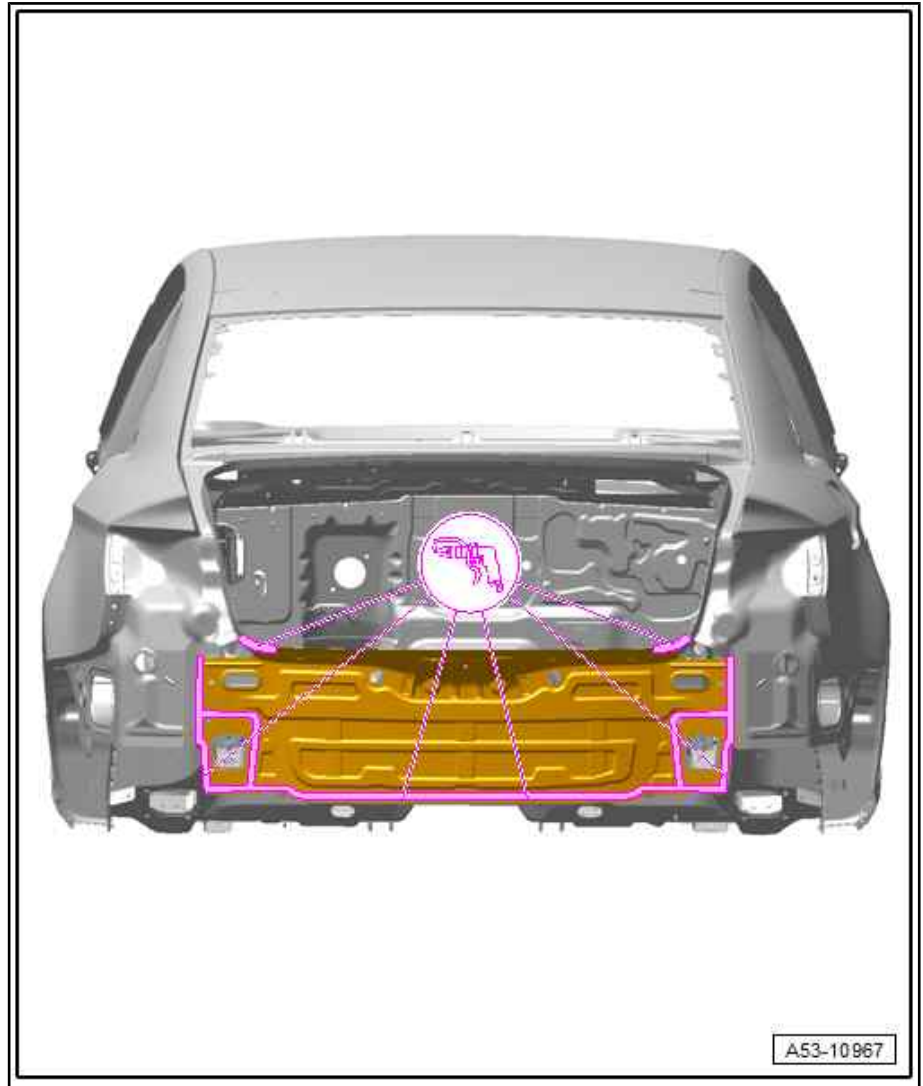


## 5.2 Procedure

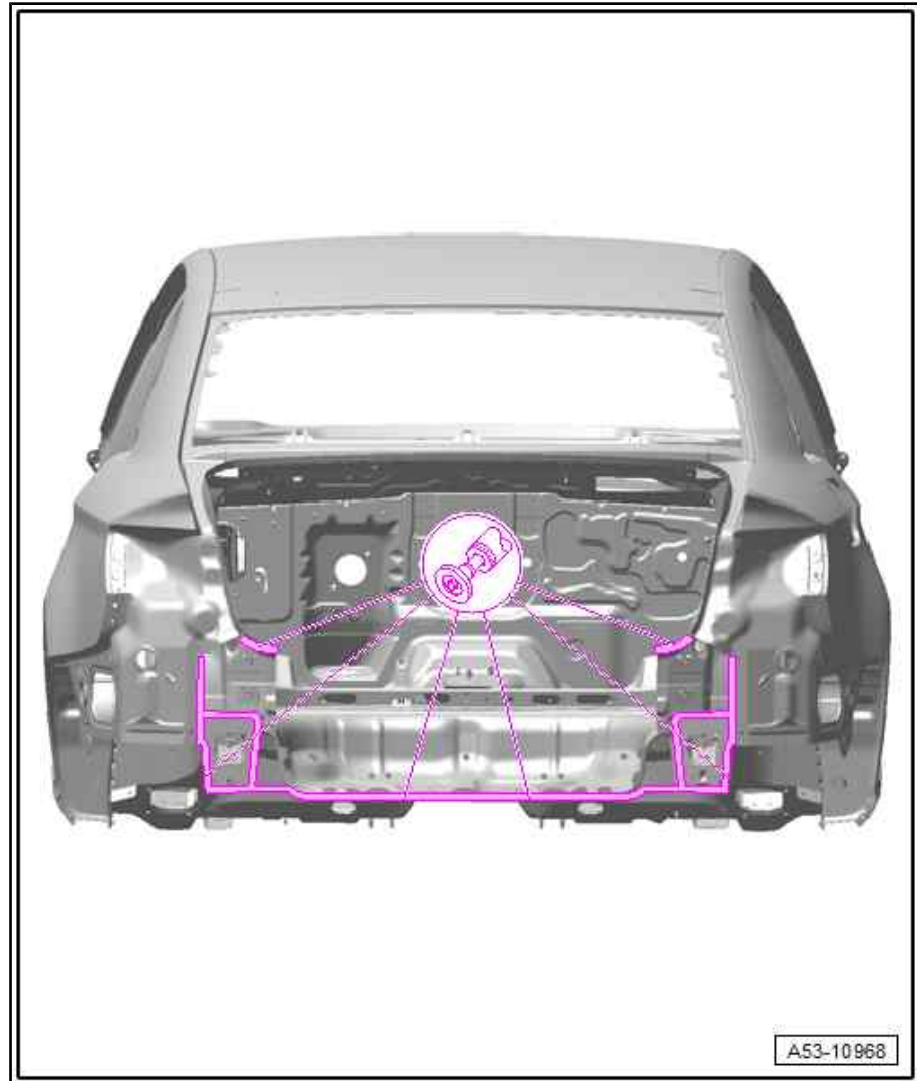
- Removing rear upper cross panel ⇒ [page 471](#)

### Cutting locations

- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.



### Replacement part

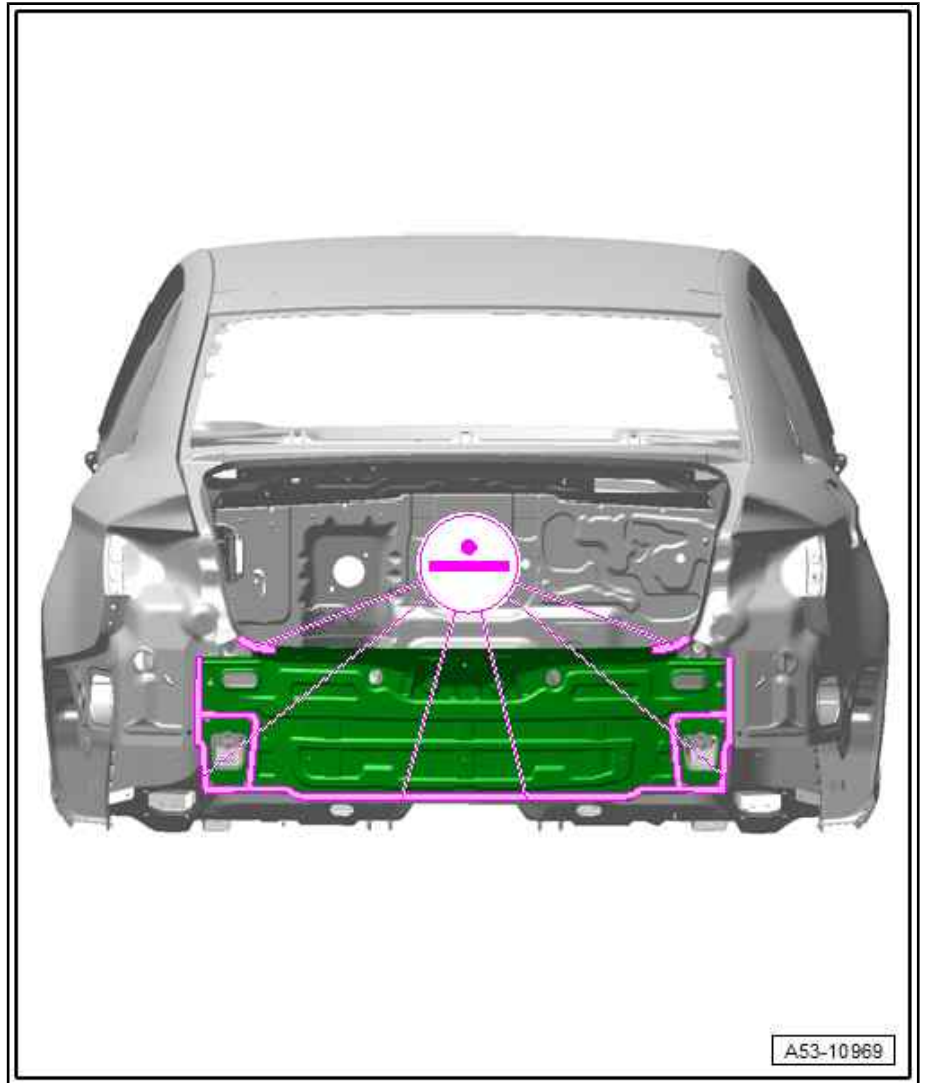
- ◆ Rear cross panel

#### NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

### Welding in

- Weld in cross panel using resistance spot welder : RP spot weld seam.
- Weld in cross panel using shielded arc welding equipment : SG plug weld seam.



- Welding in rear upper cross panel ⇒ [page 471](#)



RO: 53 48 55 52

## 6 Rear longitudinal member - Partial renewal

A3 and Sportback identical

### DANGER

Damaged natural gas fuel tanks constitute an explosion risk - risk of death!

- If components at the rear and/or rear side of the vehicle (e.g. bumper cover, rear lid, underbody trim, longitudinal member, rear cross panel, etc.) are removed due to accident damage, the natural gas fuel tanks must be checked for damage.
- Carry out assessment of damage to fuel tanks made of composite fibre materials ⇒ Natural gas engines - general information; Rep. gr. 20 ; Assessing damage to fuel tanks made of composite fibre materials; Assessing damage to fuel tanks made of composite fibre materials .

### DANGER

Only for vehicles with natural gas technology

When performing welding, cutting or drilling work in the vicinity of components that convey gas, these components must either be removed or safely covered up before performing repairs.

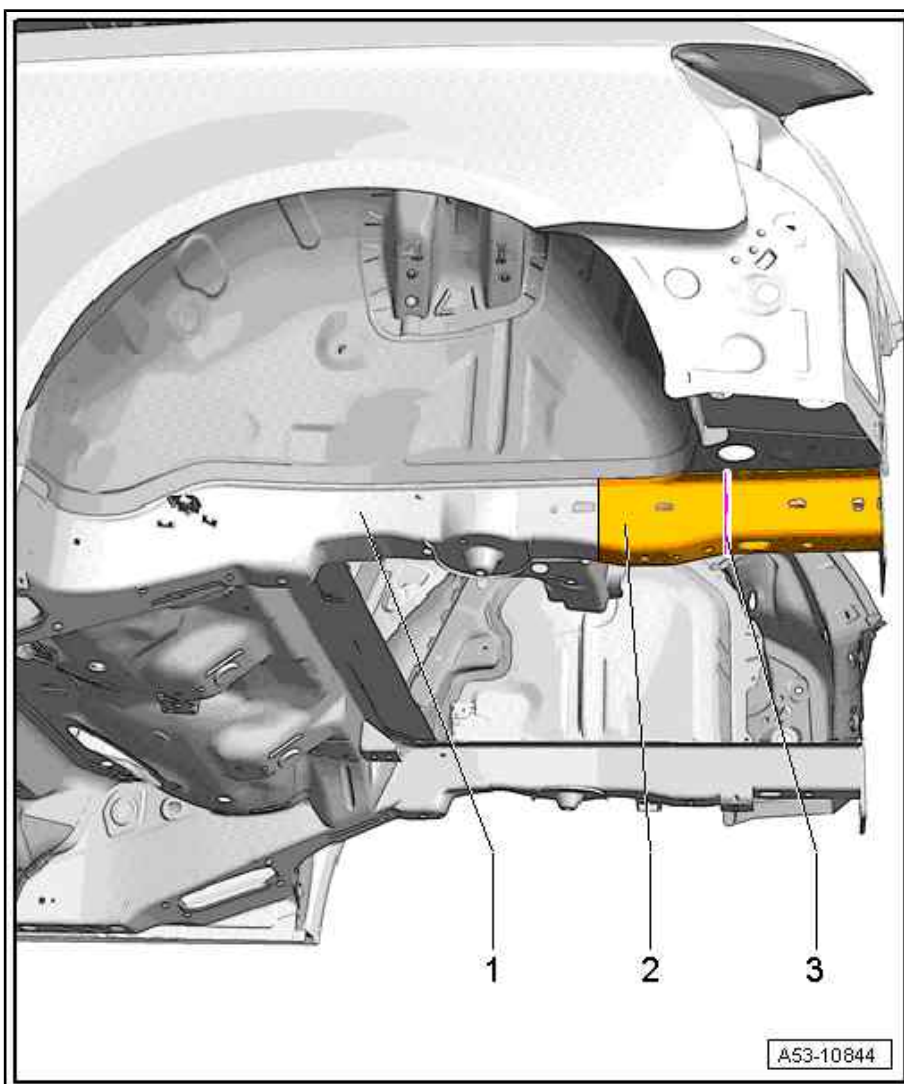
### DANGER

Fuel tank and fuel pipes

Take extreme care when performing sanding and welding work near the tank or other components carrying fuel. If in doubt, always remove these components.



- 1 - Section made of ultra-high-strength hot-formed steel
- 2 - Non-tempered section of rear longitudinal member
- 3 - Separating cut for rear longitudinal member



## 6.1 Tools

### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker

#### NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

## 6.2 Procedure

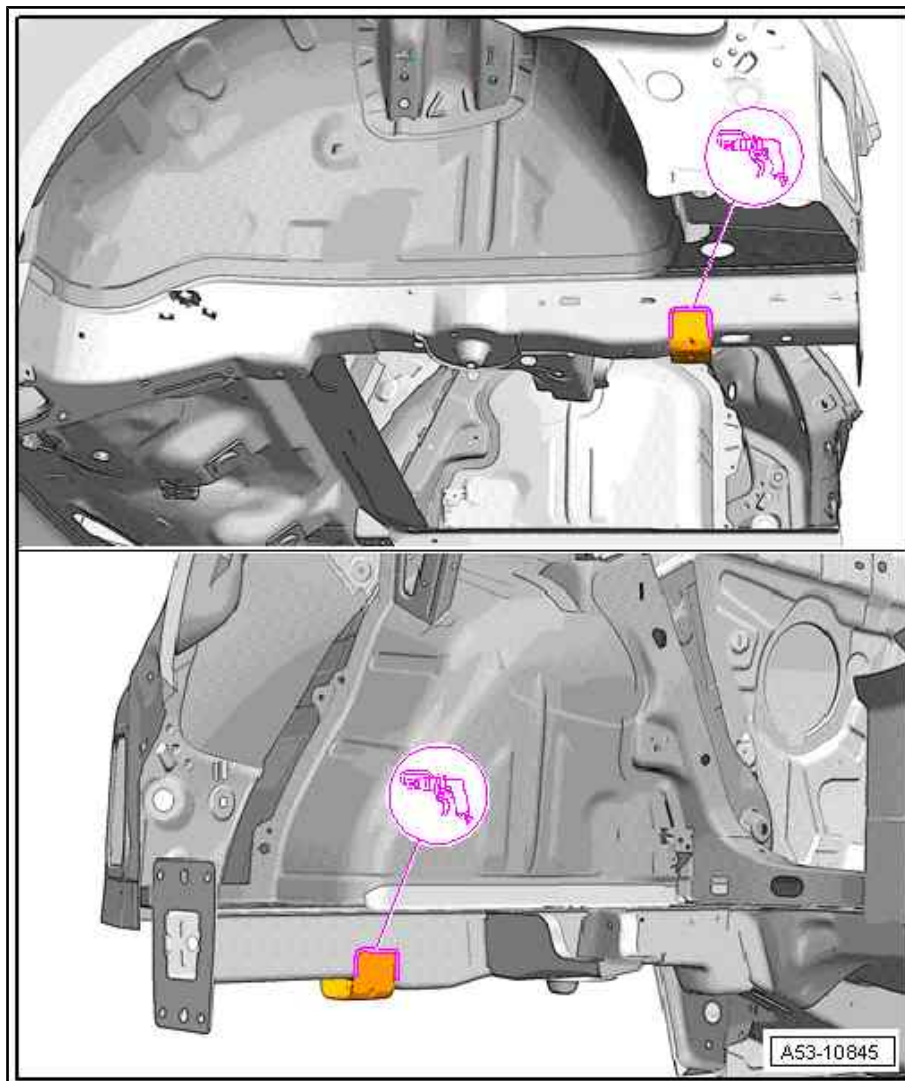
- Removing rear upper cross panel ⇒ [page 465](#)
- Removing cross panel ⇒ [page 476](#)
- Removing spare wheel well ⇒ [page 528](#)



- Removing spare wheel well (quattro) ⇒ [page 538](#)

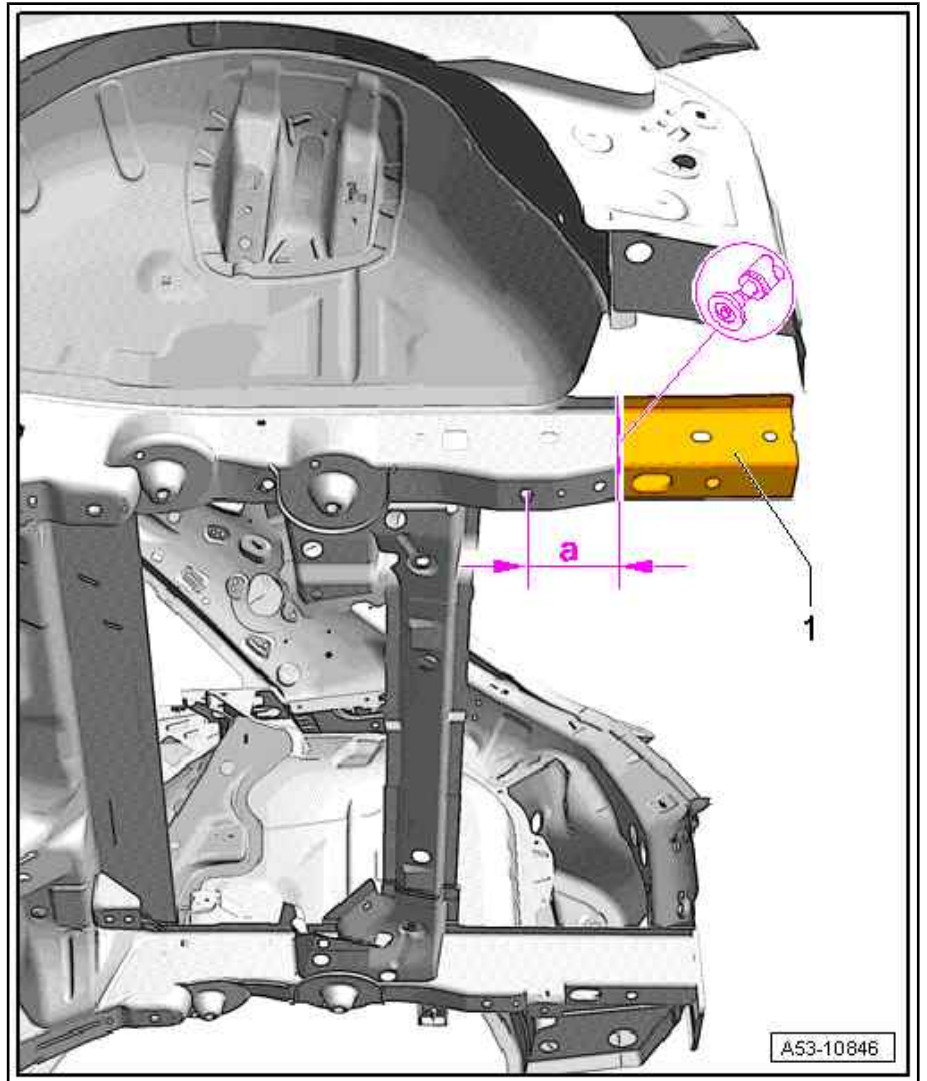
#### Cutting locations

- Separate original joint between bracket and longitudinal member using spot weld breaker .

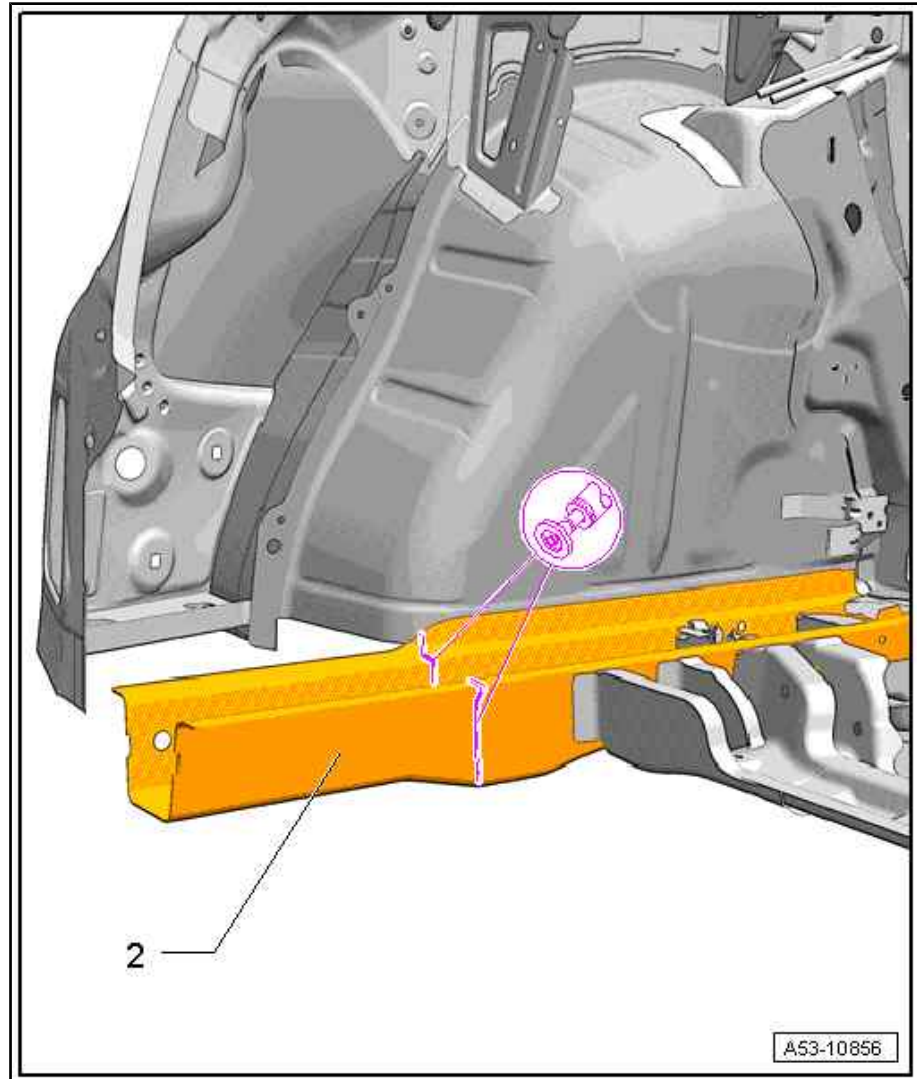


- Make separating cuts in longitudinal member from outside  
-1- using compact angle grinder .

**Dimension -a- = 73 mm**



- Make separating cuts in longitudinal member from inside -2- using compact angle grinder .

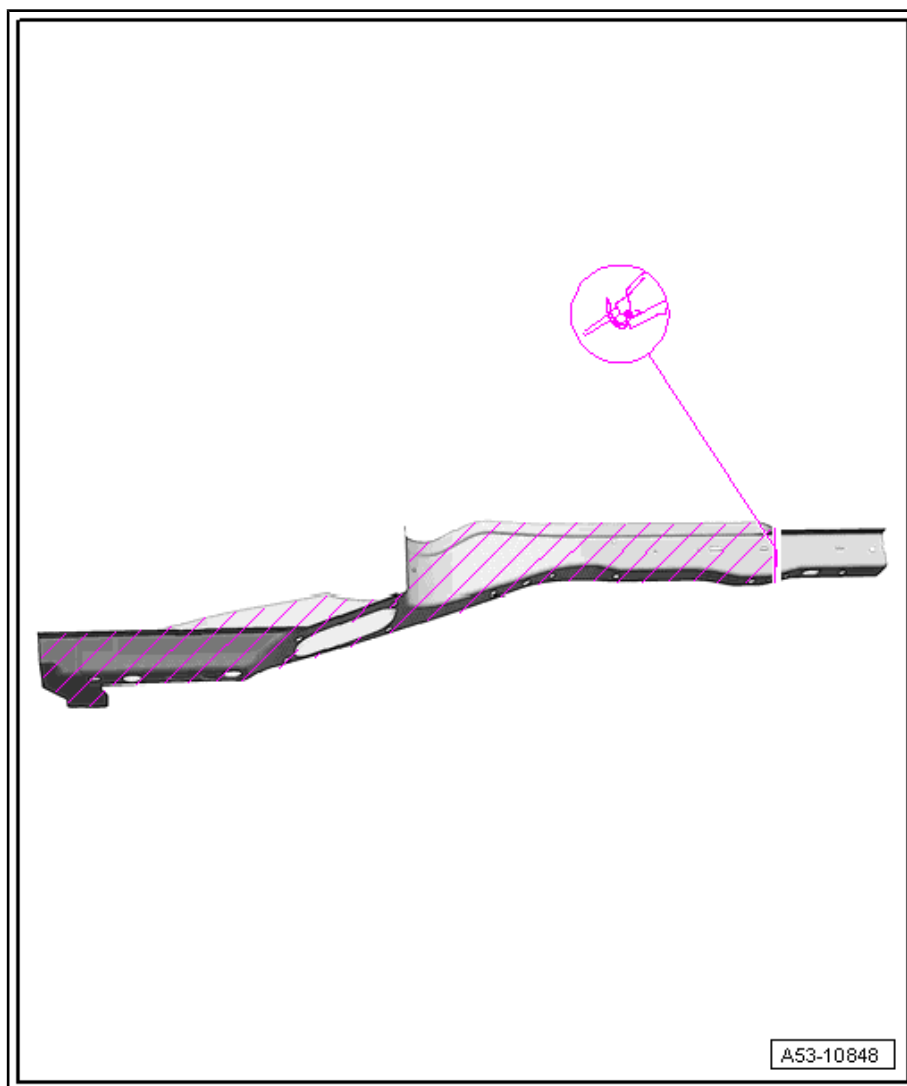


#### Replacement part

- ◆ Rear longitudinal member

#### Preparing new part

- Transfer separating cuts to new part and cut to size using body saw .
- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.



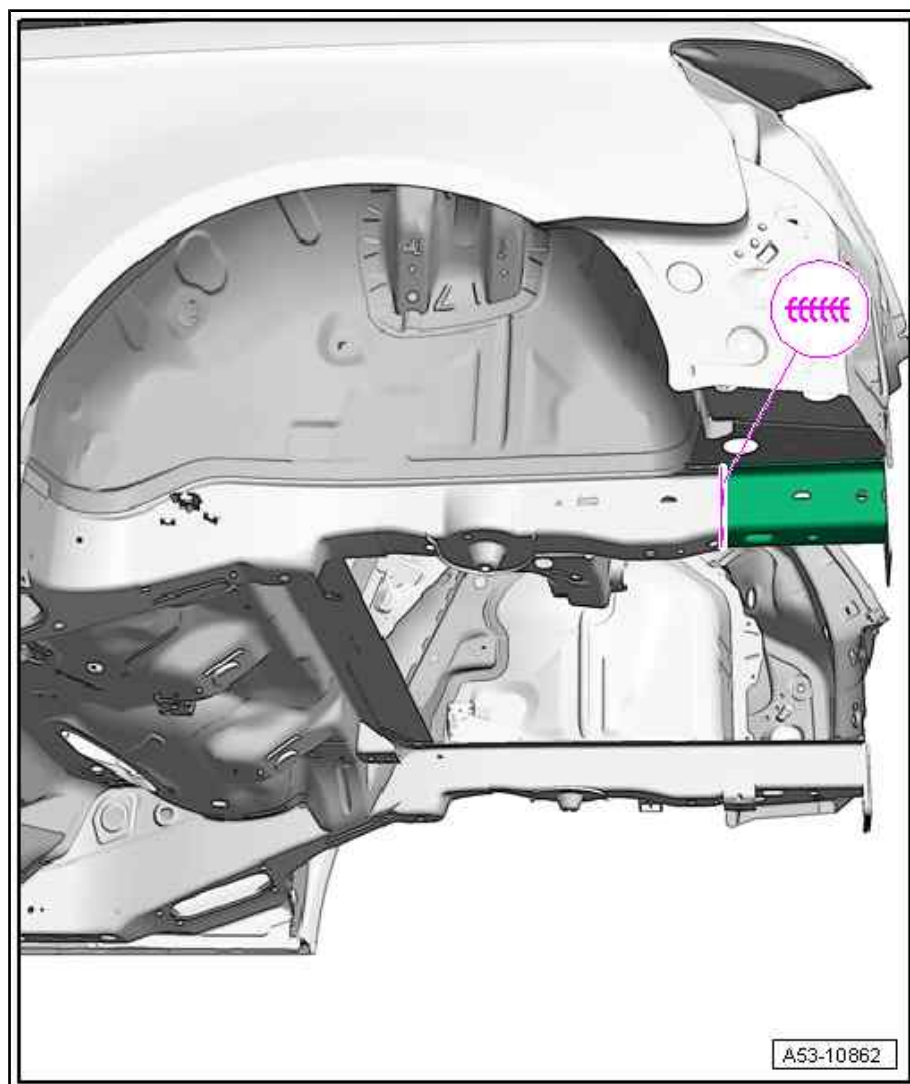
- With vehicle standing on alignment bracket set, match up new parts using cross panel and fix in position.

**!** NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Check fit relative to adjacent parts.
- Weld in longitudinal member using shielded arc welding equipment : SG continuous seam all round.



- Welding in rear upper cross panel ⇒ [page 476](#)
- Welding in cross panel ⇒ [page 476](#)
- Welding in spare wheel well ⇒ [page 528](#)
- Welding in spare wheel well (quattro) ⇒ [page 538](#)



RO: 53 48 55 52

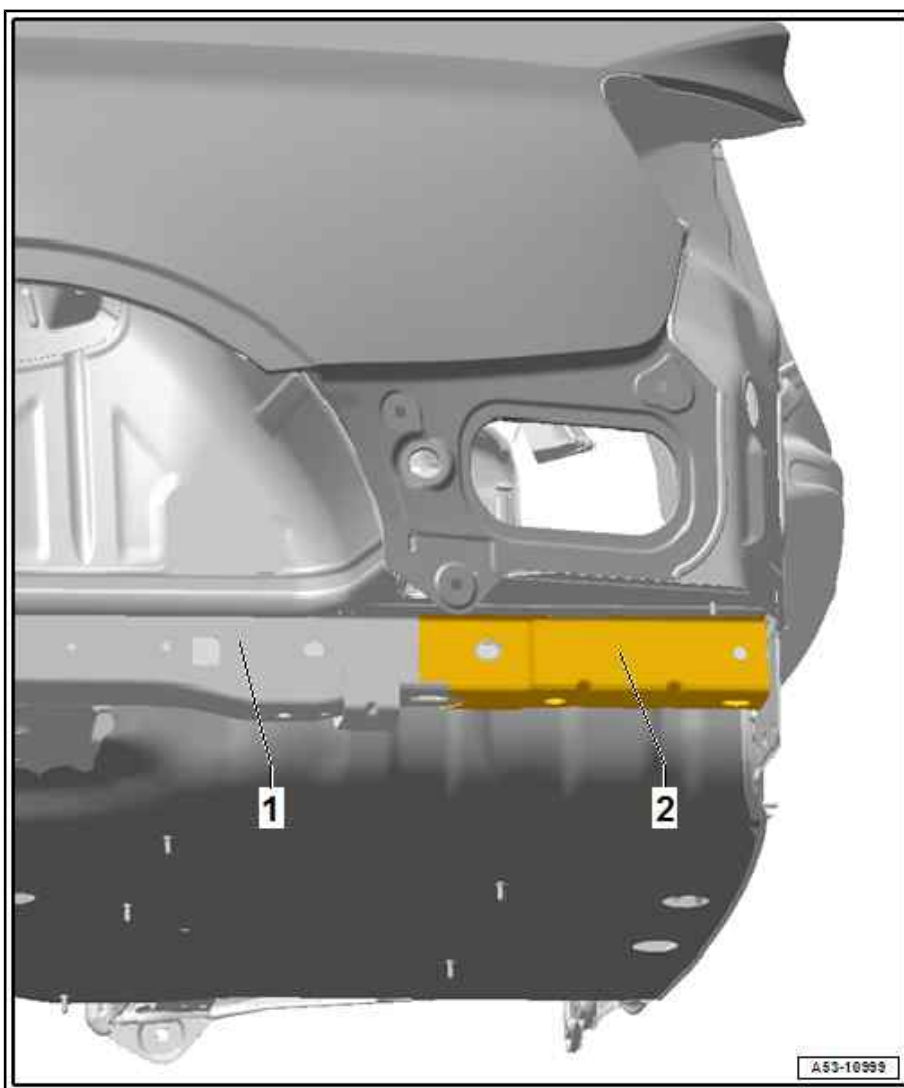
## 7 Connecting piece for rear longitudinal member - Renewal (Saloon)

### DANGER

#### Fuel tank and fuel pipes

Take extreme care when performing sanding and welding work near the tank or other components carrying fuel. If in doubt, always remove these components.

- 1 - Rear longitudinal member
- 2 - Connecting piece for rear longitudinal member



### 7.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder



- ◆ Body saw
- ◆ Spot weld breaker

**!** NOTICE

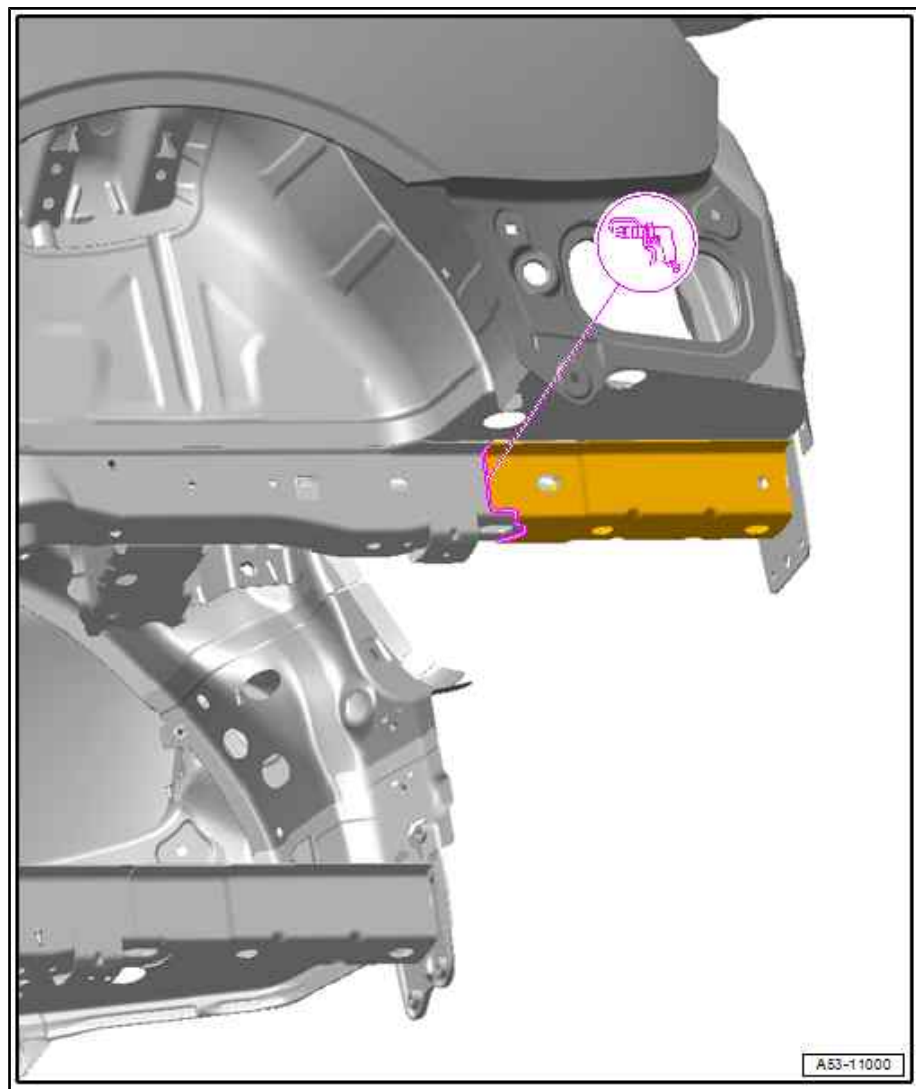
One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

## 7.2 Procedure

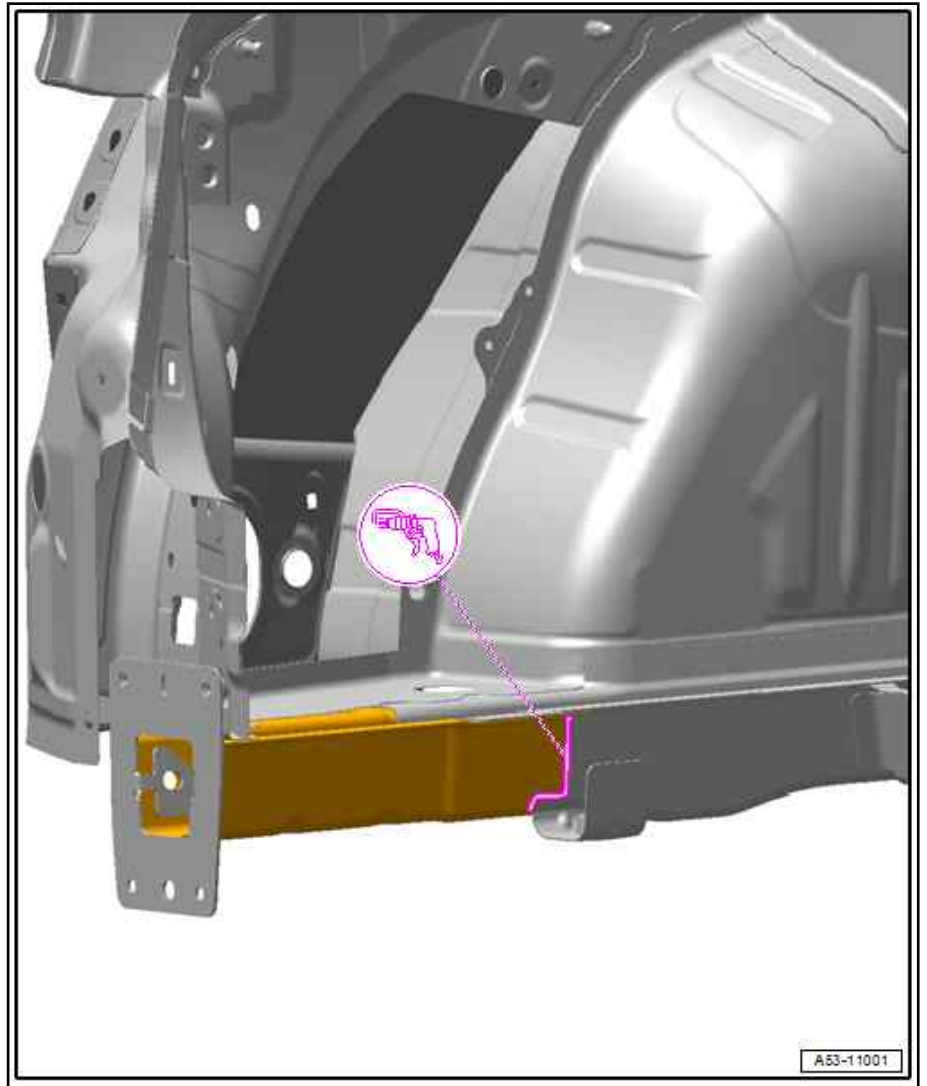
- Removing rear upper cross panel ⇒ [page 471](#)
- Removing cross panel ⇒ [page 482](#)
- Removing spare wheel well ⇒ [page 533](#)
- Removing spare wheel well (quattro) ⇒ [page 546](#)

### Cutting locations

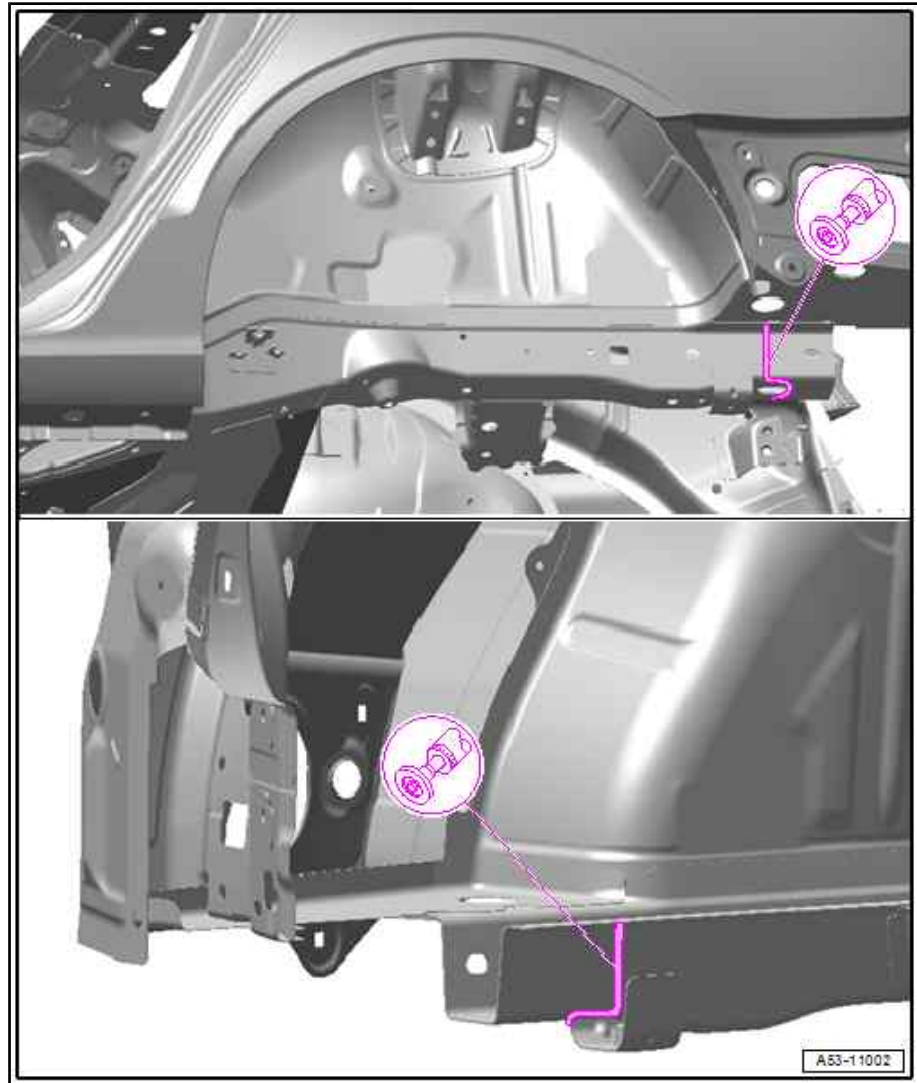
- Separate original joint using spot weld breaker .



- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.

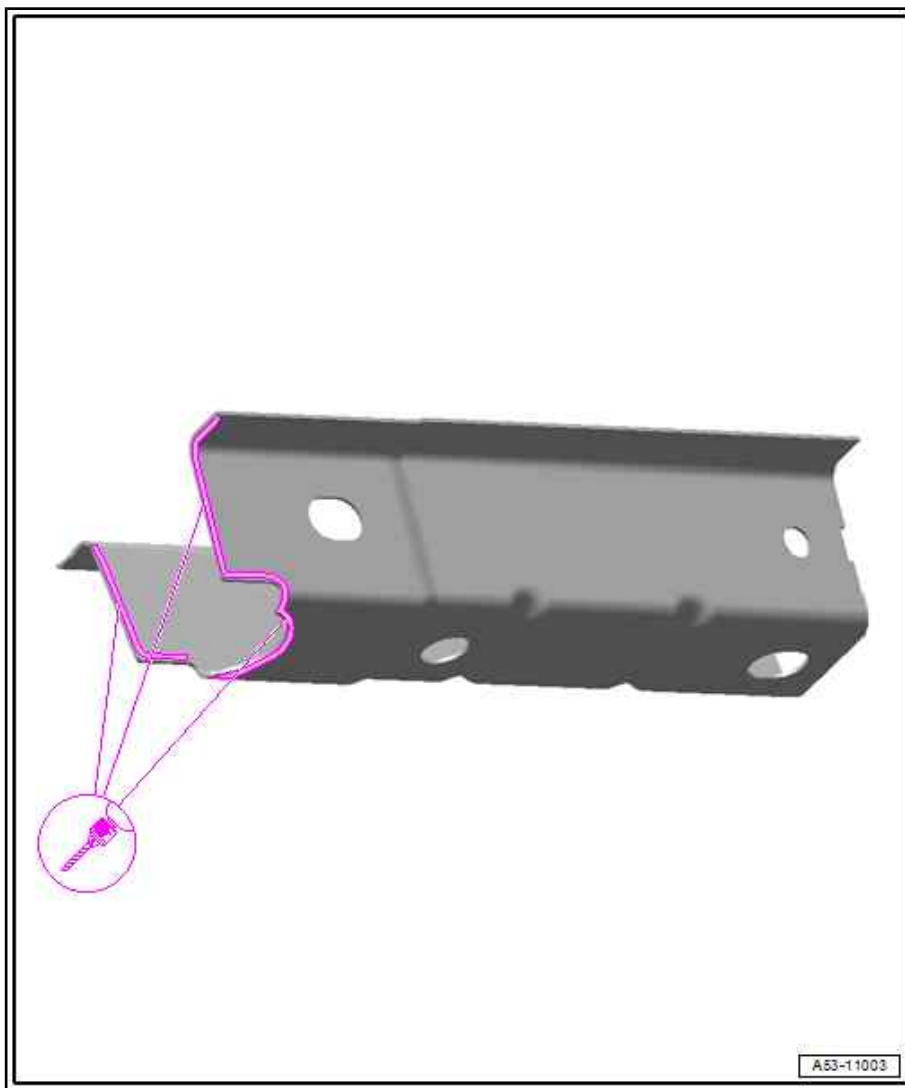


#### Replacement part

- ◆ Extension for rear longitudinal member

#### Preparing new part

- Drill holes for SG plug weld seam, 8 mm  $\varnothing$  using drill .
- Grind welding surfaces down to bare metal.

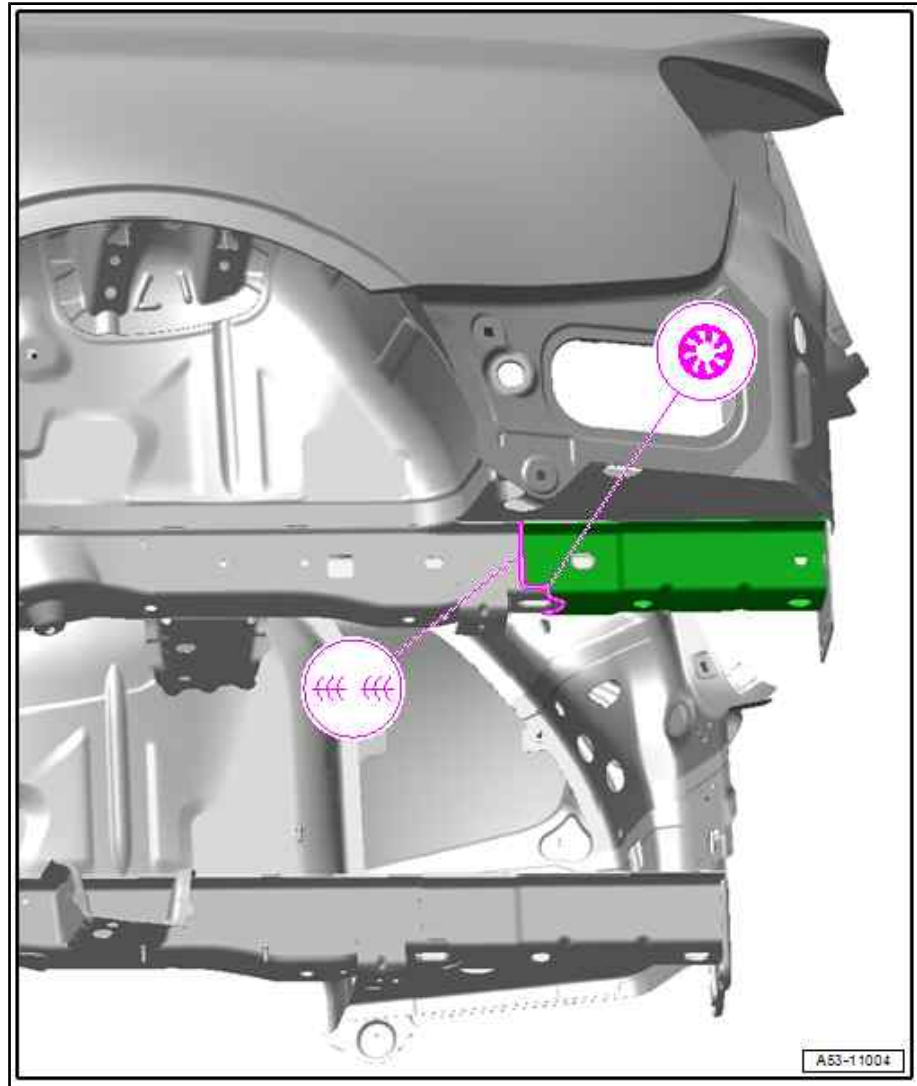


**!** NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Check fit relative to adjacent parts.
- Weld in longitudinal member using shielded arc welding equipment : SG plug weld seam.
- Additionally weld in longitudinal member using shielded arc welding equipment : SG continuous seam all round (staggered - with gaps).



- Welding in rear upper cross panel ⇒ [page 471](#)
- Welding in cross panel ⇒ [page 482](#)
- Welding in spare wheel well ⇒ [page 533](#)
- Welding in spare wheel well (quattro) ⇒ [page 546](#)



RO: 53 55 55 00

## 8 Side panel - Renewal (A3)

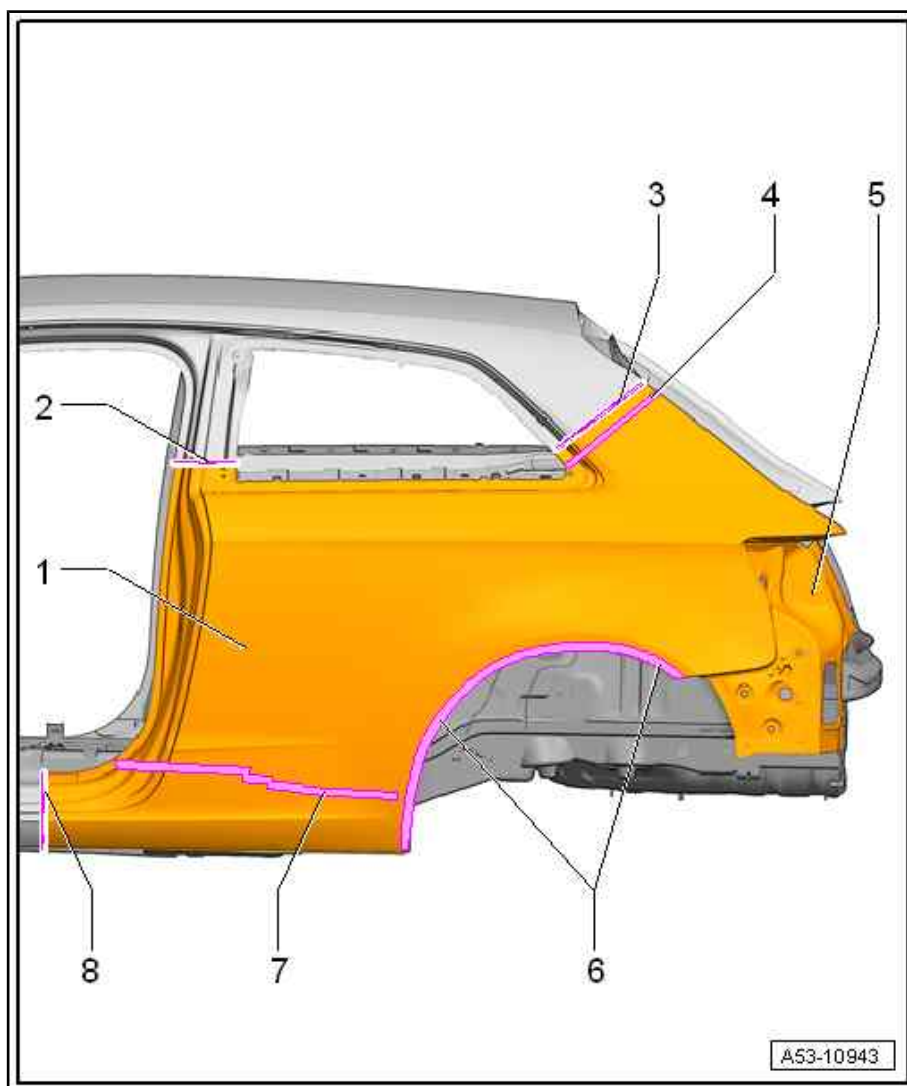
Includes rain channel and tail light mounting

### DANGER

#### Fuel tank and fuel pipes

Take extreme care when performing sanding and welding work near the tank or other components carrying fuel. If in doubt, always remove these components.

- 1 - Side panel
- 2 - Separating cut in B-pillar
- 3 - Separating cut in C-pillar
- 4 - Moulded foam insert
- 5 - Tail light mounting
- 6 - Bonded area
- 7 - Moulded foam insert
- 8 - Separating cut in side member



### 8.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder



- ◆ Body saw
- ◆ Spot weld breaker

**!** NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

## 8.2 Procedure

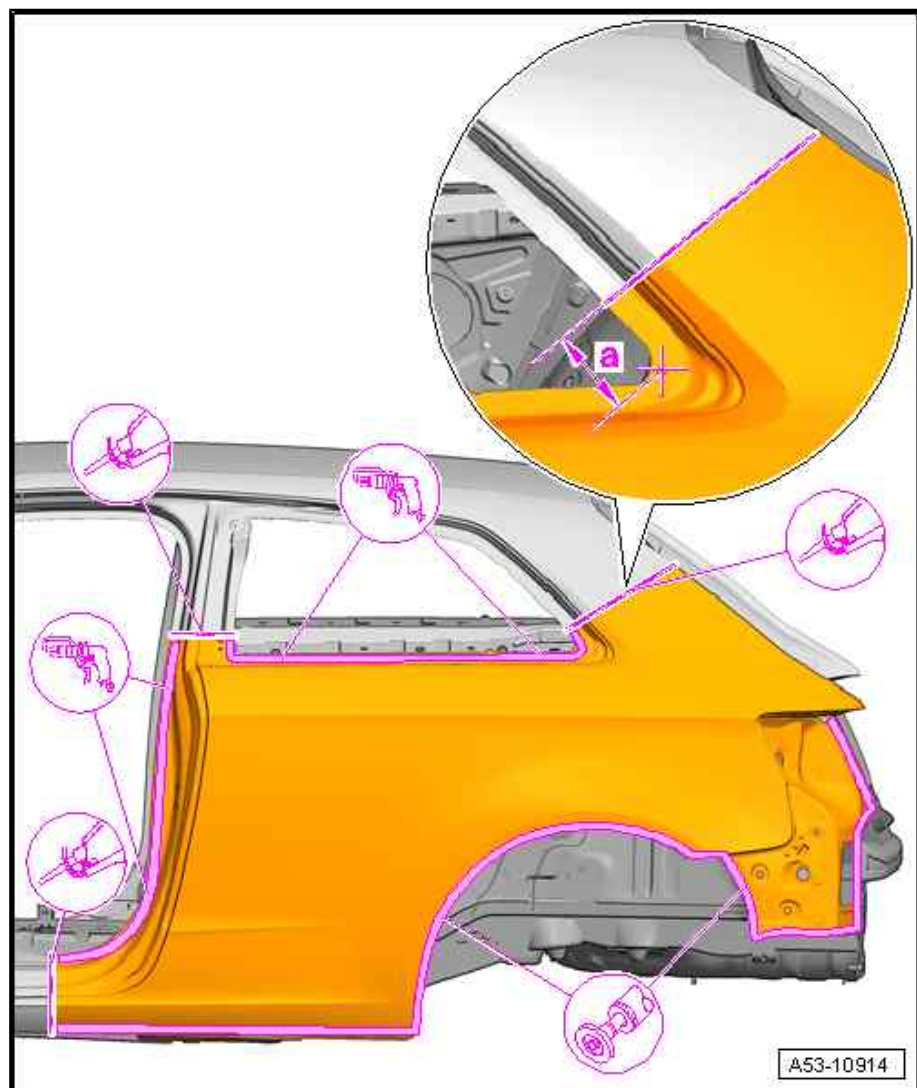
### Cutting locations

Permitted separating cuts on complete side panel ⇒ [page 125](#) .

- Make separating cut at C-pillar as shown using body saw (important: keep to dimension -a-).

Dimension -a- = 20 mm

- Separate original joint using spot weld breaker .
- Grind through outer edge at wheel arch using compact angle grinder .
- Make separating cuts as shown using body saw .

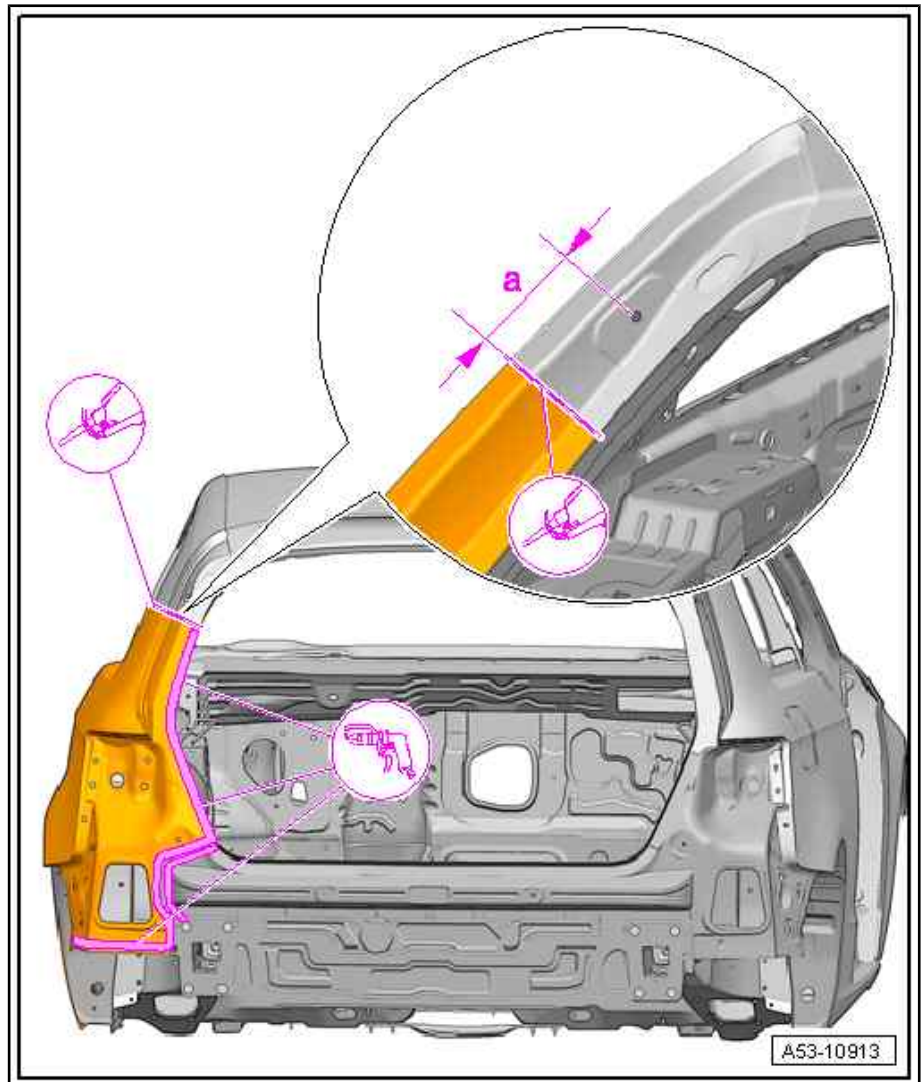




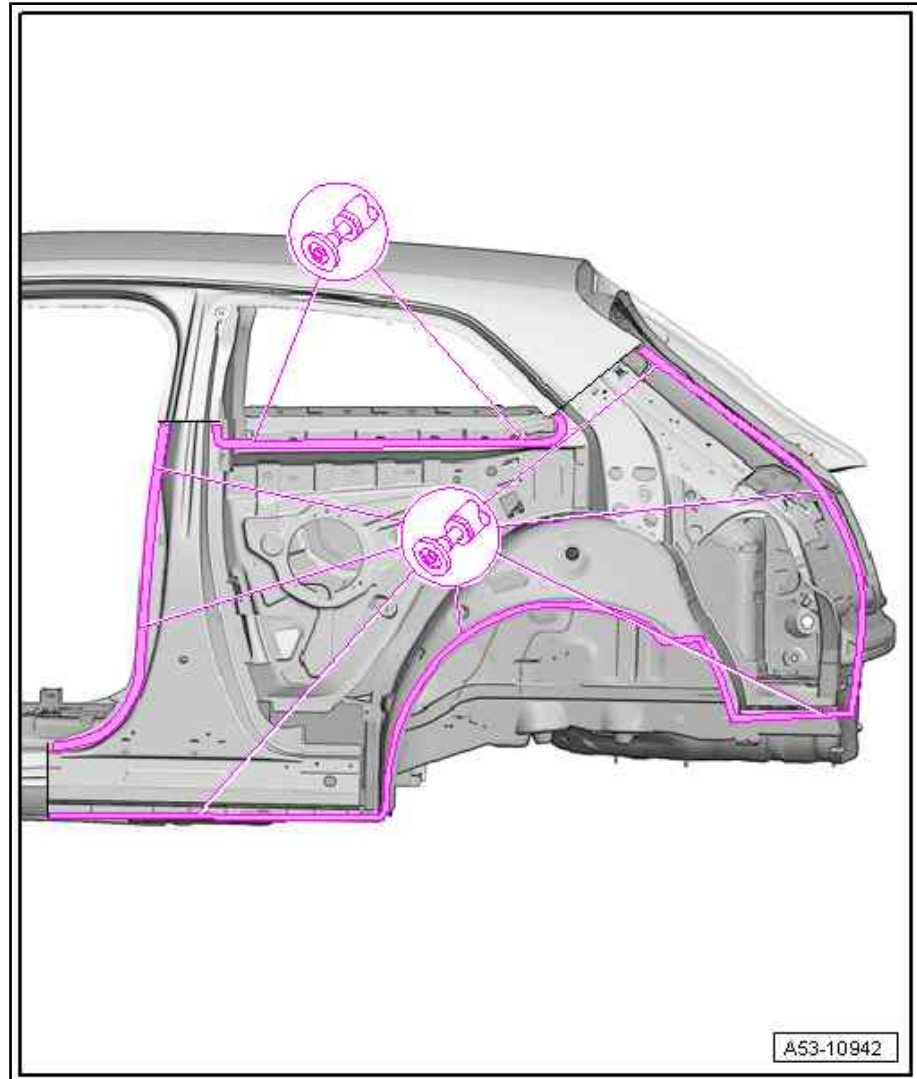
- Make separating cut at C-pillar as shown using body saw (important: keep to dimension -a-).

**Dimension -a- = 80 mm**

- Separate original joint using spot weld breaker .
- Separate original joint at cross panel using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Remove remaining adhesive completely and sand bonding surfaces down to bare metal.

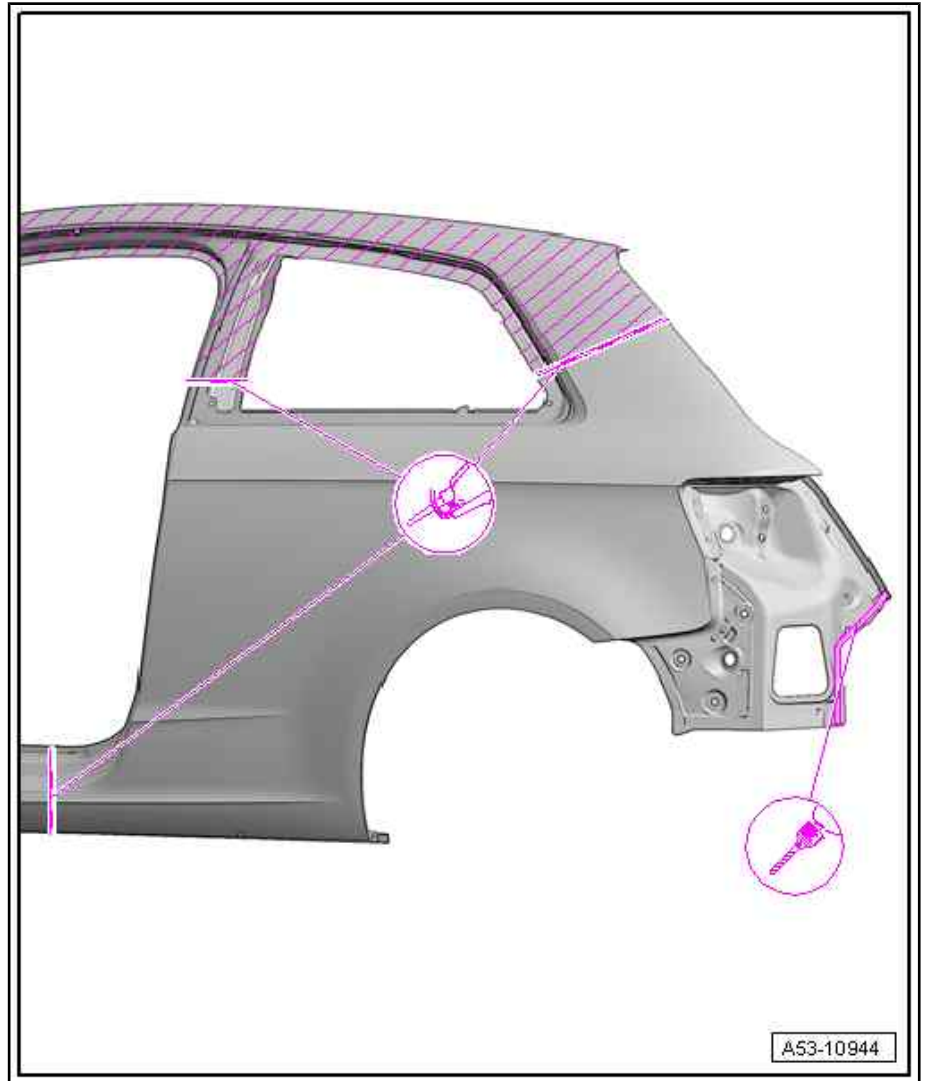


### Replacement parts

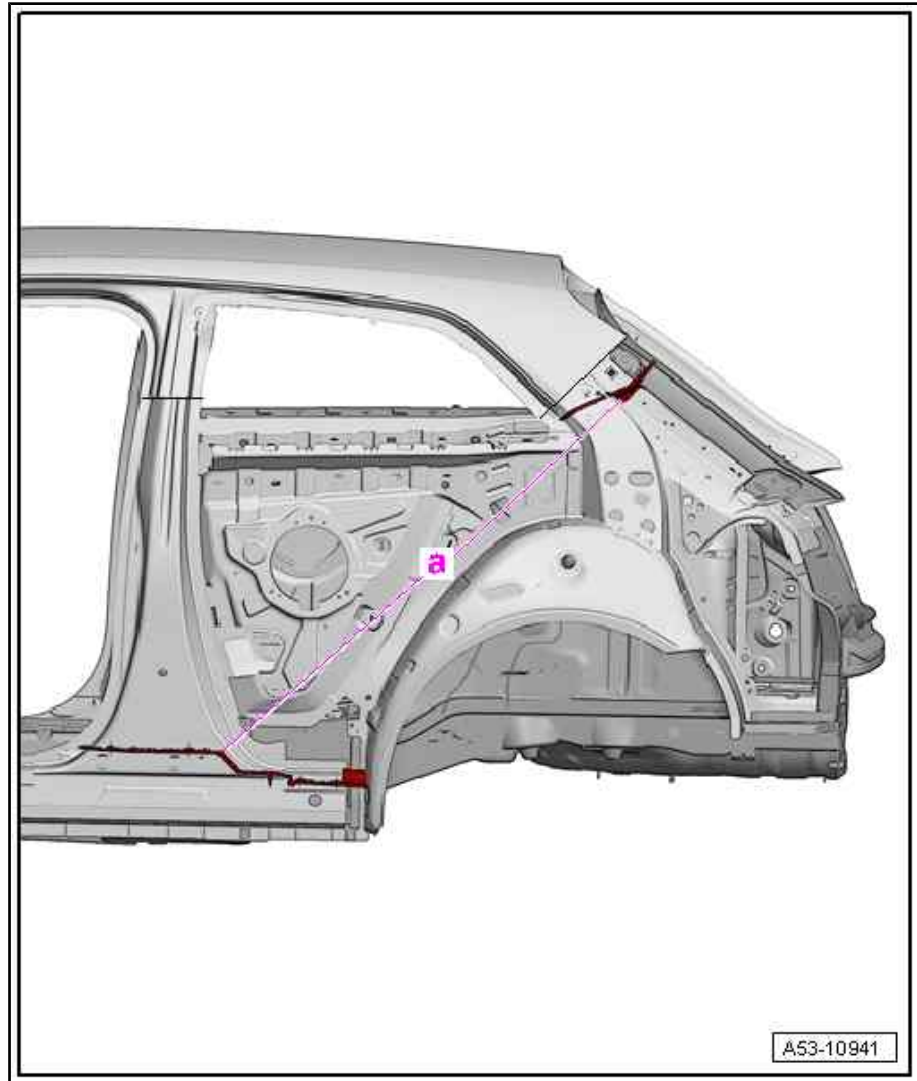
- ◆ Side panel
- ◆ Moulded foam inserts
- ◆ 2-component epoxy adhesive - DA 001 730 A2- , 1 set of cartridges
- ◆ Cleaning solution - D 009 401 04-

### Preparing new part

- Roughen bonding surface using a clean sanding disc (grit size P 80 or P 100).
- Clean bonding area with cleaning solution - D 009 401 04- (it must be free of dust and grease).
- Clean beaded flange with cleaning solution - D 009 401 04- (it must be free of dust and grease).
- Transfer separating cut to new part and cut off hatched area using body saw .
- Drill holes for SG plug weld seam, 8 mm  $\varnothing$  using drill .
- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.



Fit moulded foam inserts -a- ⇒ [page 18](#) .

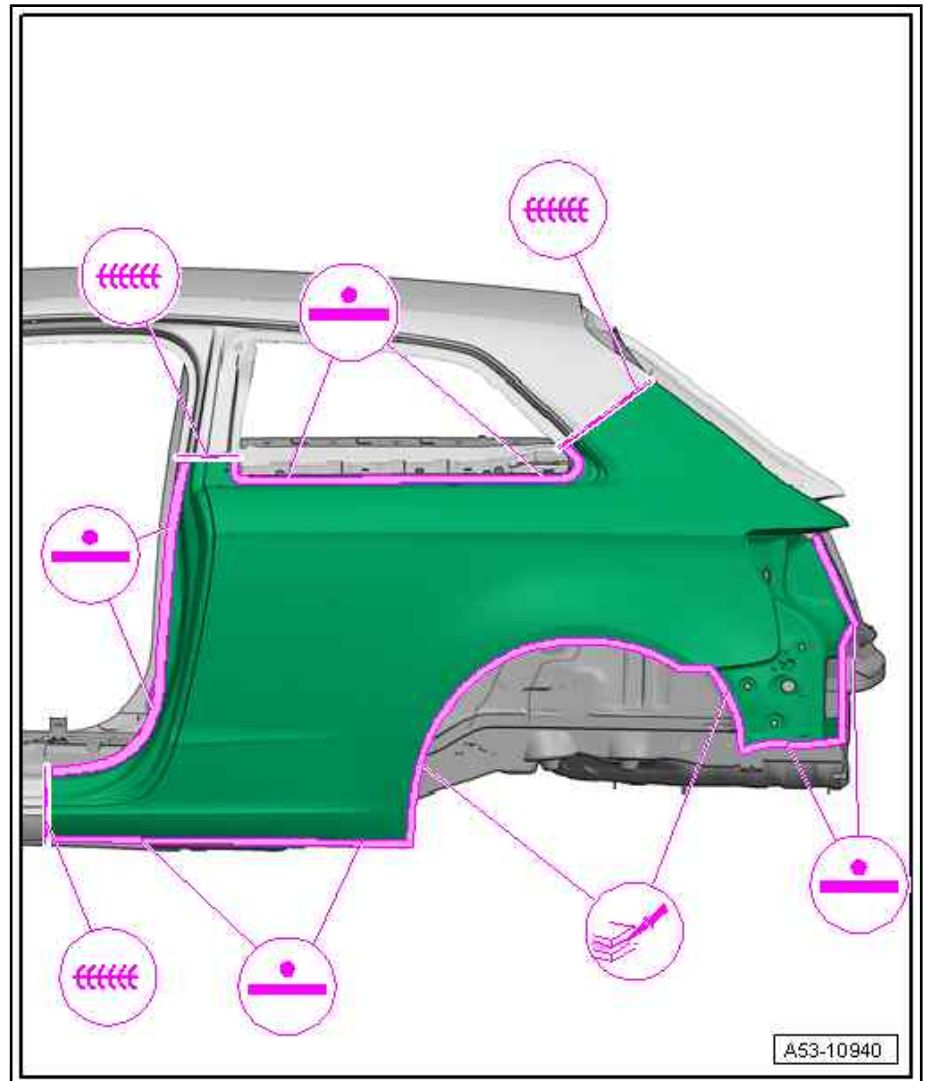


**!** NOTICE

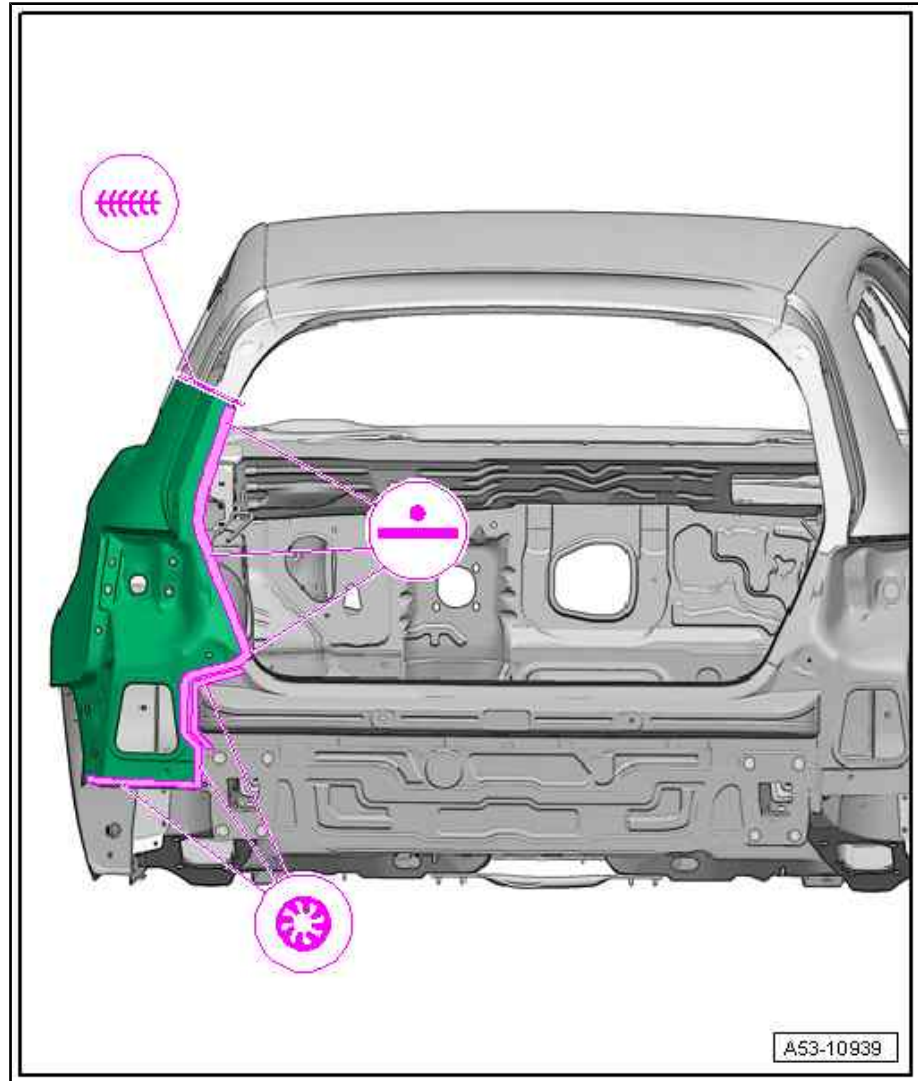
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Apply 2-component epoxy adhesive - DA 001 730 A2- to side panel and flange area on wheel housing using pneumatic glue gun - V.A.G 2005 B- .
- Weld in at separating cuts using shielded arc welding equipment : SG continuous seam.
- Weld in side panel using resistance spot welder : RP spot weld seam.



- Weld in at separating cuts using shielded arc welding equipment : SG continuous seam.
- Weld in side panel using resistance spot welder : RP spot weld seam.
- Weld in side panel using shielded arc welding equipment : SG plug weld seam.
- Weld in cross panel using shielded arc welding equipment : SG plug weld seam.





RO: 53 55 55 00

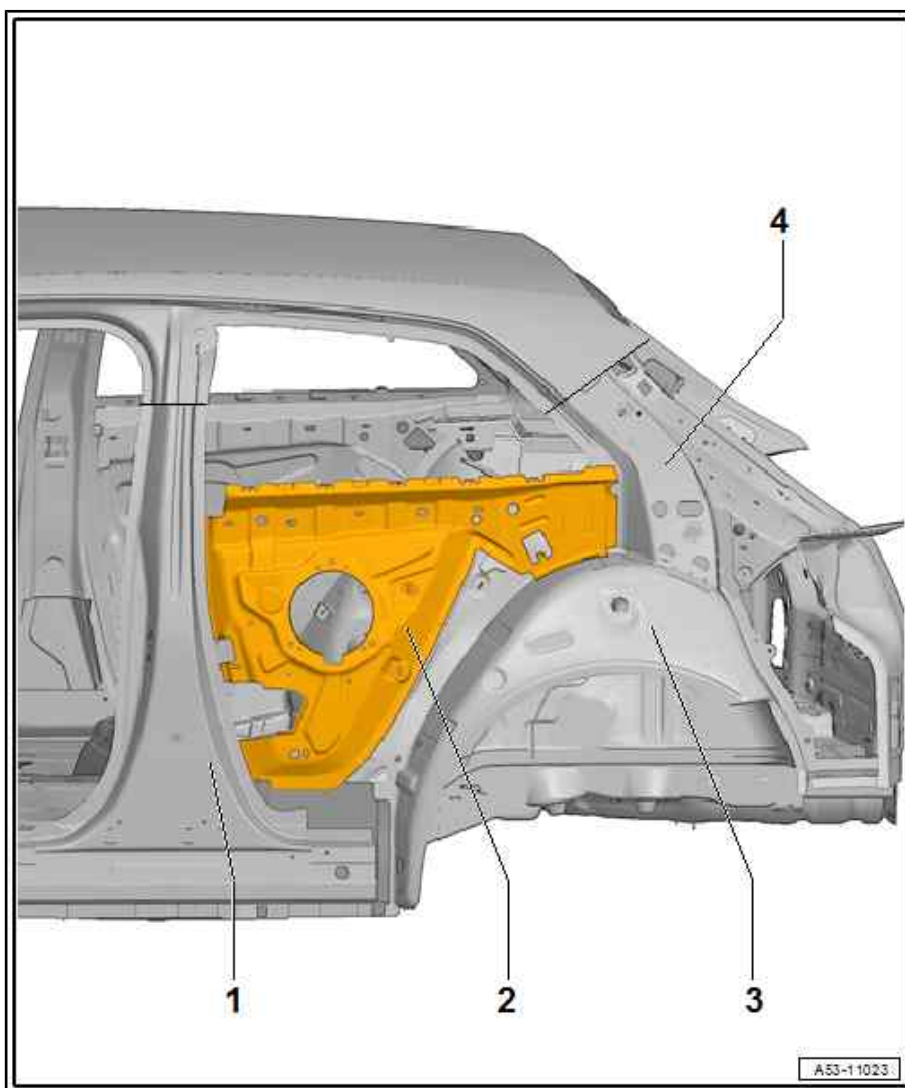
## 9 Inner side panel - Renewal (A3)

### DANGER

Fuel tank and fuel pipes

Take extreme care when performing sanding and welding work near the tank or other components carrying fuel. If in doubt, always remove these components.

- 1 - Inner B-pillar
- 2 - Inner side panel
- 3 - Wheel housing
- 4 - C-pillar reinforcement



### 9.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw



- ◆ Spot weld breaker



**NOTICE**

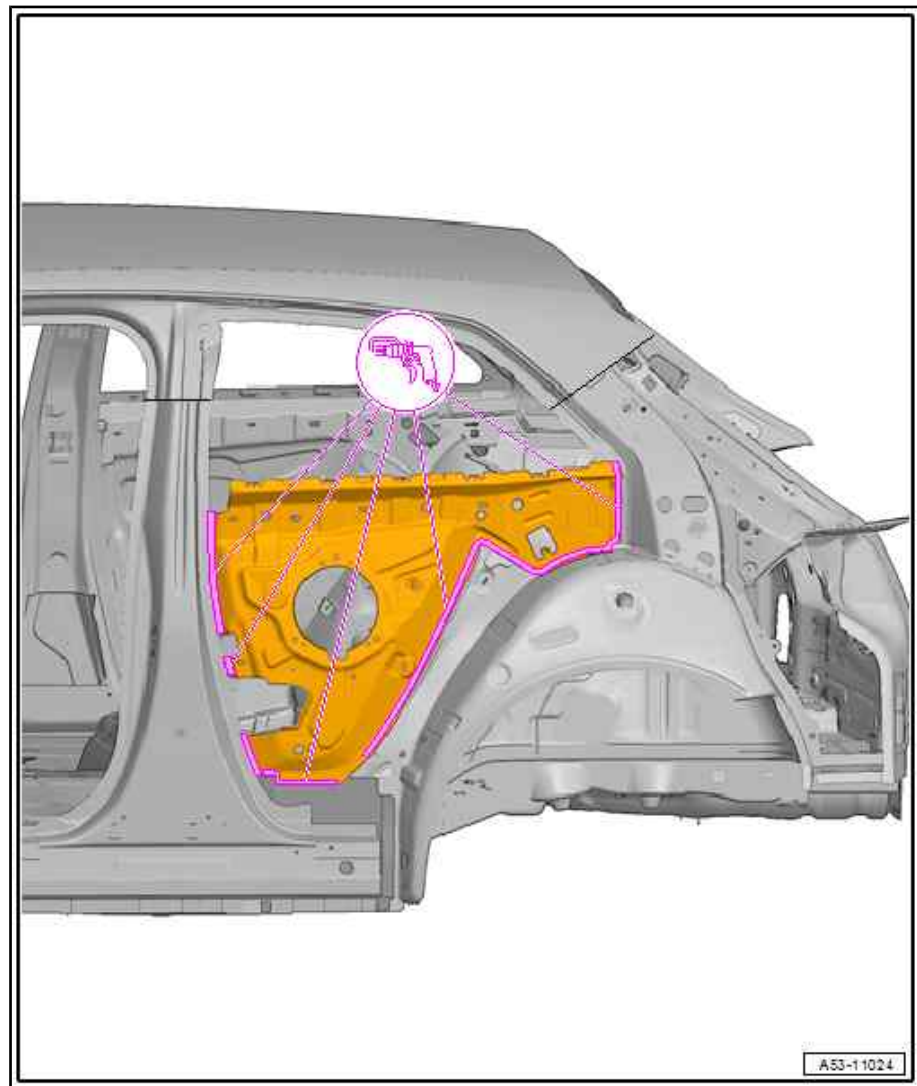
One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

## 9.2 Procedure

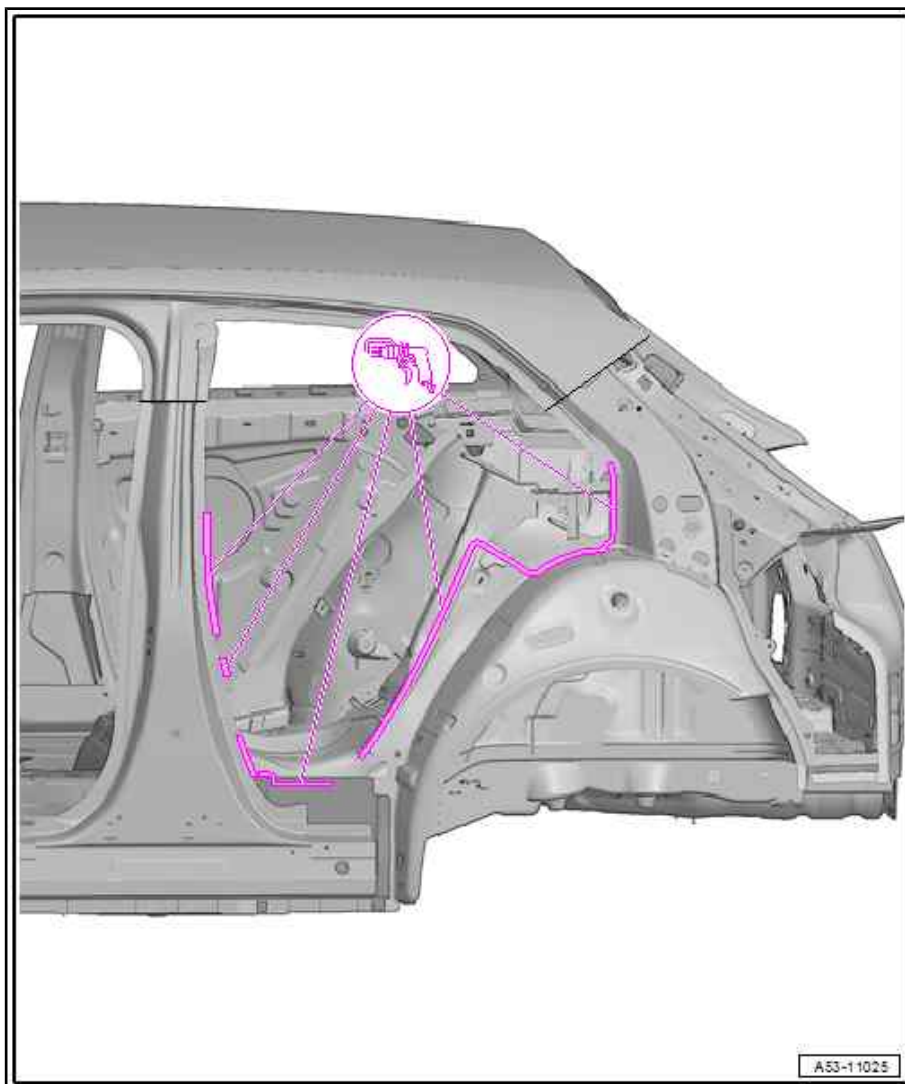
- Removing side panel ⇒ [page 499](#)

### Cutting locations

- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.



#### Replacement part

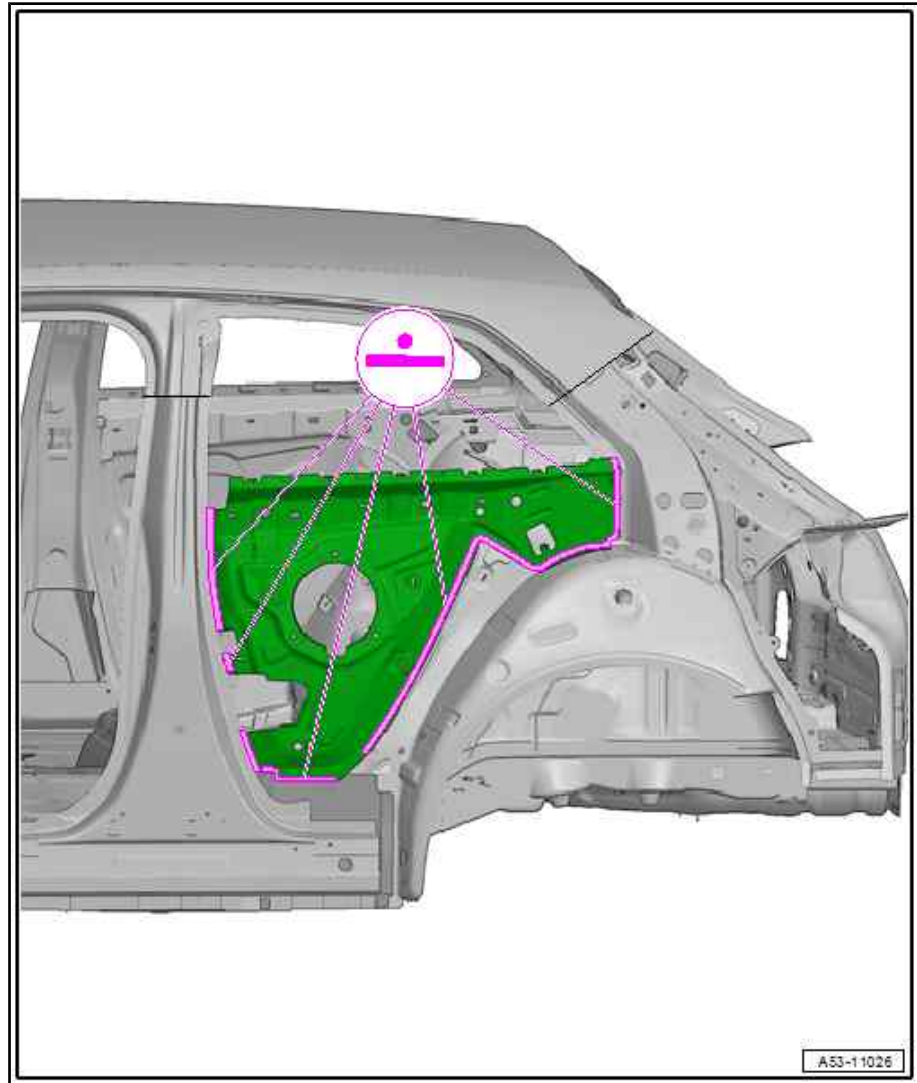
- ◆ Inner side panel

#### NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

#### Welding in

- Weld in inner side panel using resistance spot welder : RP spot weld seam.



- Renewing side panel ⇒ [page 499](#)



RO: 53 55 55 00

## 10 Side panel - Renewal (Sportback)

Includes rain channel and tail light mounting

### DANGER

Damaged natural gas fuel tanks constitute an explosion risk - risk of death!

- If components at the rear and/or rear side of the vehicle (e.g. bumper cover, rear lid, underbody trim, longitudinal member, rear cross panel, etc.) are removed due to accident damage, the natural gas fuel tanks must be checked for damage.
- Carry out assessment of damage to fuel tanks made of composite fibre materials ⇒ Natural gas engines - general information; Rep. gr. 20 ; Assessing damage to fuel tanks made of composite fibre materials; Assessing damage to fuel tanks made of composite fibre materials .

### DANGER

Only for vehicles with natural gas technology

When performing welding, cutting or drilling work in the vicinity of components that convey gas, these components must either be removed or safely covered up before performing repairs.

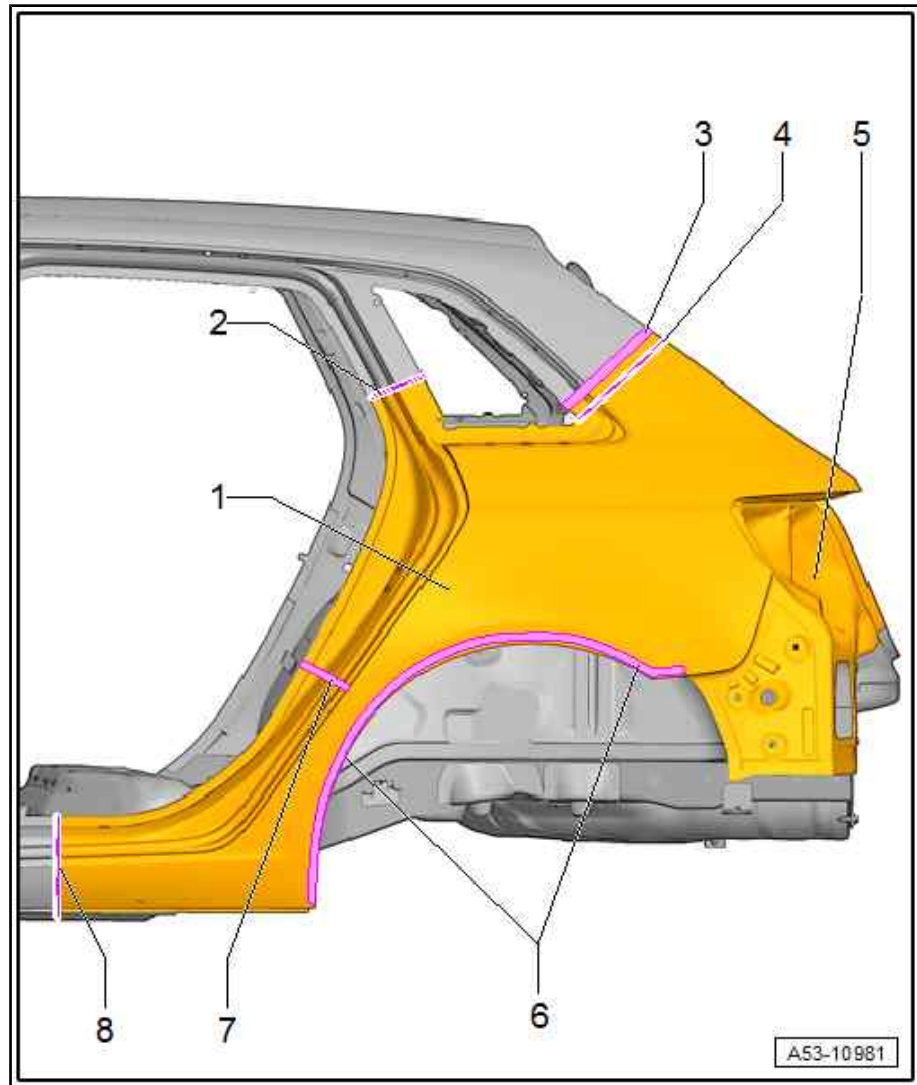
### DANGER

Fuel tank and fuel pipes

Take extreme care when performing sanding and welding work near the tank or other components carrying fuel. If in doubt, always remove these components.



- 1 - Side panel
- 2 - Separating cut in B-pillar
- 3 - Separating cut in C-pillar
- 4 - Moulded foam insert
- 5 - Tail light mounting
- 6 - Bonded area
- 7 - Moulded foam insert
- 8 - Separating cut in side member



## 10.1 Tools

### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker



### NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .



## 10.2 Procedure

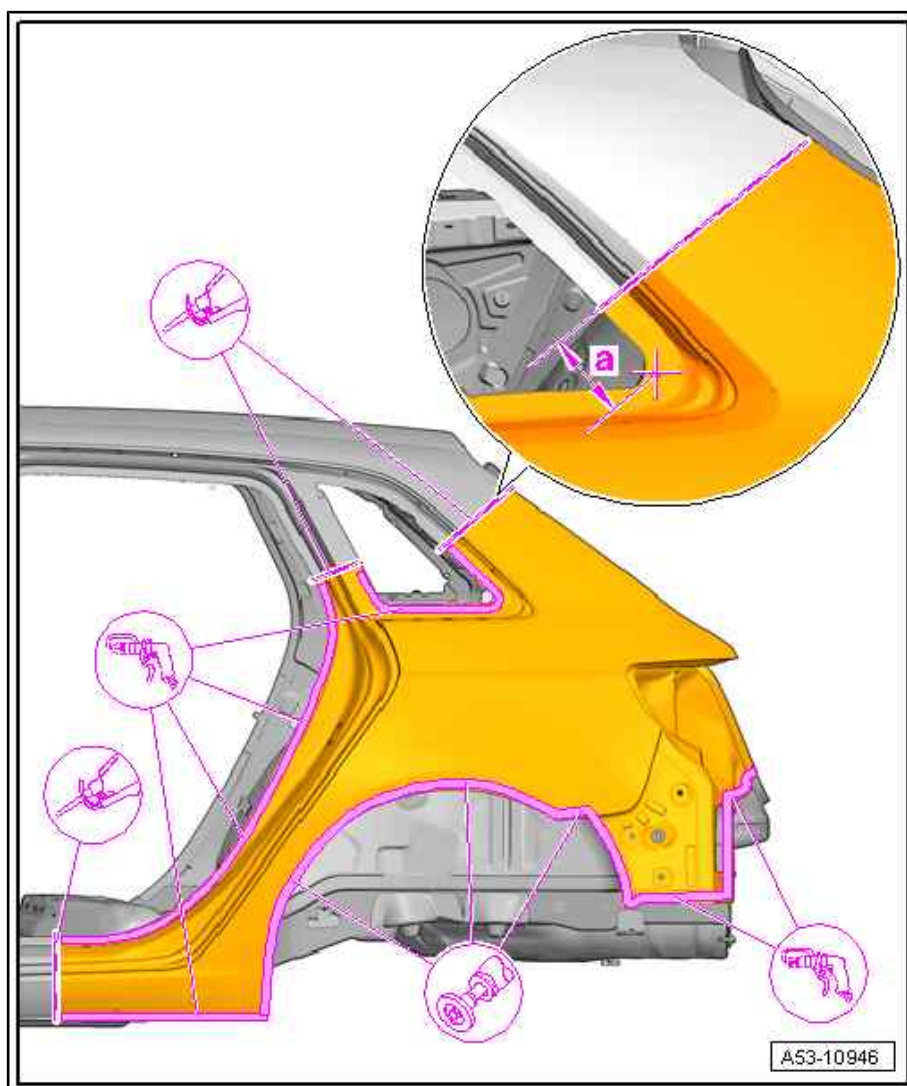
### Cutting locations

Permitted separating cuts on complete side panel ⇒ [page 125](#) .

- Make separating cut at C-pillar as shown using body saw (important: keep to dimension -a-).

Dimension -a- = 40 mm

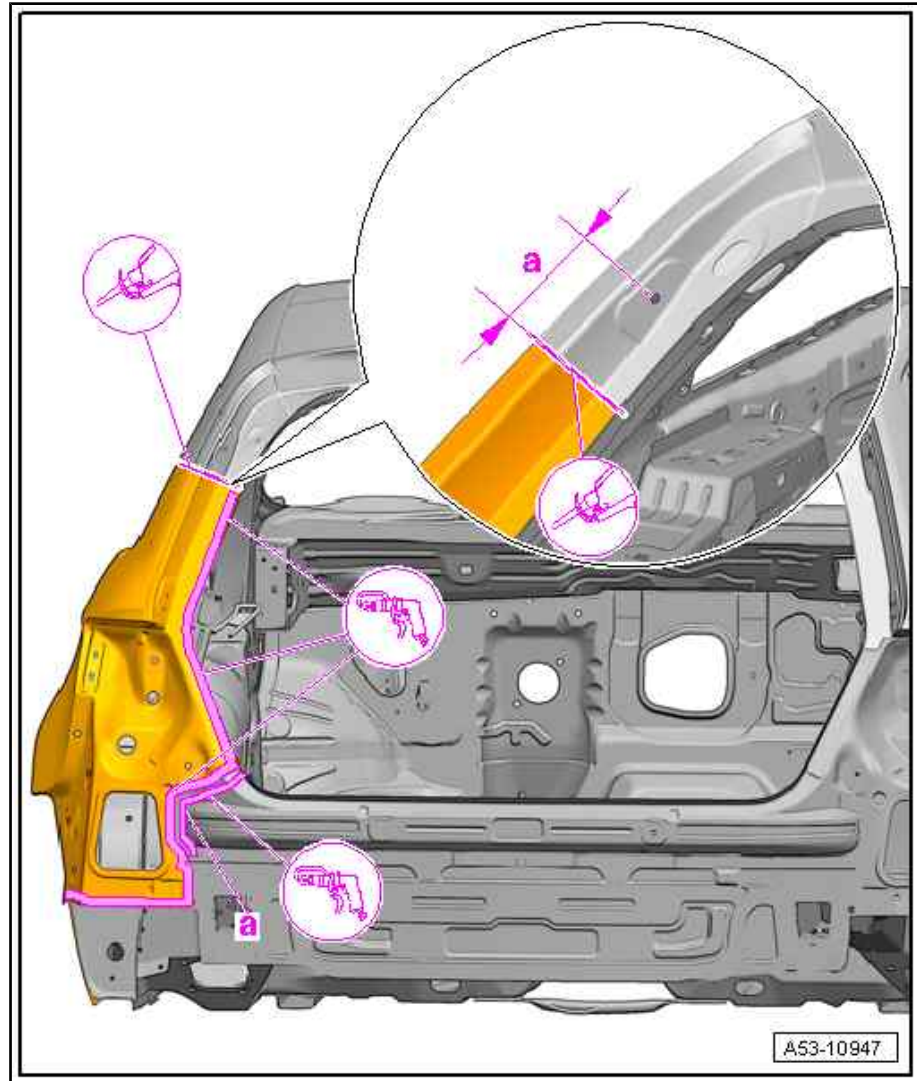
- Separate original joint using spot weld breaker .
- Grind through outer edge at wheel arch using compact angle grinder .
- Make separating cuts as shown using body saw .



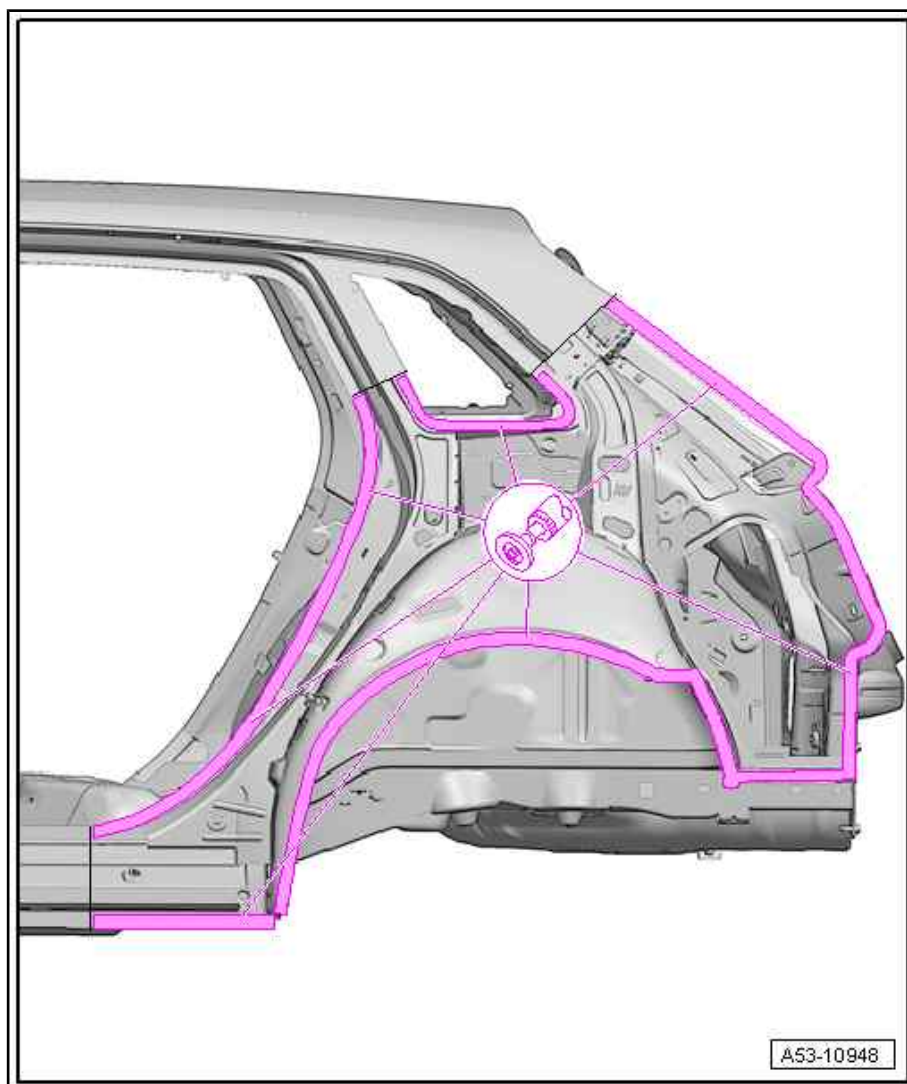
- Make separating cut at C-pillar as shown using body saw (important: keep to dimension -a-).

Dimension -a- = 80 mm

- Separate original joint using spot weld breaker .
- Separate original joint at cross panel -a- using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Remove remaining adhesive completely and sand bonding surfaces down to bare metal.



### Replacement parts

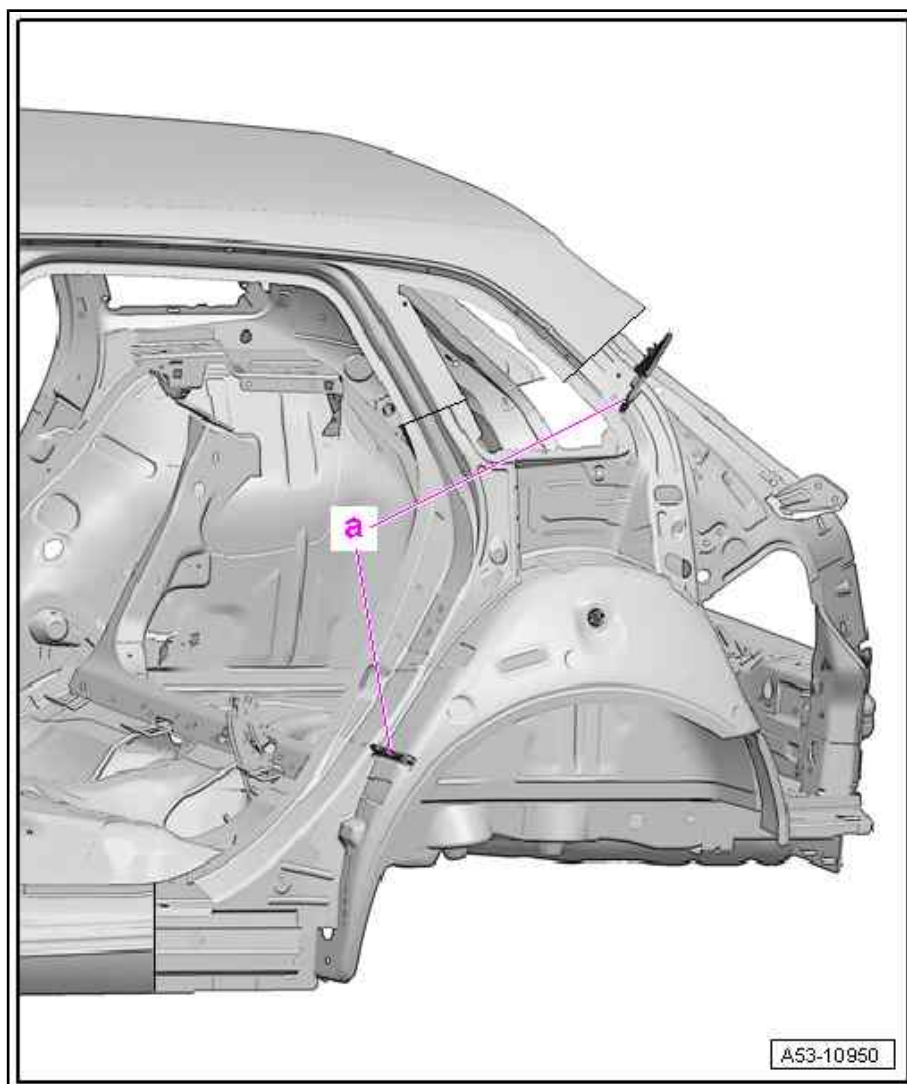
- ◆ Side panel
- ◆ Moulded foam inserts
- ◆ 2-component epoxy adhesive - DA 001 730 A2- , 1 set of cartridges
- ◆ Cleaning solution - D 009 401 04-

### Preparing new part

#### Pre-treatment - applies to replacement part only

- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.
- Roughen bonding surface using a clean sanding disc (grit size P 80 or P 100).
- Clean bonding area with cleaning solution - D 009 401 04- (it must be free of dust and grease).
- Clean beaded flange with cleaning solution - D 009 401 04- (it must be free of dust and grease).
- Transfer separating cut to new part and cut off hatched area using body saw .



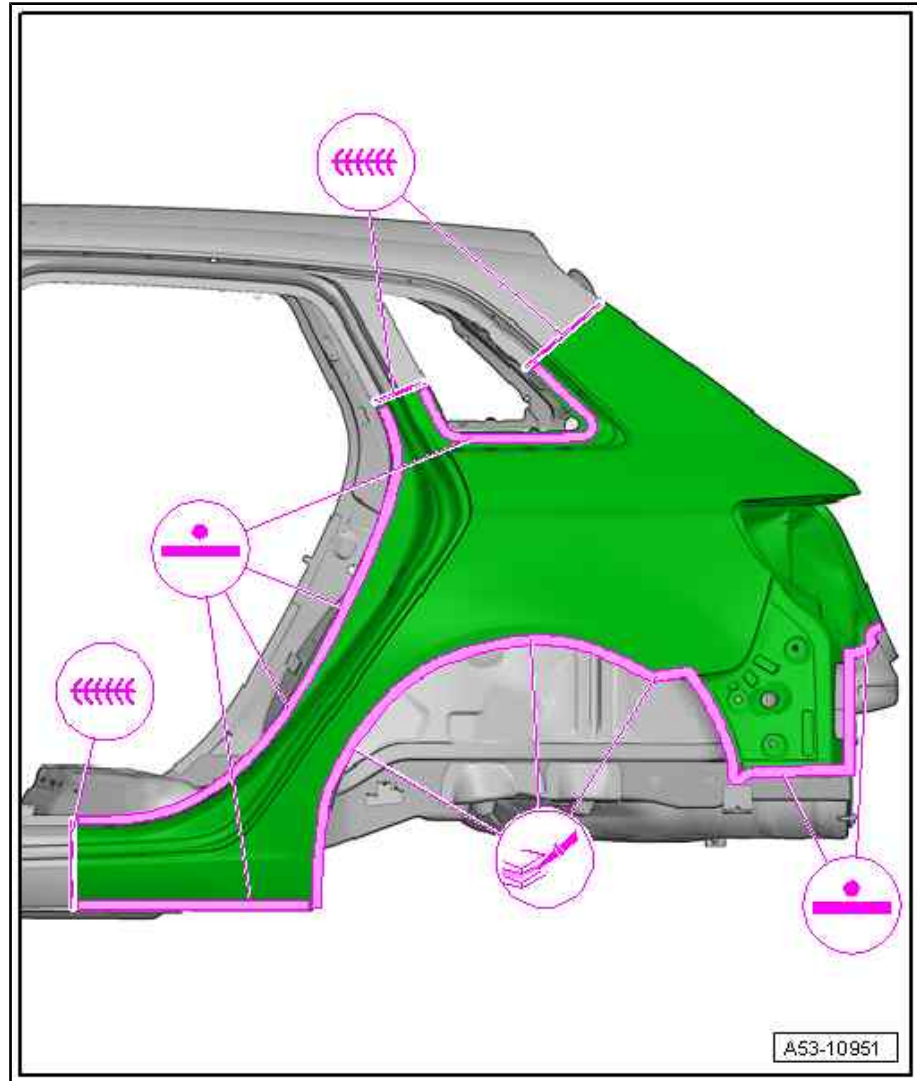


**!** NOTICE

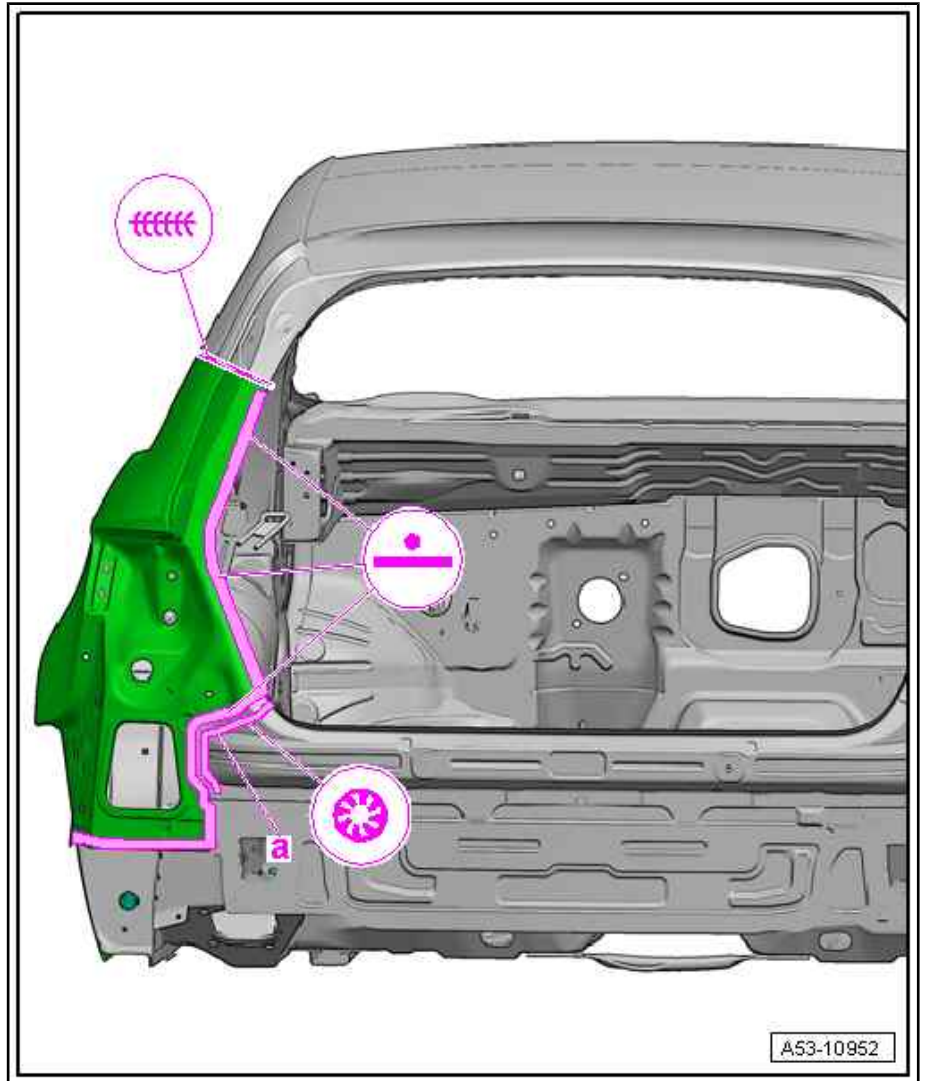
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Apply 2-component epoxy adhesive - DA 001 730 A2- to side panel and flange area on wheel housing using pneumatic glue gun - V.A.G 2005 B- .
- Weld in at separating cuts using shielded arc welding equipment : SG continuous seam.
- Weld in side panel using resistance spot welder : RP spot weld seam.



- Weld in at separating cut using shielded arc welding equipment : SG continuous seam.
- Weld in side panel using resistance spot welder : RP spot weld seam.
- Weld in side panel using shielded arc welding equipment : SG plug weld seam.
- Weld in cross panel -a- using shielded arc welding equipment : SG plug weld seam.





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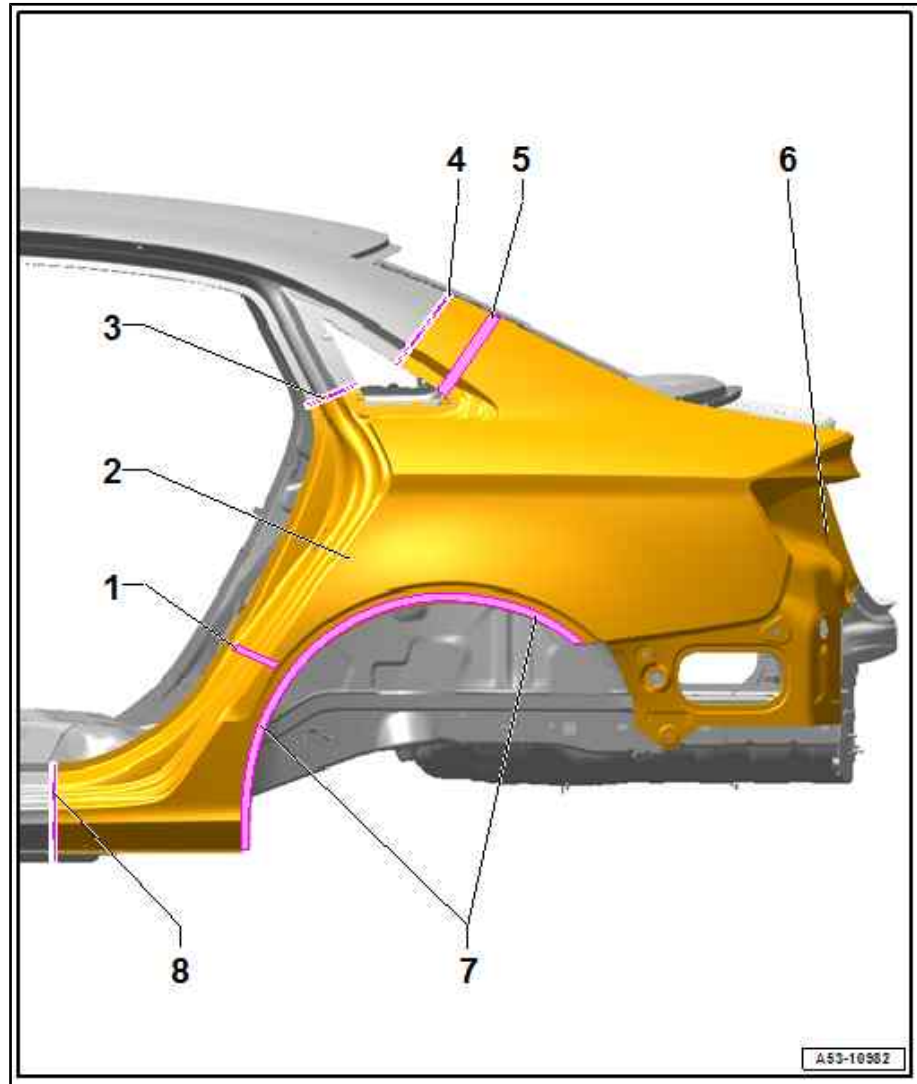
## 11 Side panel - Renewal (Saloon)

### DANGER

#### Fuel tank and fuel pipes

Take extreme care when performing sanding and welding work near the tank or other components carrying fuel. If in doubt, always remove these components.

- 1 - Moulded foam insert
- 2 - Side panel
- 3 - Separating cut in C-pillar
- 4 - Separating cut in D-pillar
- 5 - Moulded foam insert
- 6 - Tail light mounting
- 7 - Bonded area
- 8 - Separating cut in side member



### 11.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw



◆ Spot weld breaker

**!** NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

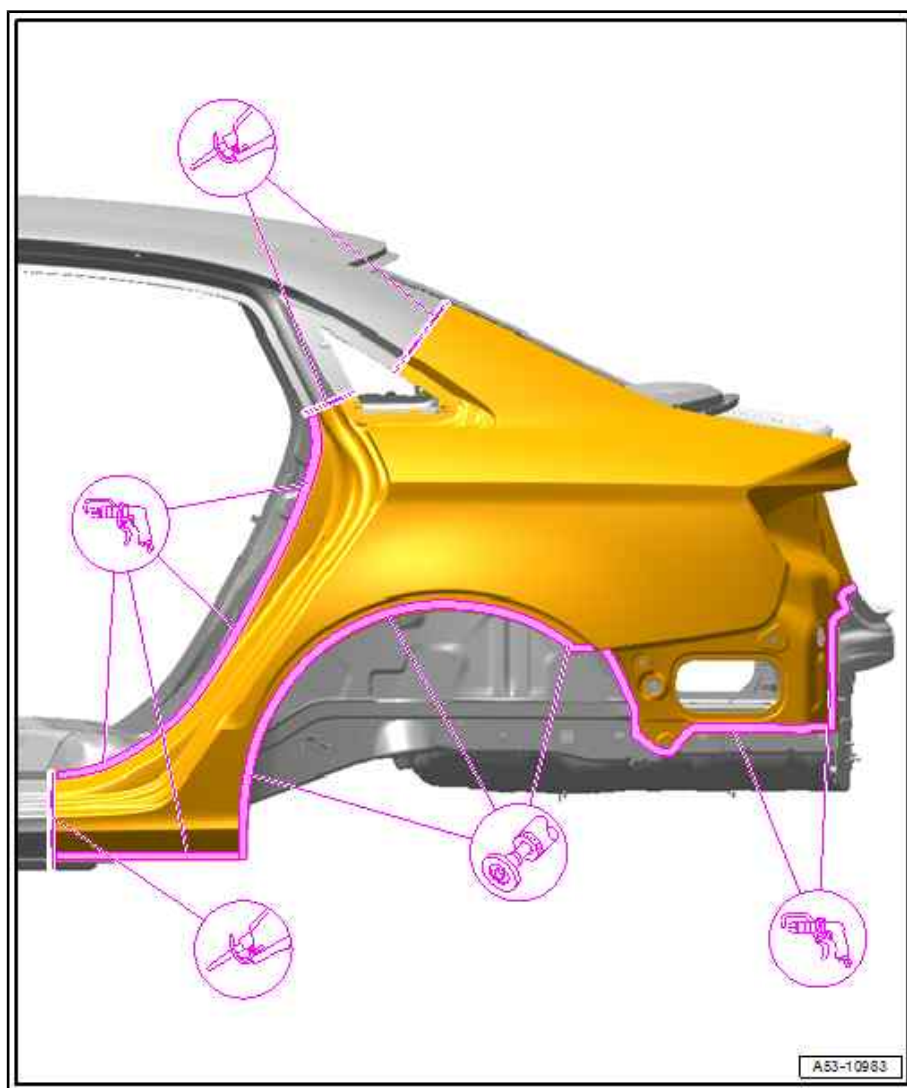
## 11.2 Procedure

- Removing rear upper cross panel (part section) ⇒ [page 471](#)

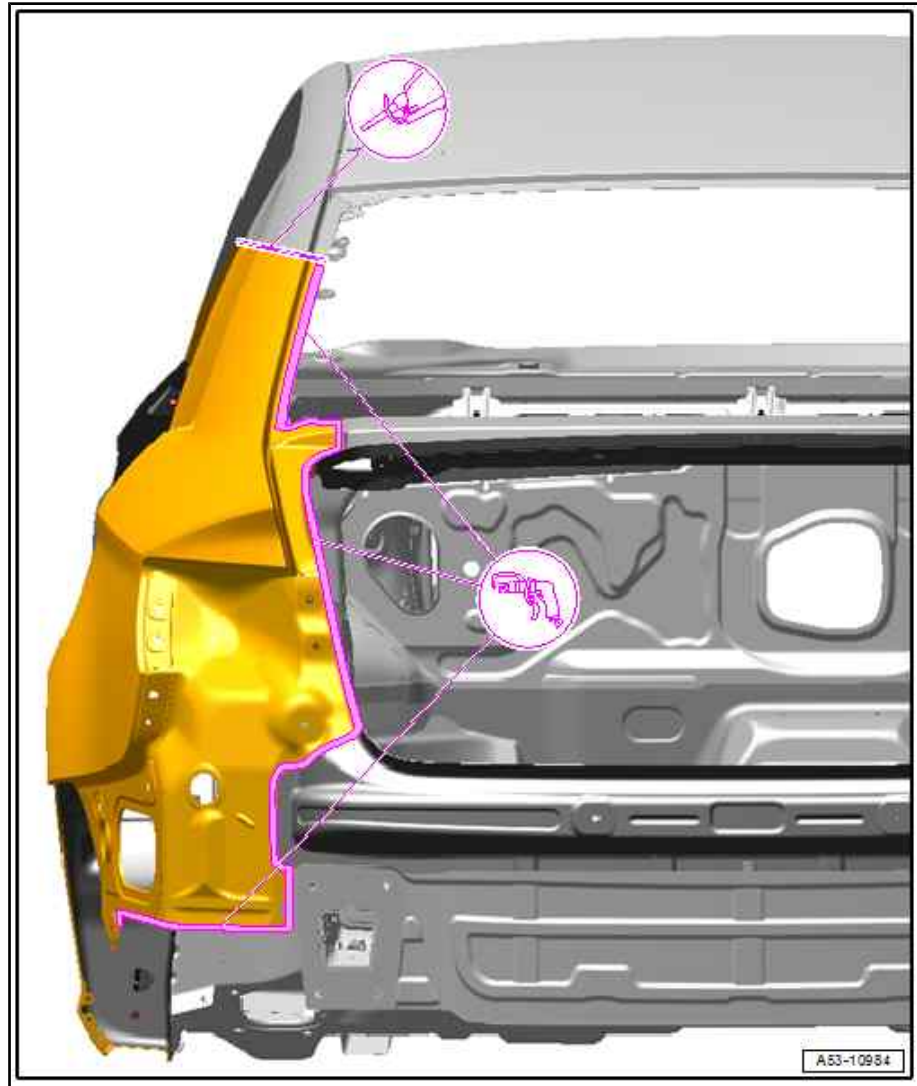
### Cutting locations

Permitted separating cuts on complete side panel ⇒ [page 125](#) .

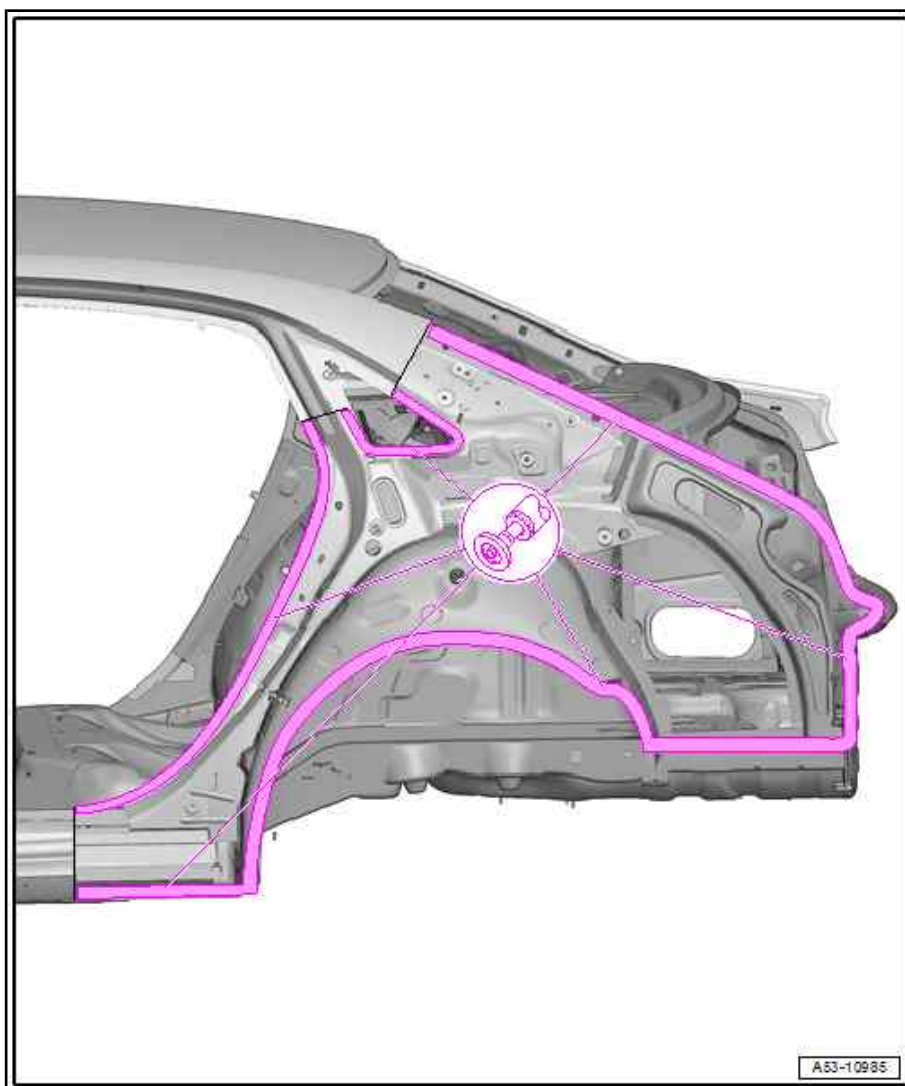
- Separate original joint using spot weld breaker .
- Grind through outer edge at wheel arch using compact angle grinder .
- Make separating cuts as shown using body saw .



- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Remove remaining adhesive completely and sand bonding surfaces down to bare metal.



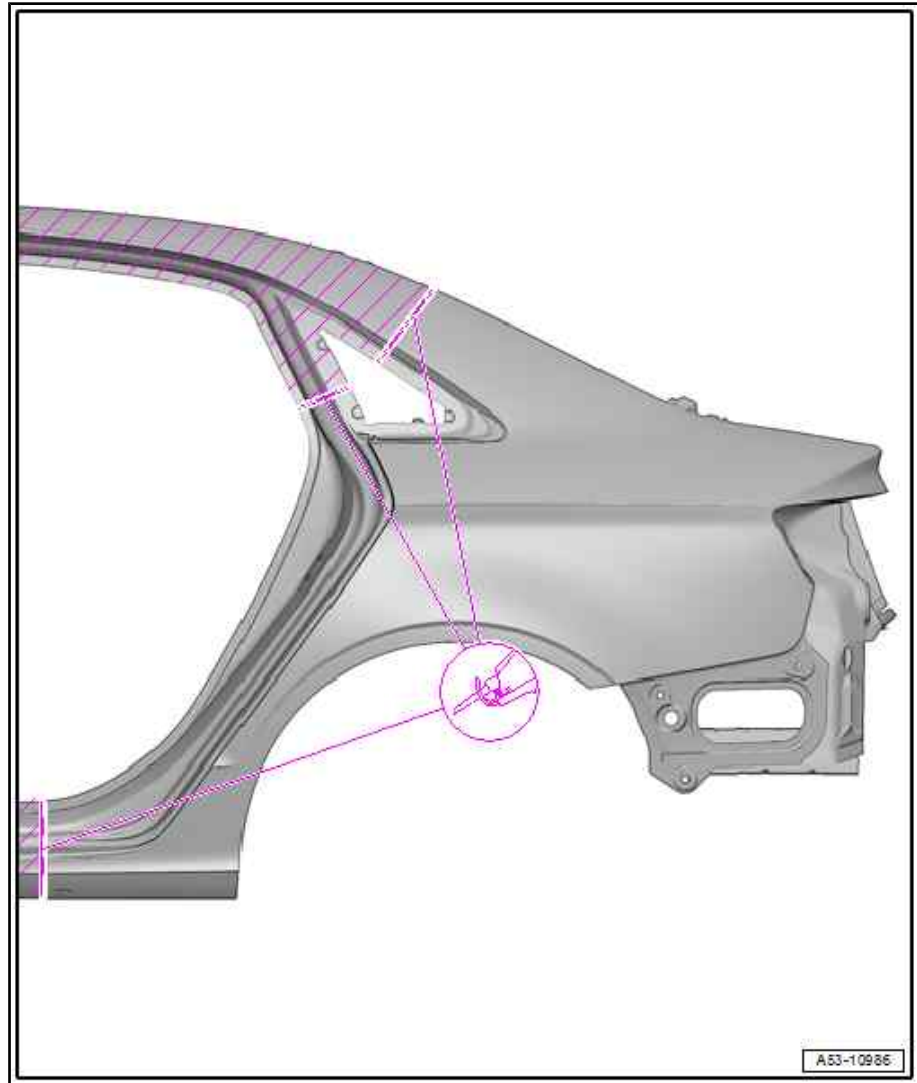
### Replacement parts

- ◆ Side panel
- ◆ Moulded foam inserts
- ◆ 2-component epoxy adhesive - DA 001 730 A2- , 1 set of cartridges
- ◆ Cleaning solution - D 009 401 04-

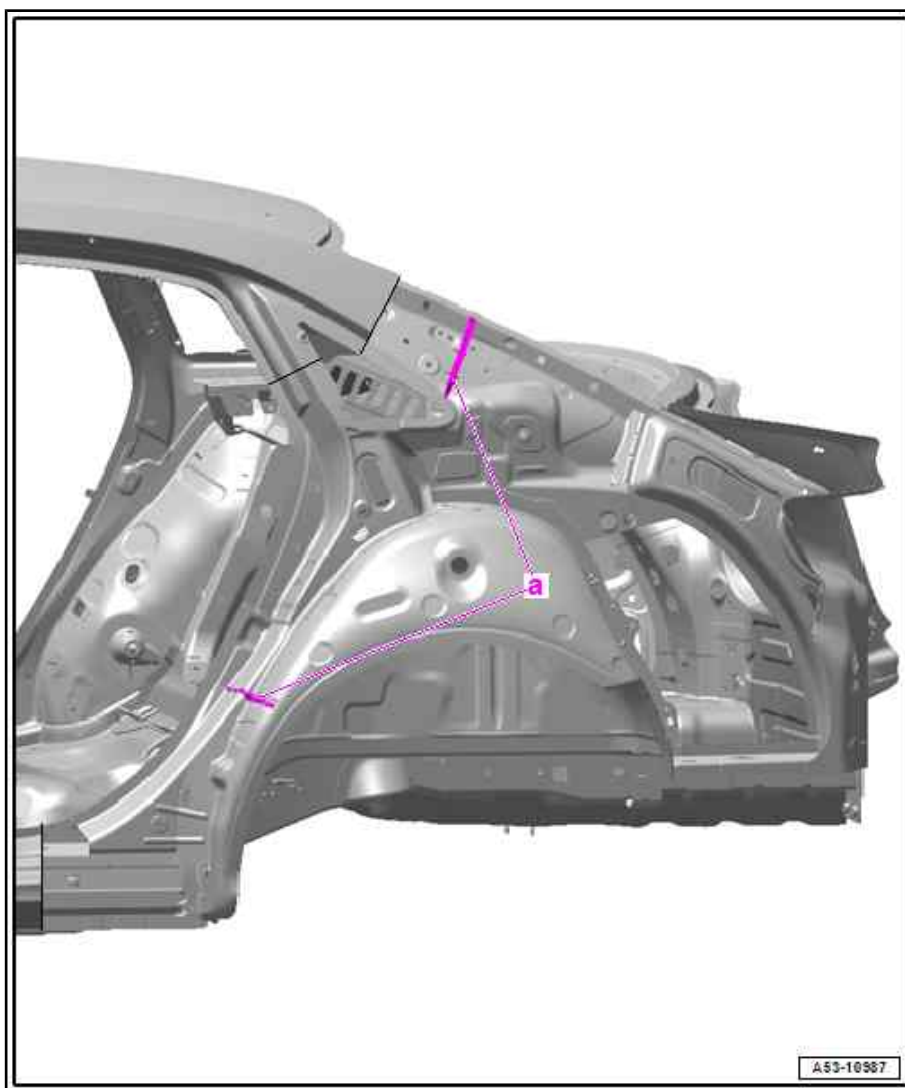
### Preparing new part

#### Pre-treatment - applies to replacement part only

- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.
- Roughen bonding surface using a clean sanding disc (grit size P 80 or P 100).
- Clean bonding area with cleaning solution - D 009 401 04- (it must be free of dust and grease).
- Clean beaded flange with cleaning solution - D 009 401 04- (it must be free of dust and grease).
- Transfer separating cut to new part and cut off hatched area using body saw .



Fit moulded foam inserts -a- ⇒ [page 18](#) .

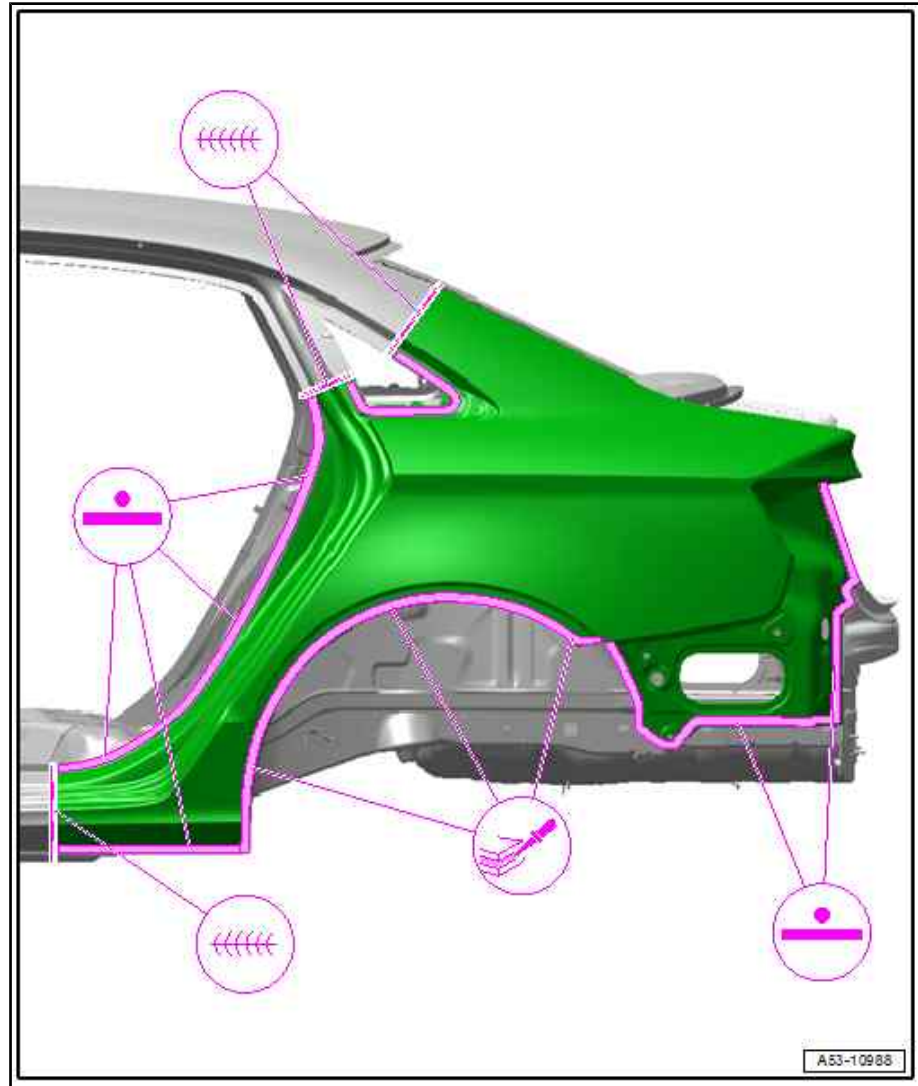


**!** NOTICE

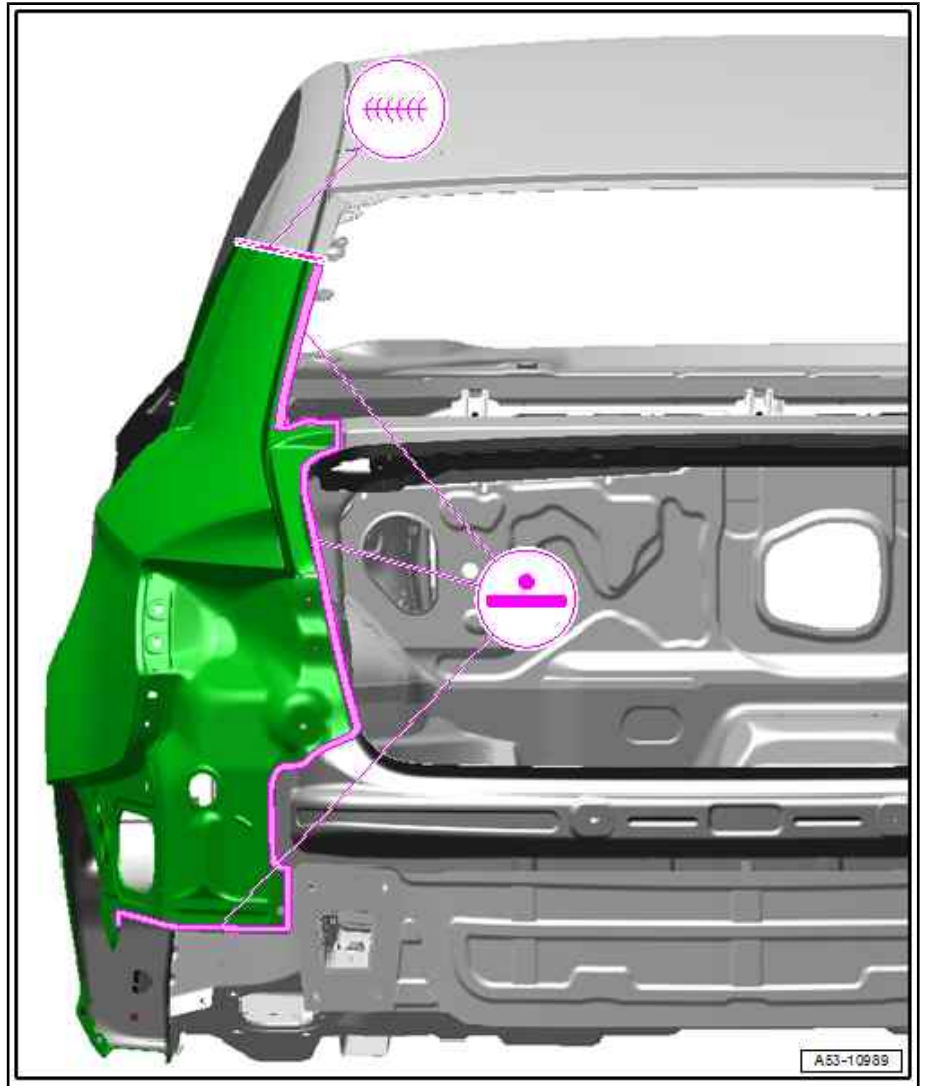
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Apply 2-component epoxy adhesive - DA 001 730 A2- to side panel and flange area on wheel housing using pneumatic glue gun - V.A.G 2005 B- .
- Weld in at separating cuts using shielded arc welding equipment : SG continuous seam.
- Weld in side panel using resistance spot welder : RP spot weld seam.



- Weld in at separating cut using shielded arc welding equipment : SG continuous seam.
- Weld in side panel using resistance spot welder : RP spot weld seam.



- Welding in rear upper cross panel (part section) ⇒ [page 471](#)



RO: 53 80 55 50

## 12 Spare wheel well - Renewal

A3 and Sportback identical

### DANGER

#### Fuel tank and fuel pipes

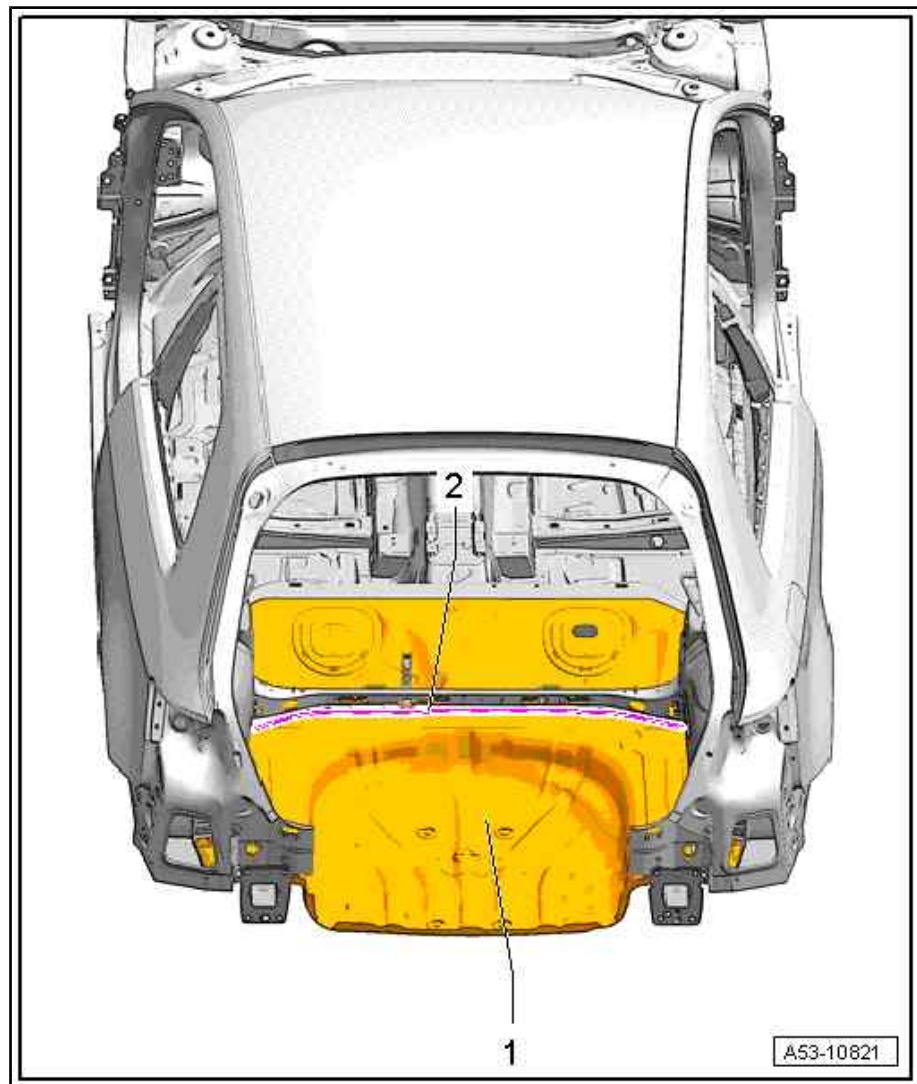
Take extreme care when performing sanding and welding work near the tank or other components carrying fuel. If in doubt, always remove these components.

1 - Spare wheel well

2 - Separating cut

Partial renewal

*Partial renewal of the spare wheel well is possible using this separating cut.*



### 12.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder



- ◆ Body saw
- ◆ Spot weld breaker

**!** NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

## 12.2 Procedure

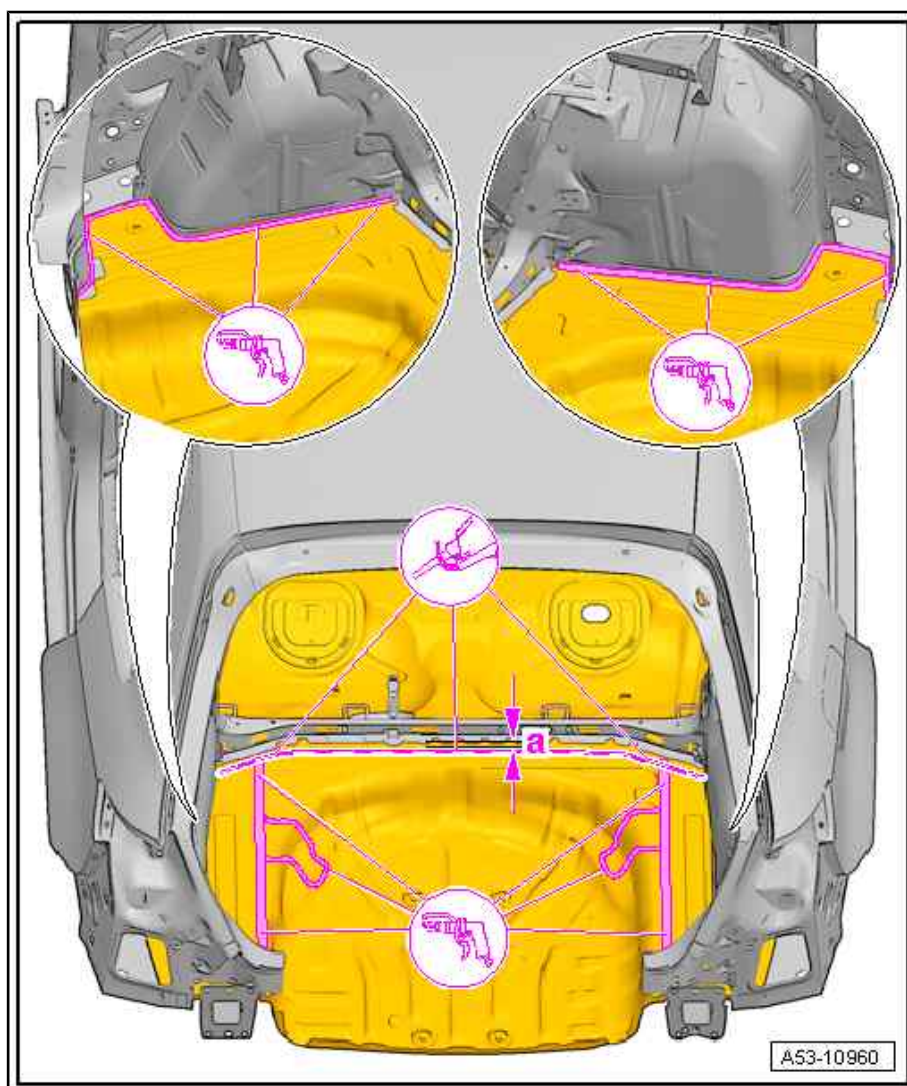
- Removing rear upper cross panel ⇒ [page 465](#)
- Removing cross panel ⇒ [page 476](#)

### Cutting locations

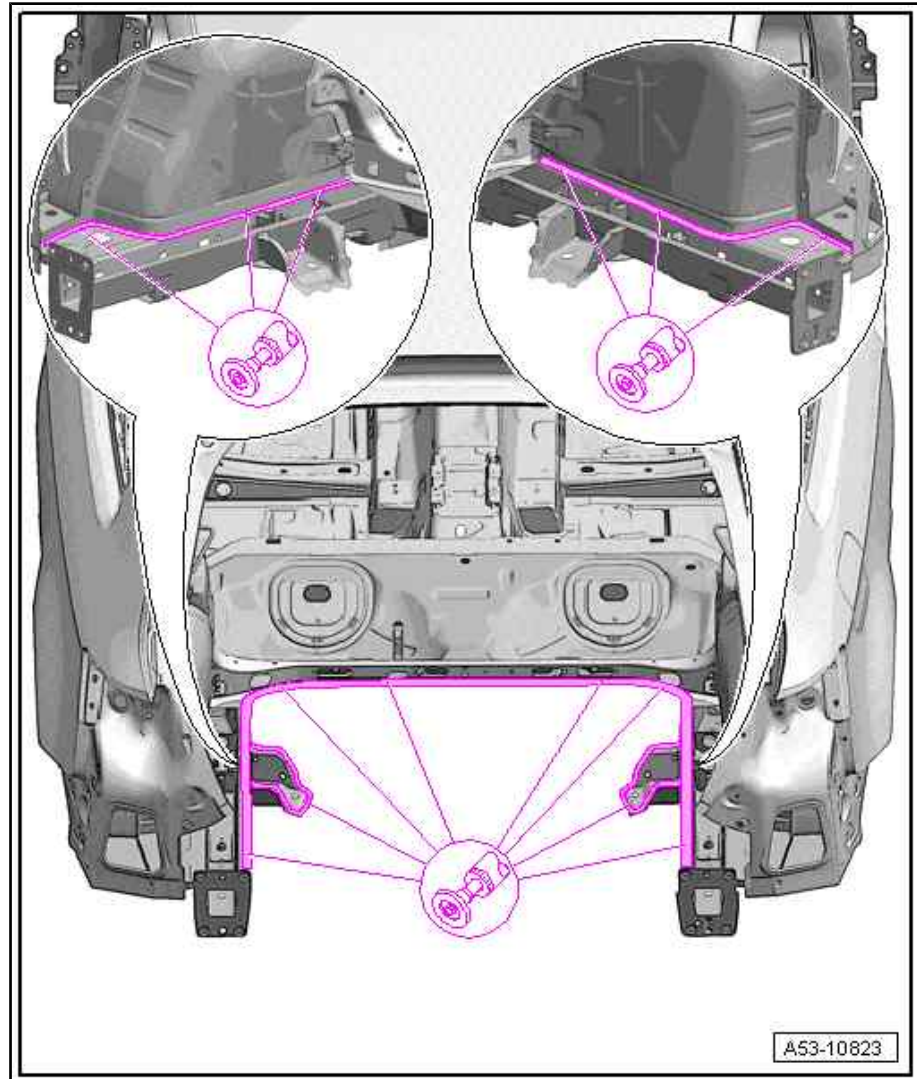
- Make separating cut at spare wheel well as shown using body saw (important: keep to dimension -a-).

Dimension -a- = 20 mm

- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.



### Replacement part

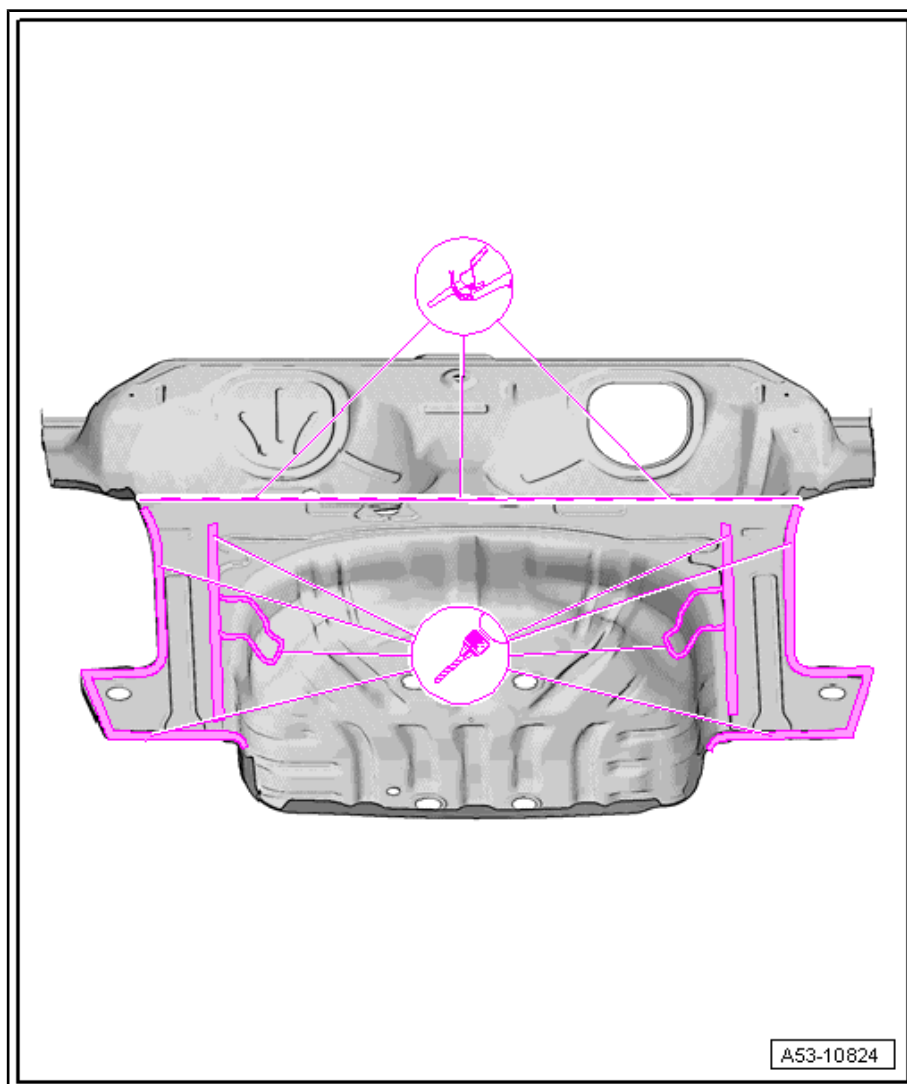
- ◆ Spare wheel well

### Pre-treatment - applies to replacement part only

- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.

### Preparing new part

- Transfer separating cut to new part and cut to size using body saw .
- Drill holes for SG plug weld seam, 8 mm Ø using drill .



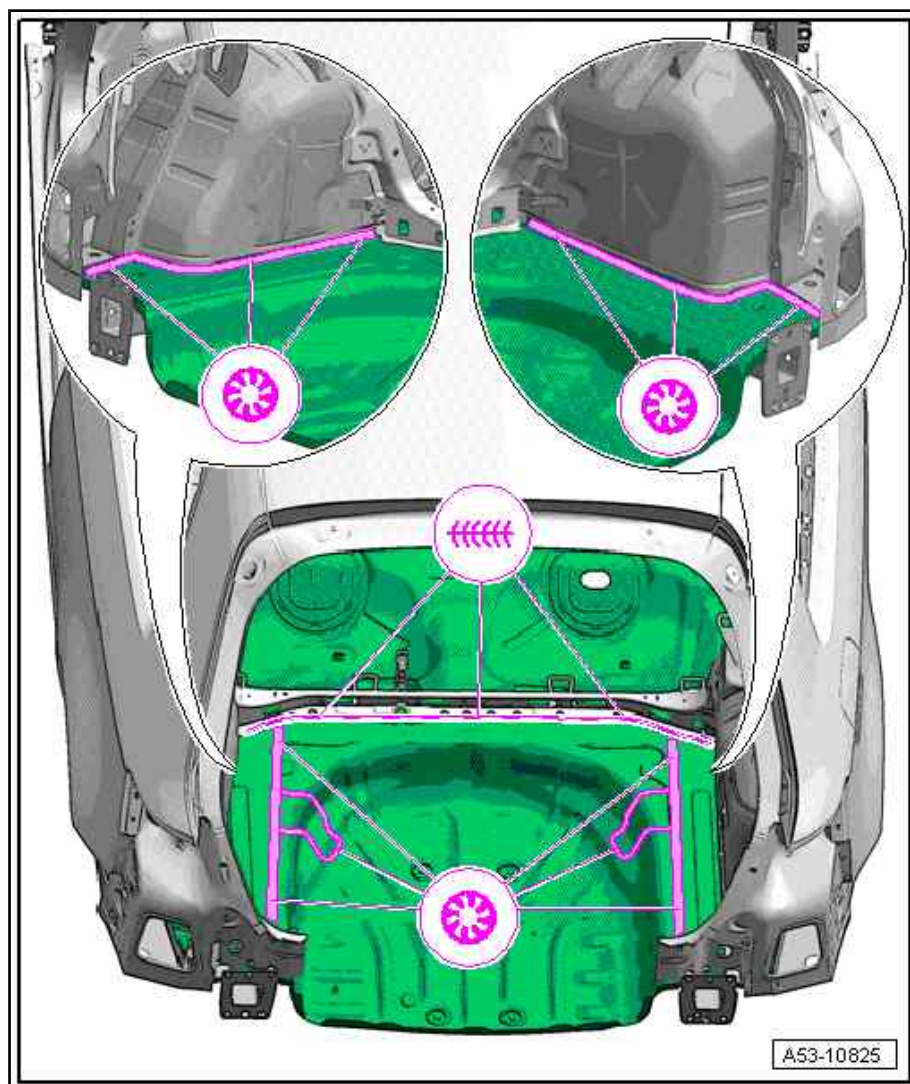
- Match up spare wheel well with vehicle standing on its wheels or on alignment bracket set and fix in position.
- Match up bracket and fix in position.
- Check fit relative to cross panel.

**!** NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Weld in spare wheel well using shielded arc welding equipment : SG plug weld seam.
- Weld in spare wheel well with overlap using shielded arc welding equipment : SG continuous seam.



- Welding in rear upper cross panel ⇒ [page 465](#)
- Welding in cross panel ⇒ [page 476](#)



RO: 53 80 55 50

## 13 Spare wheel well - Renewal (Saloon)

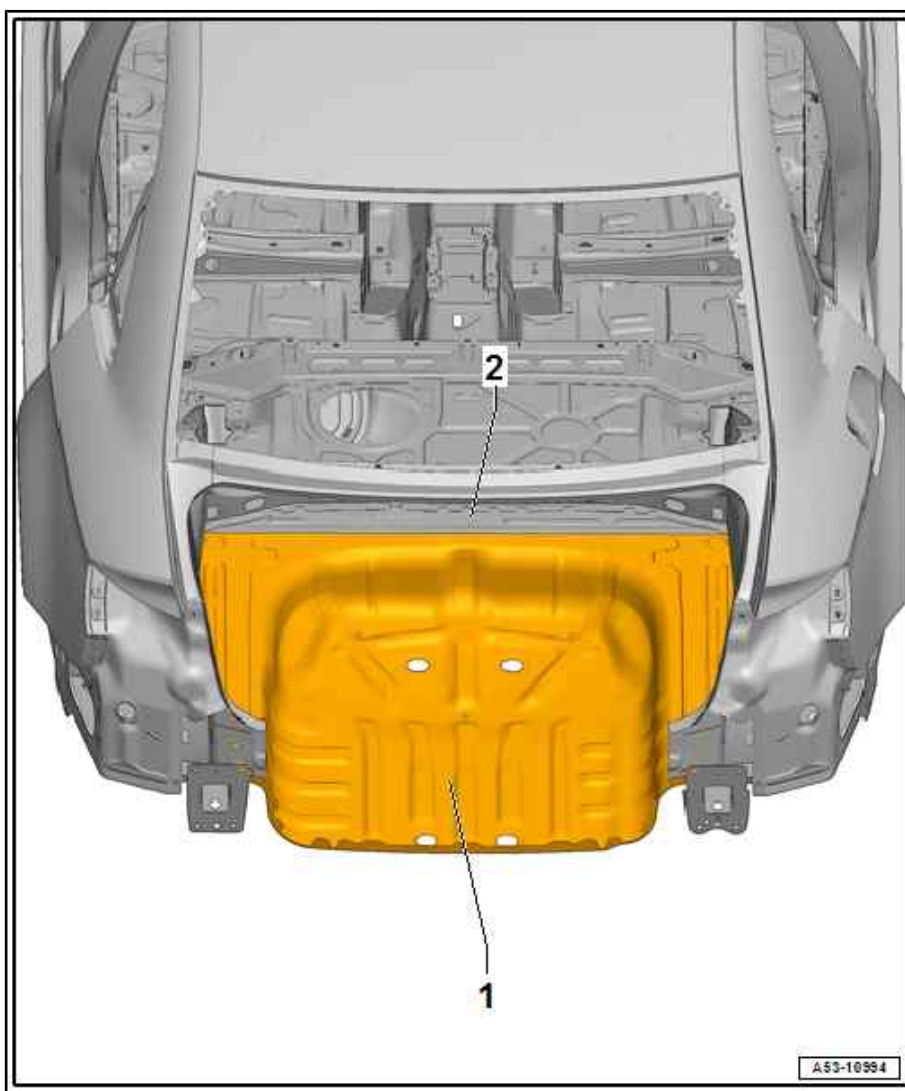
### DANGER

Fuel tank and fuel pipes

Take extreme care when performing sanding and welding work near the tank or other components carrying fuel. If in doubt, always remove these components.

1 - Spare wheel well

2 - Floor panel



### 13.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw



◆ Spot weld breaker



**NOTICE**

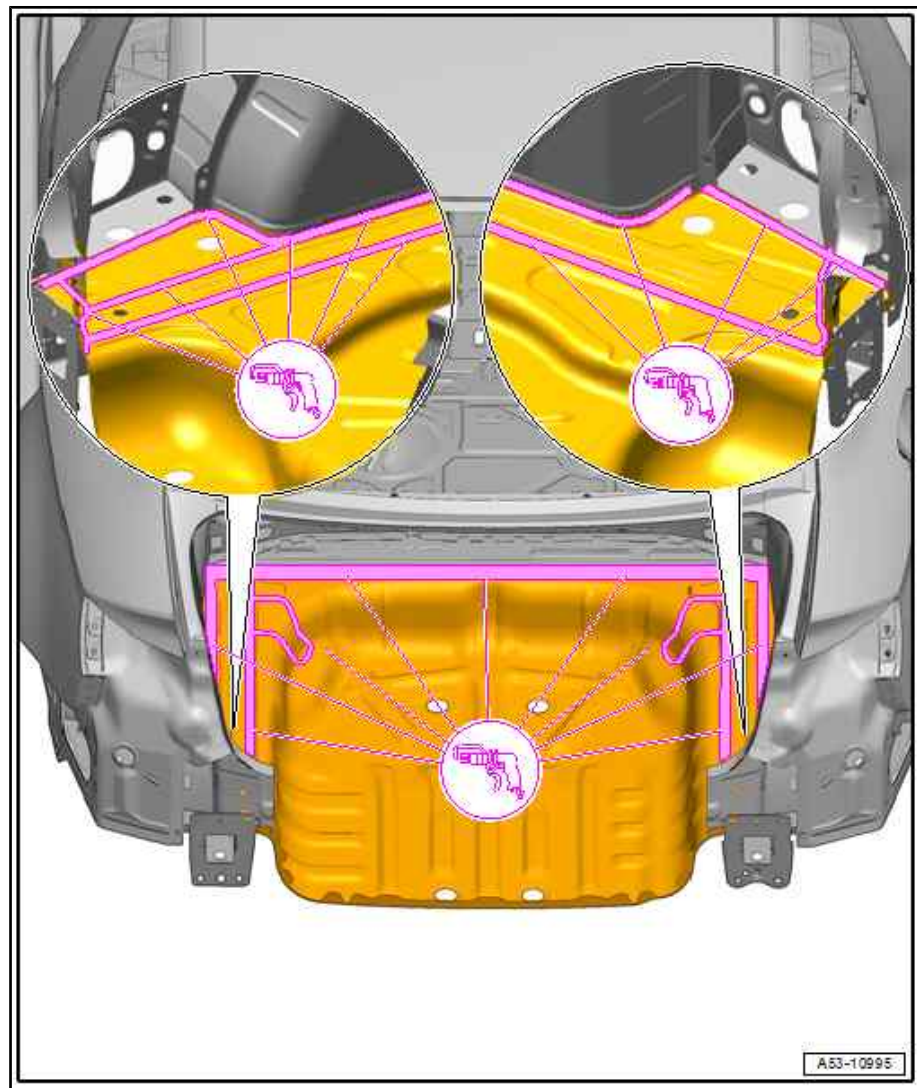
One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

## 13.2 Procedure

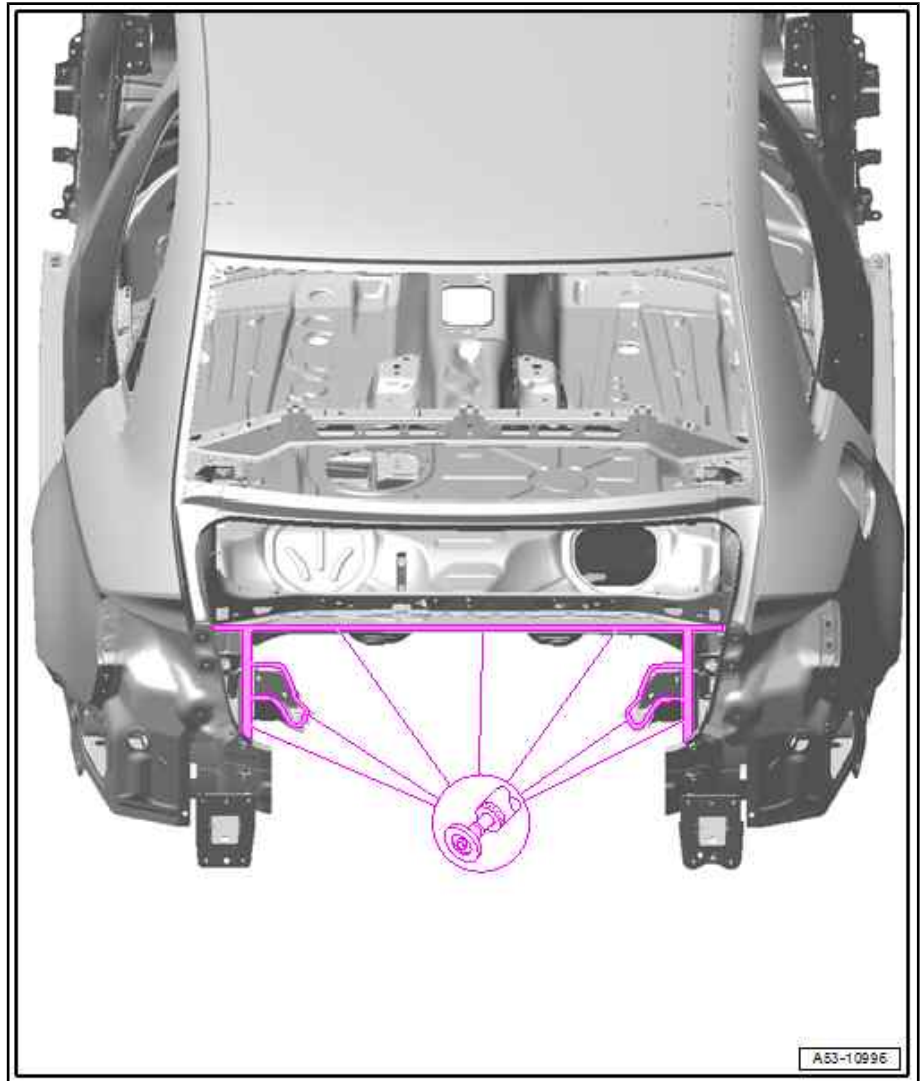
- Removing rear upper cross panel ⇒ [page 465](#)
- Removing cross panel ⇒ [page 476](#)

### Cutting locations

- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.



#### Replacement part

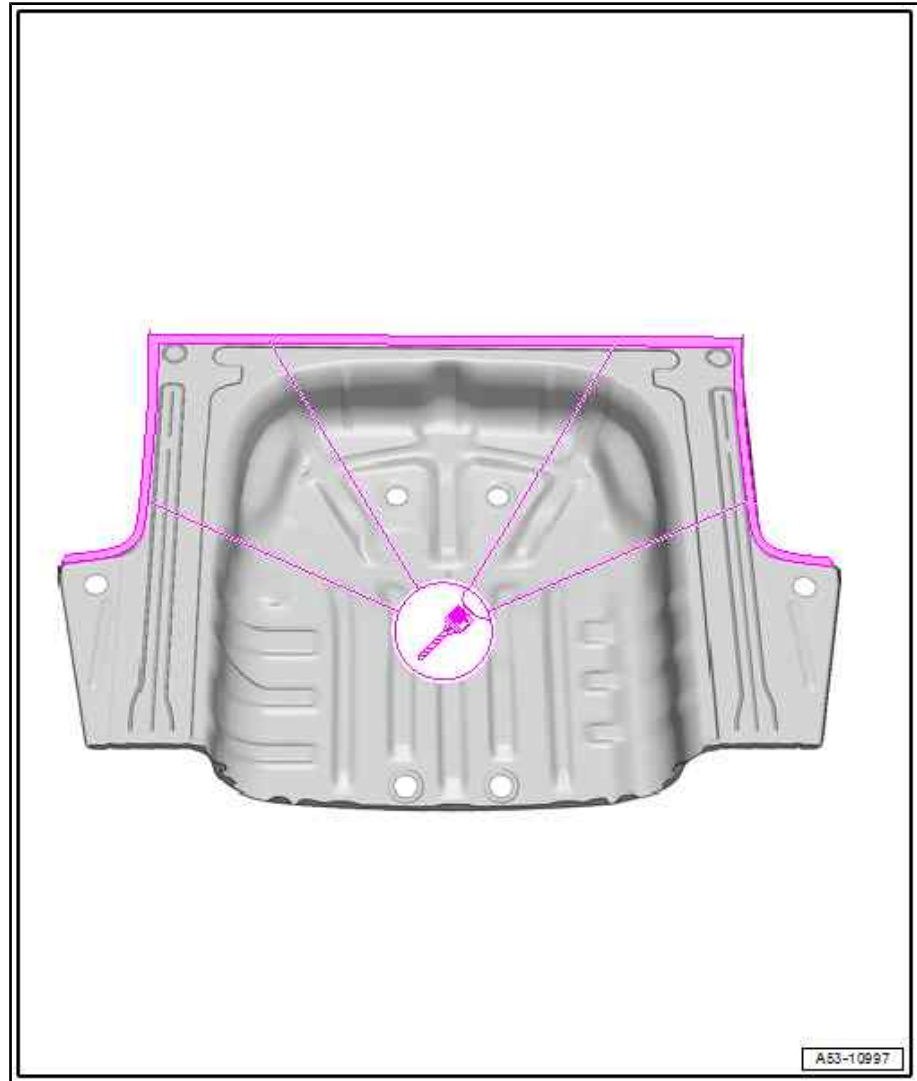
- ◆ Spare wheel well

#### Pre-treatment - applies to replacement part only

- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.

#### Preparing new part

- Drill holes for SG plug weld seam, 8 mm  $\varnothing$  using drill .

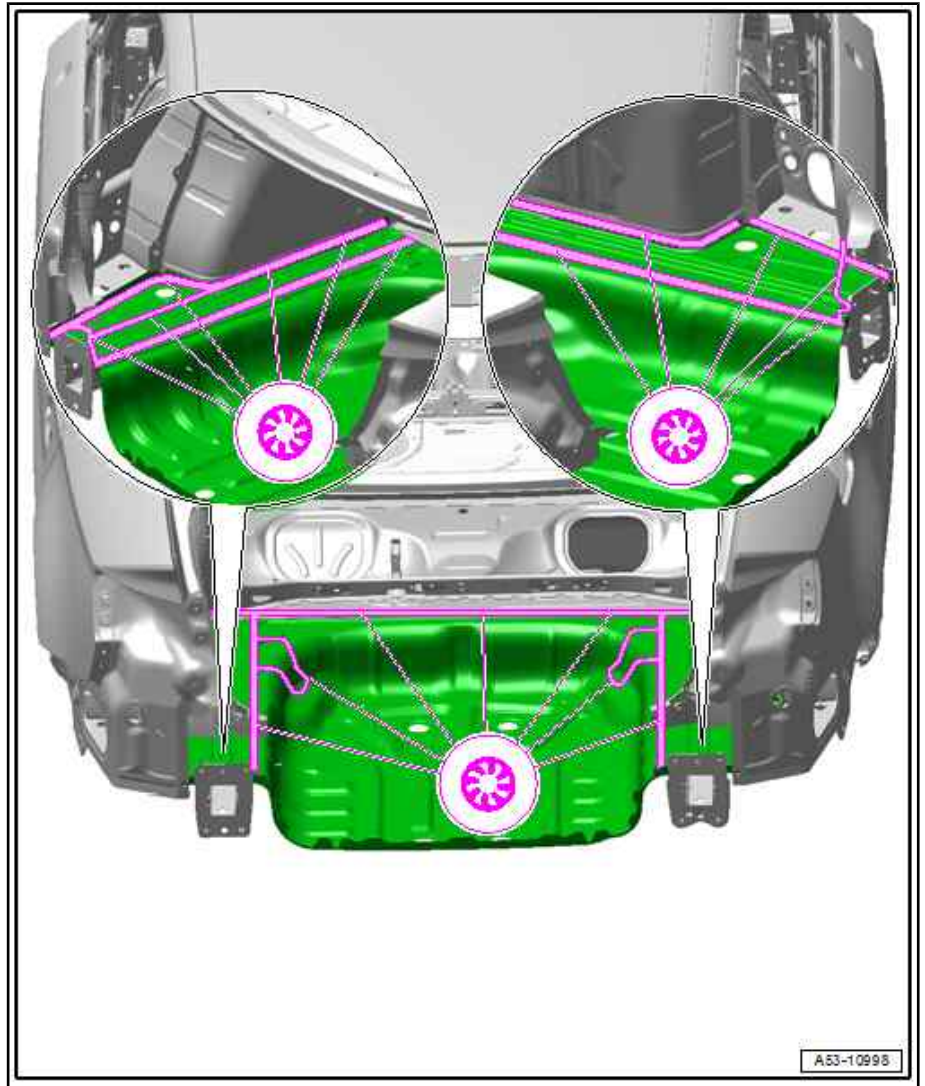


**!** NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Match up spare wheel well with vehicle standing on its wheels or on alignment bracket set and fix in position.
- Match up bracket and fix in position.
- Check fit relative to cross panel.
- Weld in spare wheel well using shielded arc welding equipment : SG plug weld seam.



- Welding in rear upper cross panel ⇒ [page 465](#)
- Welding in cross panel ⇒ [page 476](#)



RO: 53 80 55 50

## 14 Spare wheel well - Renewal (quattro)

A3 and Sportback identical

### DANGER

Damaged natural gas fuel tanks constitute an explosion risk - risk of death!

- If components at the rear and/or rear side of the vehicle (e.g. bumper cover, rear lid, underbody trim, longitudinal member, rear cross panel, etc.) are removed due to accident damage, the natural gas fuel tanks must be checked for damage.
- Carry out assessment of damage to fuel tanks made of composite fibre materials ⇒ Natural gas engines - general information; Rep. gr. 20 ; Assessing damage to fuel tanks made of composite fibre materials; Assessing damage to fuel tanks made of composite fibre materials .

### DANGER

Only for vehicles with natural gas technology

When performing welding, cutting or drilling work in the vicinity of components that convey gas, these components must either be removed or safely covered up before performing repairs.

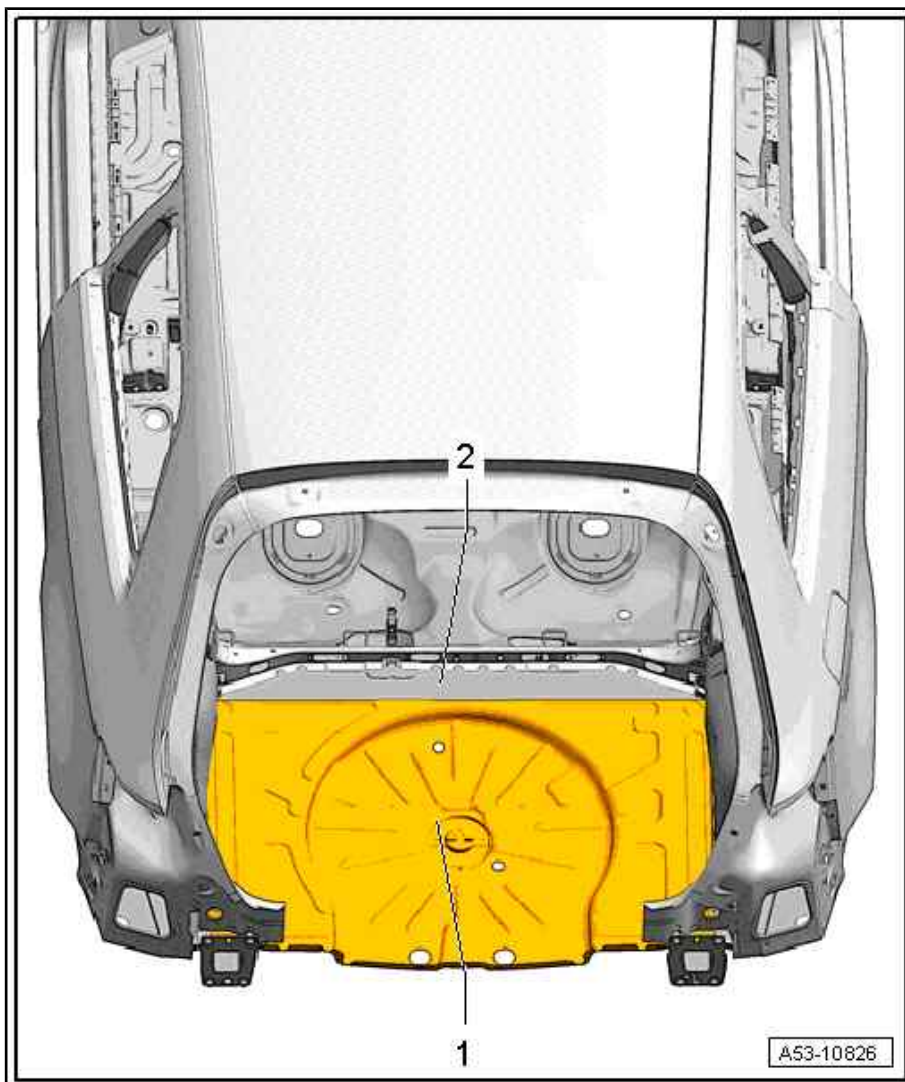
### DANGER

Fuel tank and fuel pipes

Take extreme care when performing sanding and welding work near the tank or other components carrying fuel. If in doubt, always remove these components.



- 1 - Spare wheel well (quattro)
- 2 - Floor panel



## 14.1 Tools

### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker

#### NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

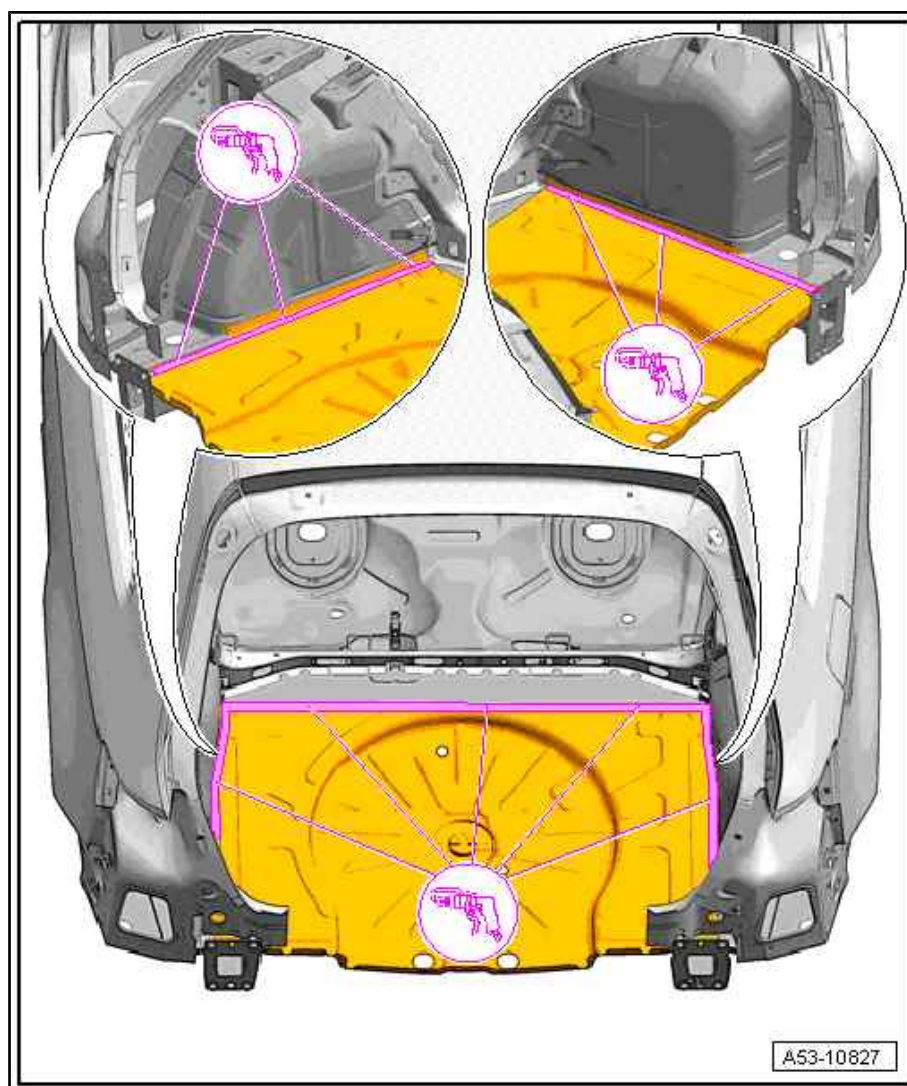
## 14.2 Procedure

- Removing rear upper cross panel ⇒ [page 465](#)
- Removing cross panel ⇒ [page 476](#)

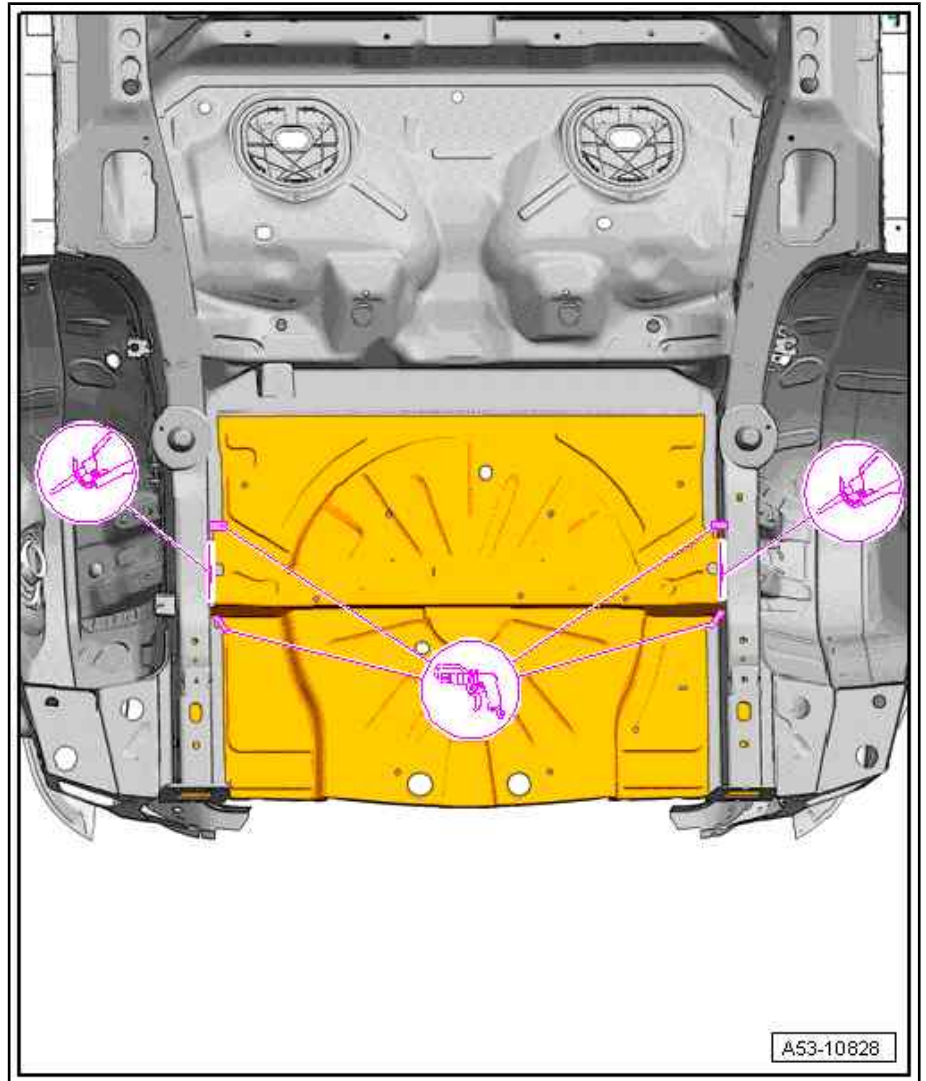


### Cutting locations

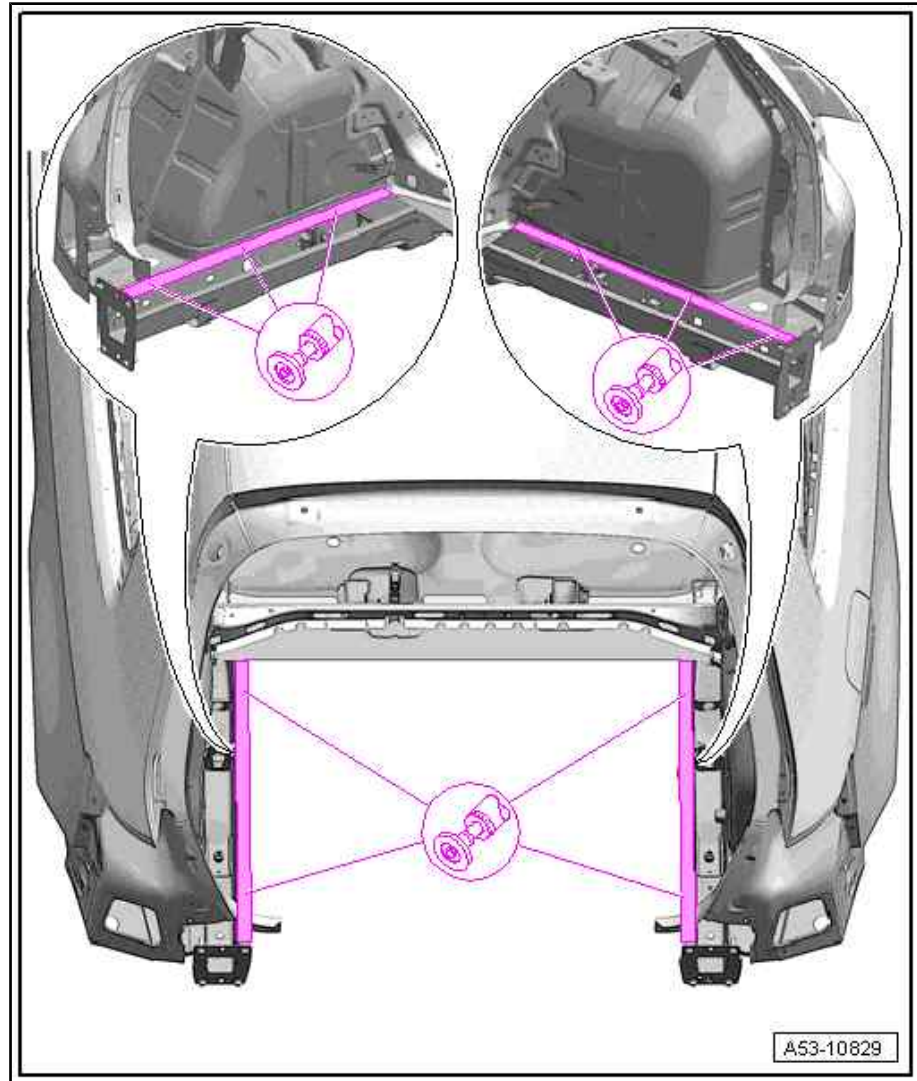
- Separate original joint using spot weld breaker .



- Make separating cut as shown using body saw .
- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.



#### Replacement part

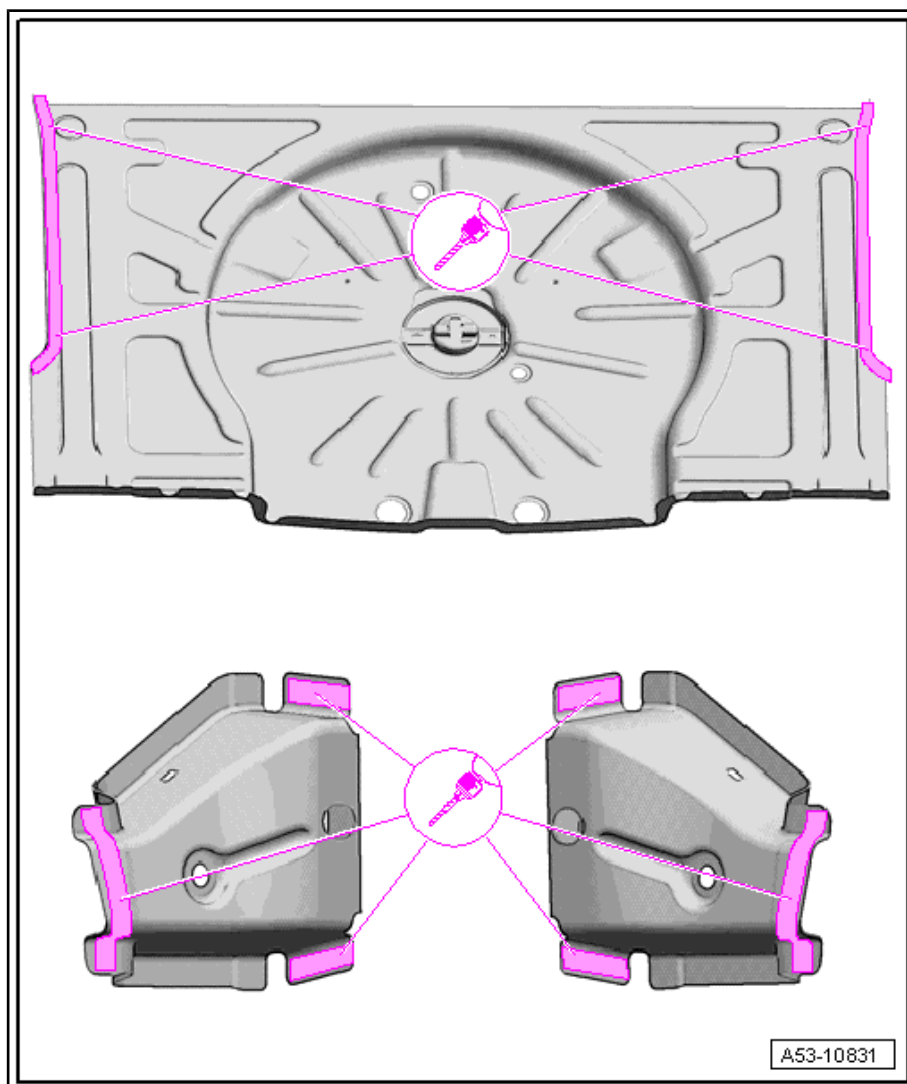
- ◆ Spare wheel well
- ◆ Cross member (centre)
- ◆ Connecting pieces (left and right)

#### Pre-treatment - applies to replacement part only

- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.

#### Preparing new part

- Drill holes for SG plug weld seam, 8 mm Ø using drill .

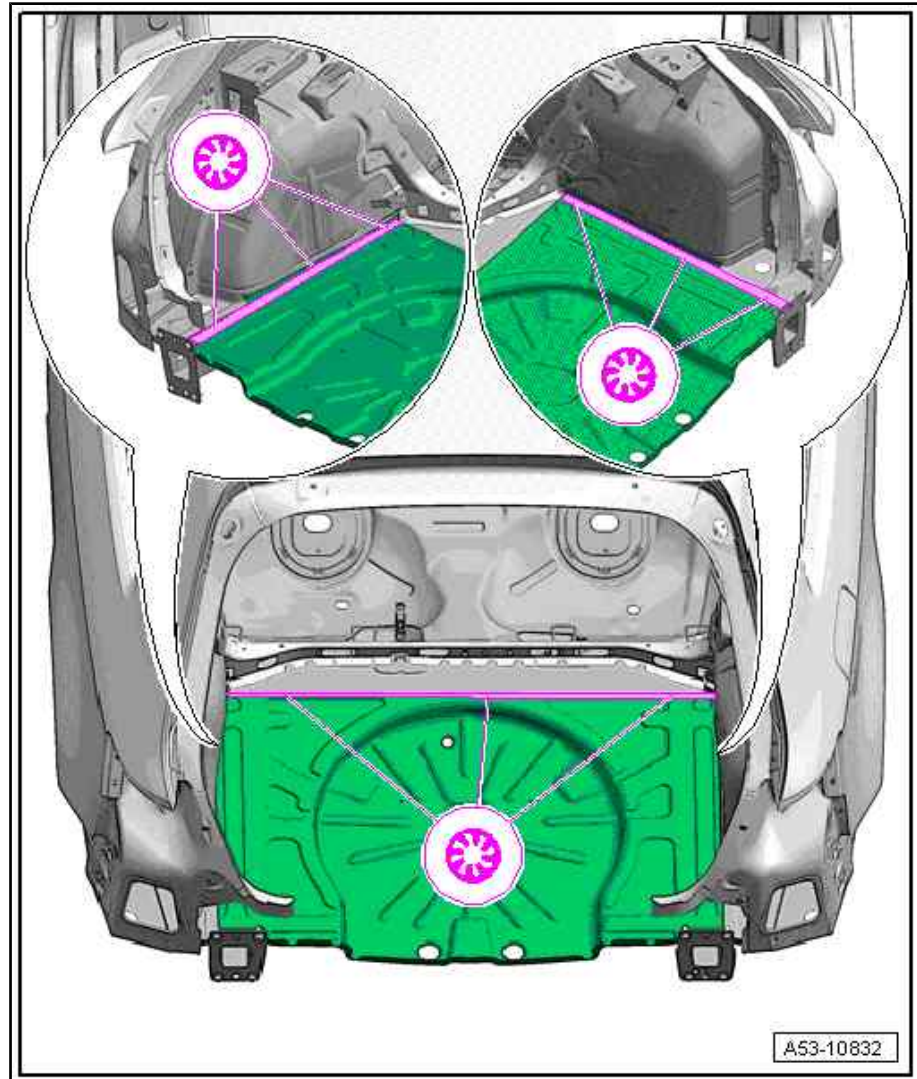


**!** NOTICE

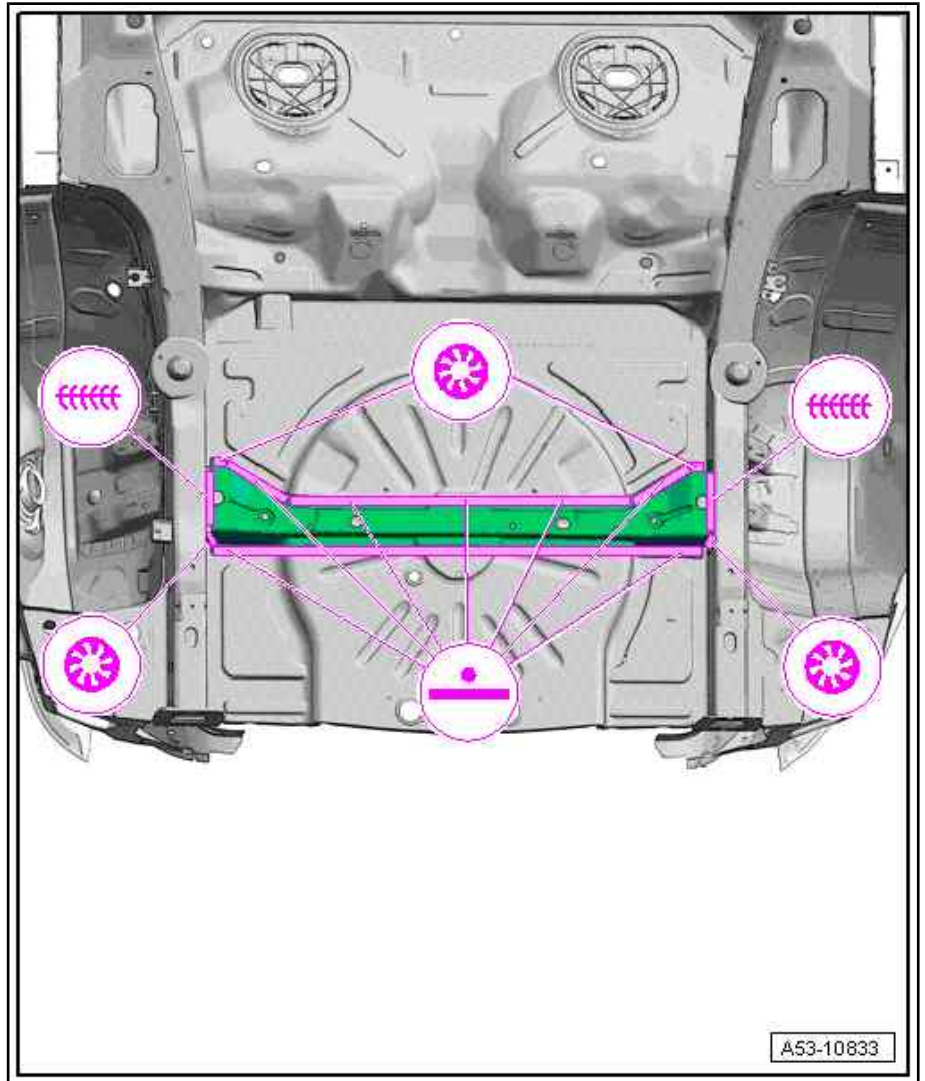
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Match up spare wheel well with vehicle standing on its wheels or on alignment bracket set and fix in position.
- Match up bracket and fix in position.
- Check fit relative to cross panel.
- Weld in spare wheel well using shielded arc welding equipment : SG plug weld seam.



- Weld in connecting pieces (left and right) using shielded arc welding equipment : SG plug weld seam.
- Weld in centre cross member using resistance spot welder : RP spot weld seam.
- Weld in connecting pieces (left and right) using shielded arc welding equipment : SG continuous seam.



- Welding in rear upper cross panel ⇒ [page 465](#)
- Welding in cross panel ⇒ [page 476](#)



RO: 53 80 55 50

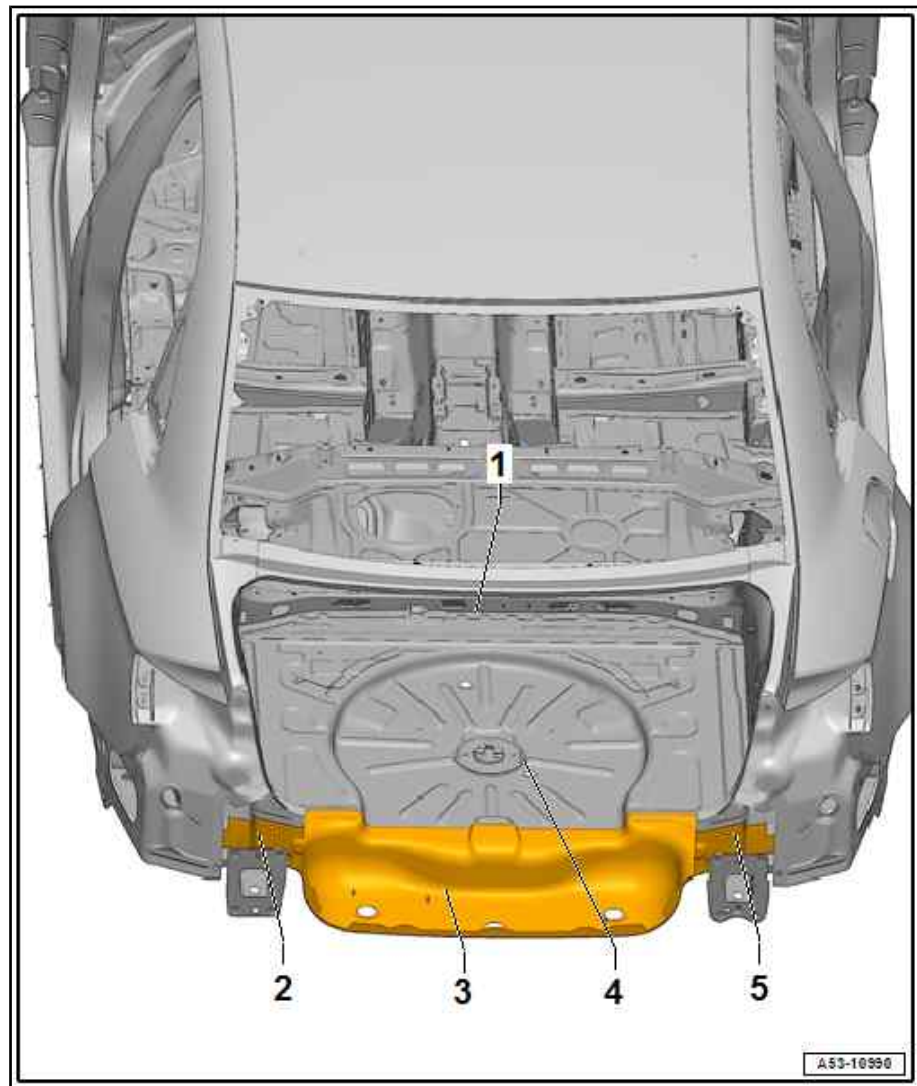
## 15 Rear spare wheel well - Renewal (Saloon, quattro version)

### DANGER

#### Fuel tank and fuel pipes

Take extreme care when performing sanding and welding work near the tank or other components carrying fuel. If in doubt, always remove these components.

- 1 - Floor panel
- 2 - Connecting piece
- 3 - Rear floor pan
- 4 - Spare wheel well (quattro)
- 5 - Connecting piece



### 15.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder



- ◆ Body saw
- ◆ Spot weld breaker

**!** NOTICE

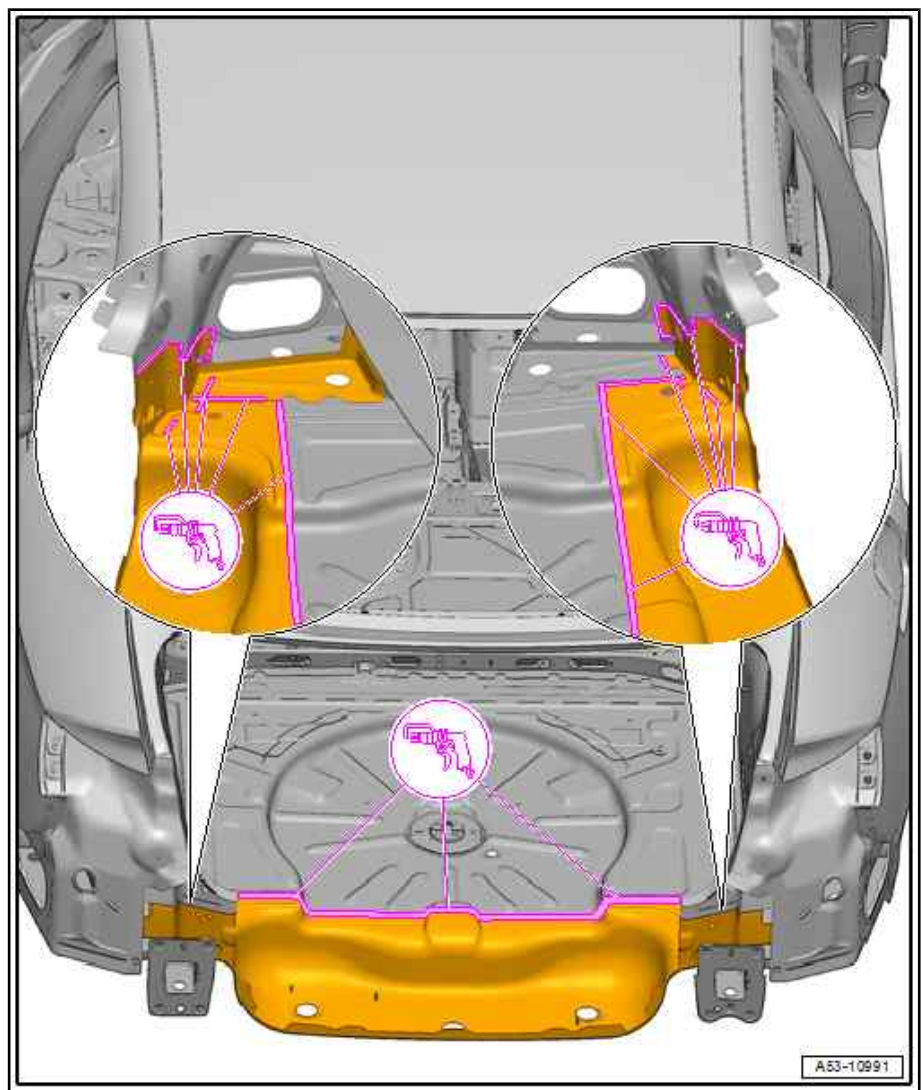
One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

## 15.2 Procedure

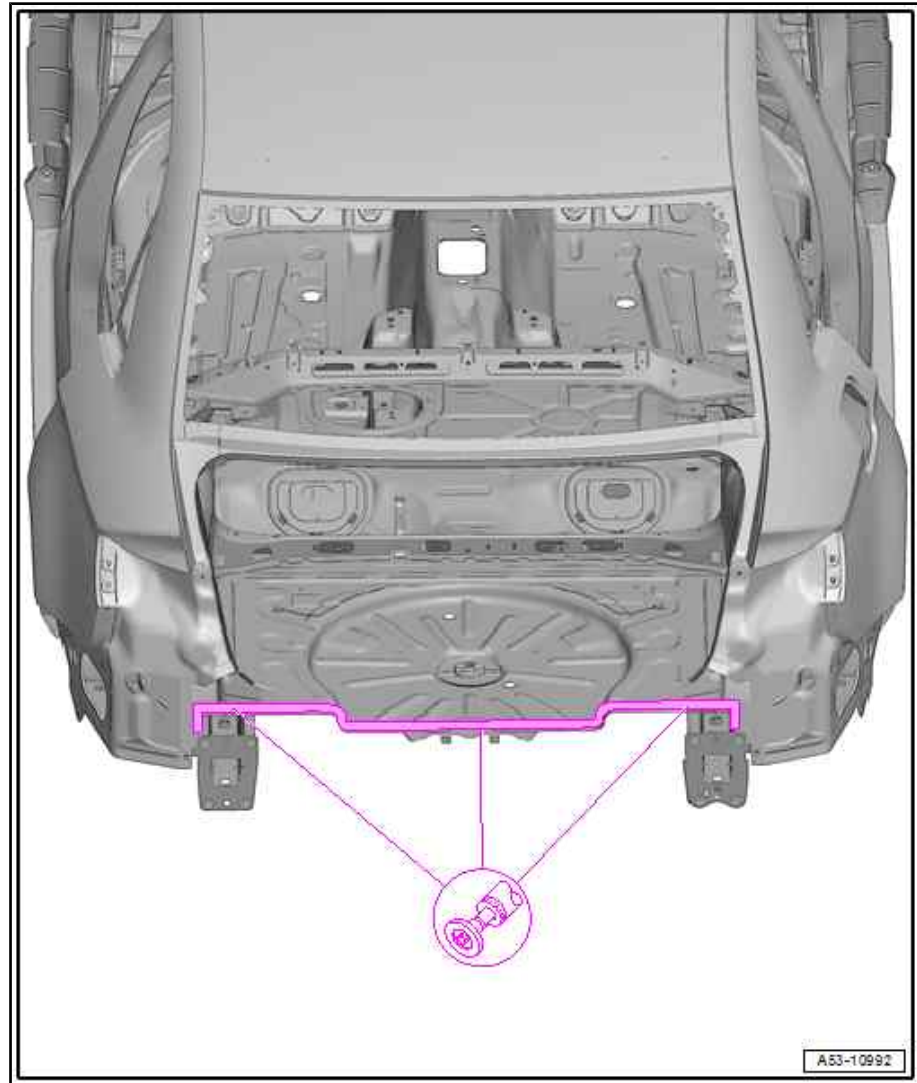
- Removing rear upper cross panel ⇒ [page 471](#)
- Removing cross panel ⇒ [page 476](#)

### Cutting locations

- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.



### Replacement part

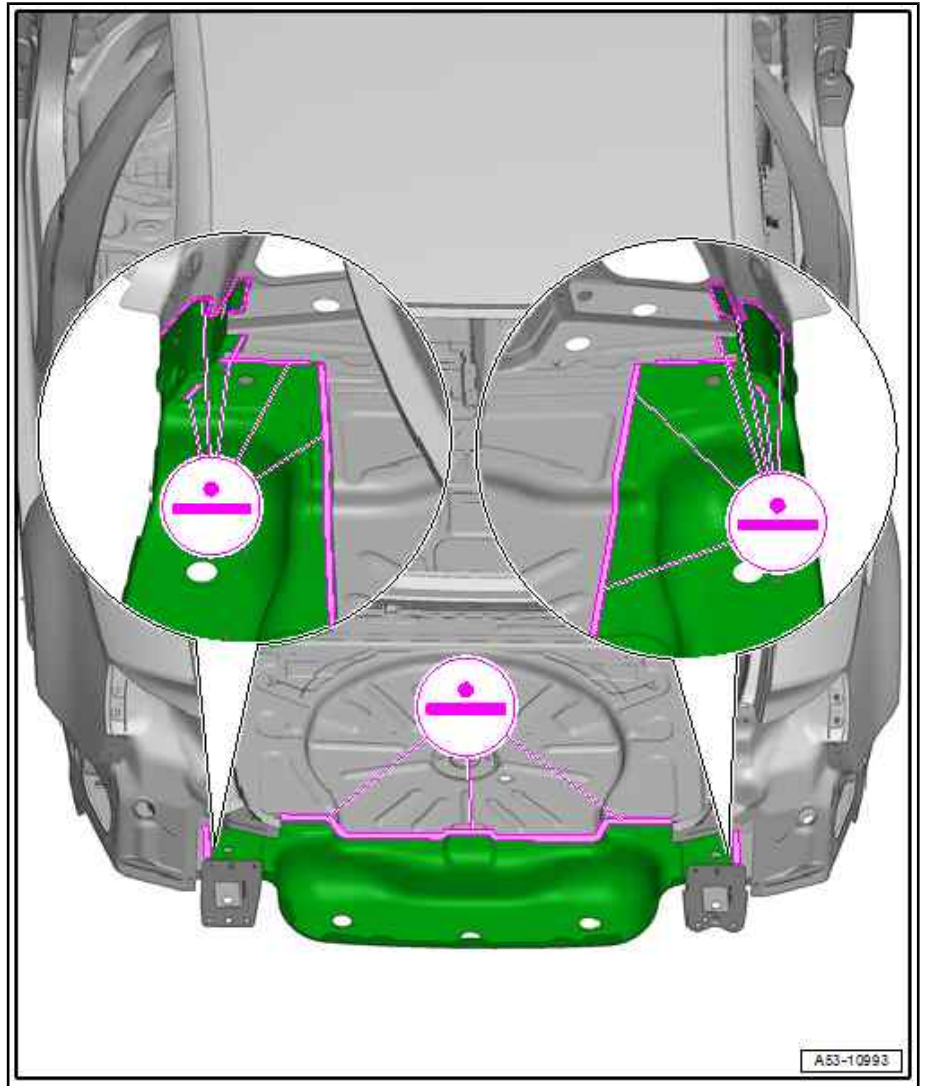
- ◆ Spare wheel well
- ◆ Connecting pieces (left and right)

### NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

### Welding in

- Match up spare wheel well with vehicle standing on its wheels or on alignment bracket set and fix in position.
- Match up bracket and fix in position.
- Check fit relative to cross panel.
- Weld in rear floor panel using resistance spot welder : RP spot weld seam.



- Welding in rear upper cross panel ⇒ [page 471](#)
- Welding in cross panel ⇒ [page 482](#)



RO: 53 80 55 50

## 16 Luggage compartment floor - Renewal (only for vehicles with natural gas technology)

### DANGER

Damaged natural gas fuel tanks constitute an explosion risk - risk of death!

- If components at the rear and/or rear side of the vehicle (e.g. bumper cover, rear lid, underbody trim, longitudinal member, rear cross panel, etc.) are removed due to accident damage, the natural gas fuel tanks must be checked for damage.
- Carry out assessment of damage to fuel tanks made of composite fibre materials ⇒ Natural gas engines - general information; Rep. gr. 20 ; Assessing damage to fuel tanks made of composite fibre materials; Assessing damage to fuel tanks made of composite fibre materials .

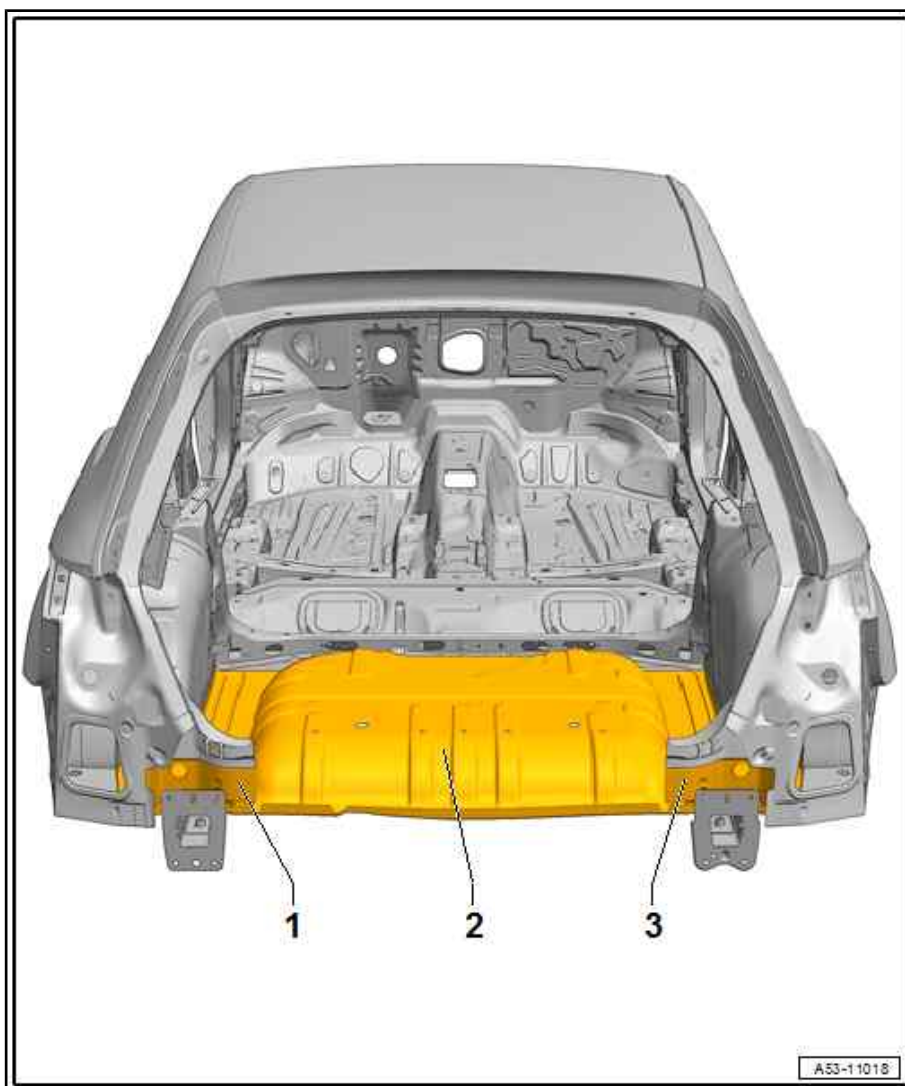
### DANGER

Only for vehicles with natural gas technology

When performing welding, cutting or drilling work in the vicinity of components that convey gas, these components must either be removed or safely covered up before performing repairs.



- 1 - Connecting piece
- 2 - Luggage compartment floor
- 3 - Connecting piece



## 16.1 Tools

### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker

#### NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

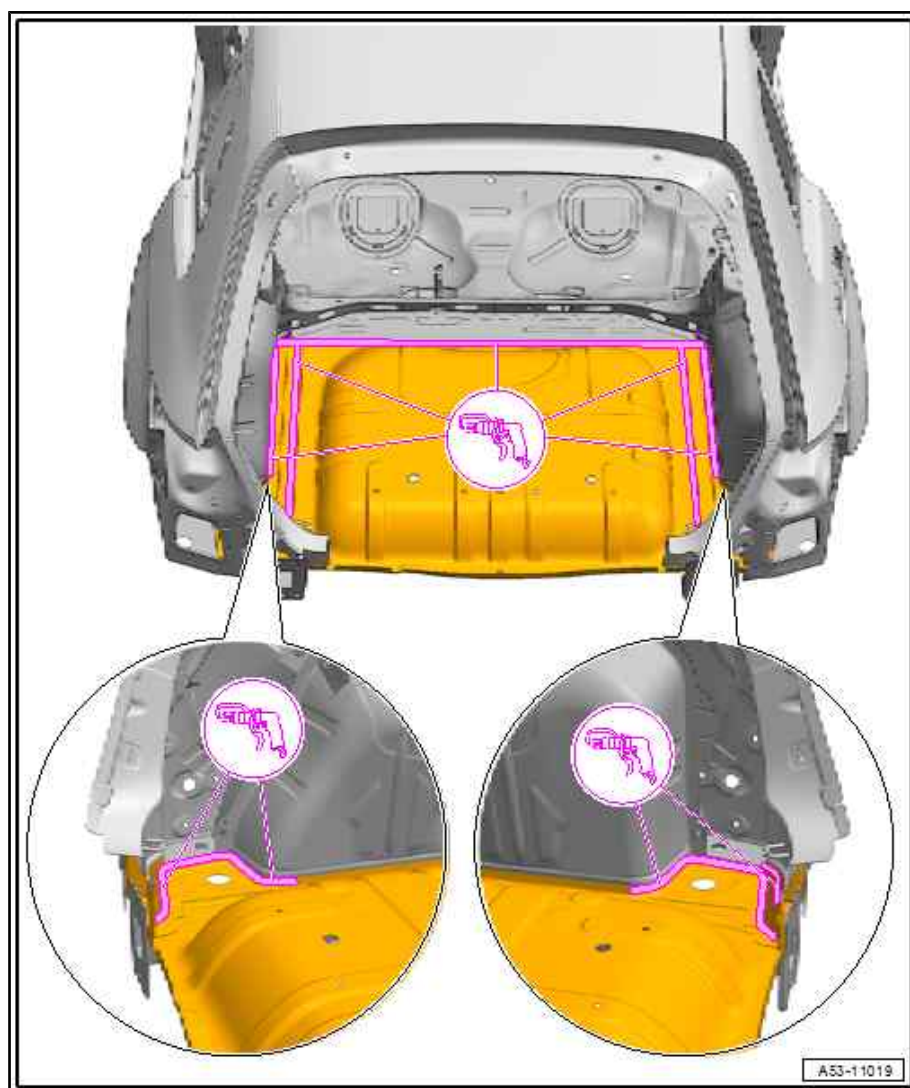
## 16.2 Procedure

- Removing rear upper cross panel ⇒ [page 471](#)
- Removing cross panel ⇒ [page 482](#)

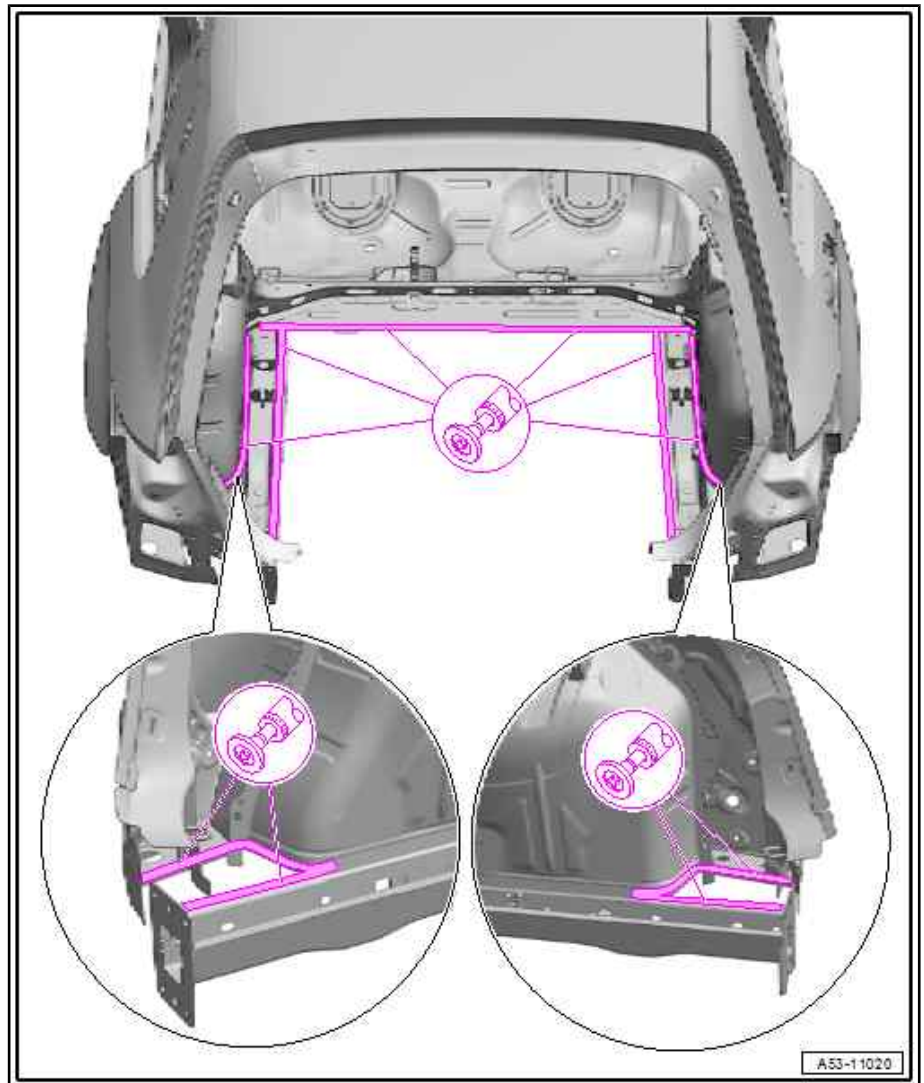


### Cutting locations

- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.



#### Replacement part

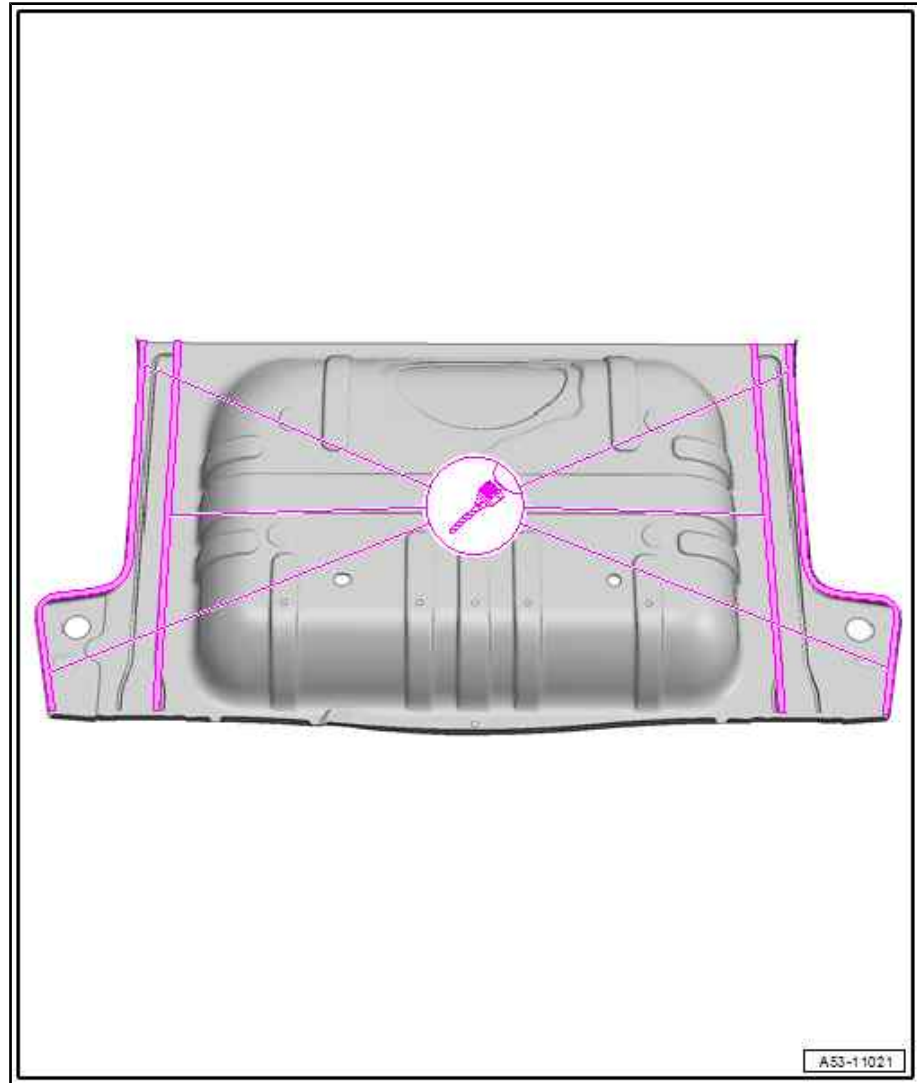
- ◆ Luggage compartment floor
- ◆ Connecting pieces (left and right)

#### Pre-treatment - applies to replacement part only

- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.

#### Preparing new part

- Drill holes for SG plug weld seam, 8 mm Ø using drill .

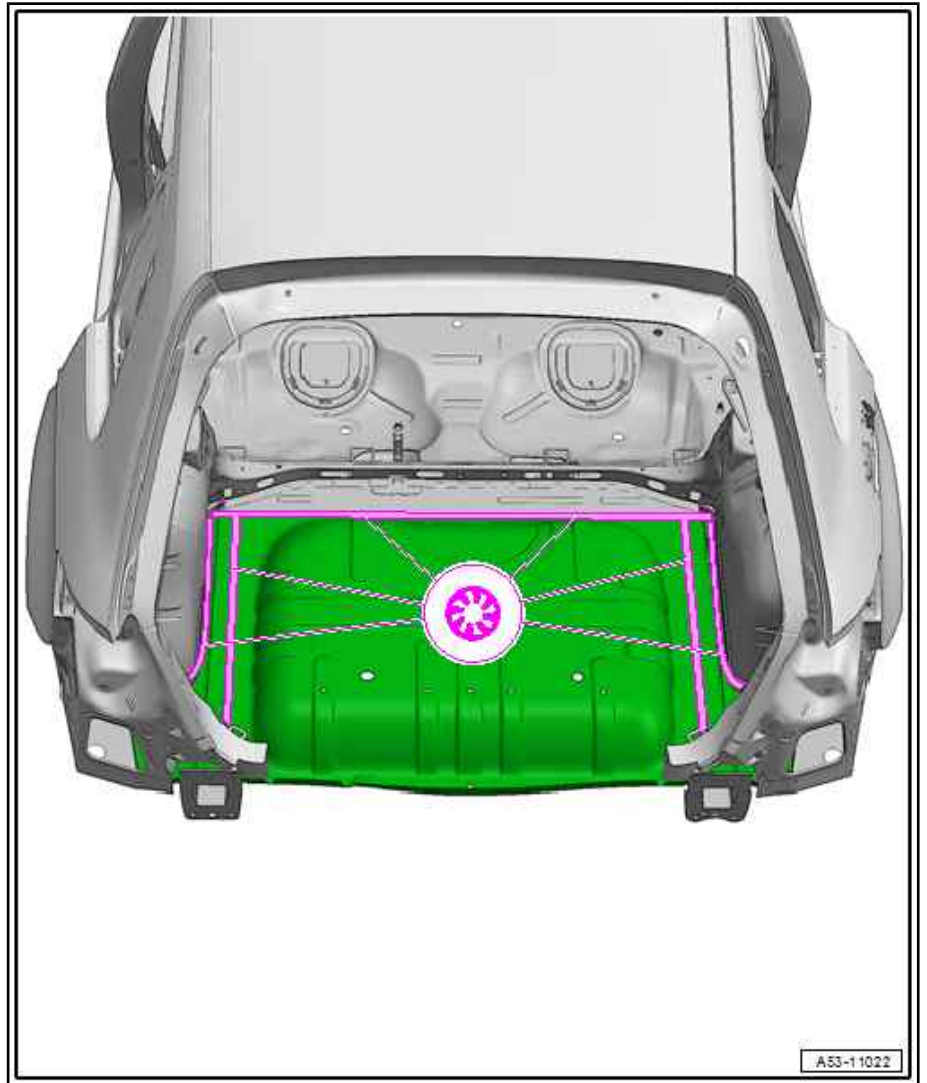


**!** NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Match up luggage compartment floor with vehicle standing on its wheels or on alignment bracket set and fix in position.
- Match up bracket and fix in position.
- Check fit relative to cross panel.
- Weld in luggage compartment floor using shielded arc welding equipment : SG plug weld seam.



- Welding in rear upper cross panel ⇒ [page 471](#)
- Welding in cross panel ⇒ [page 482](#)



RO: 53 69 55 00

## 17 Rear wheel housing - Renewal (A3)

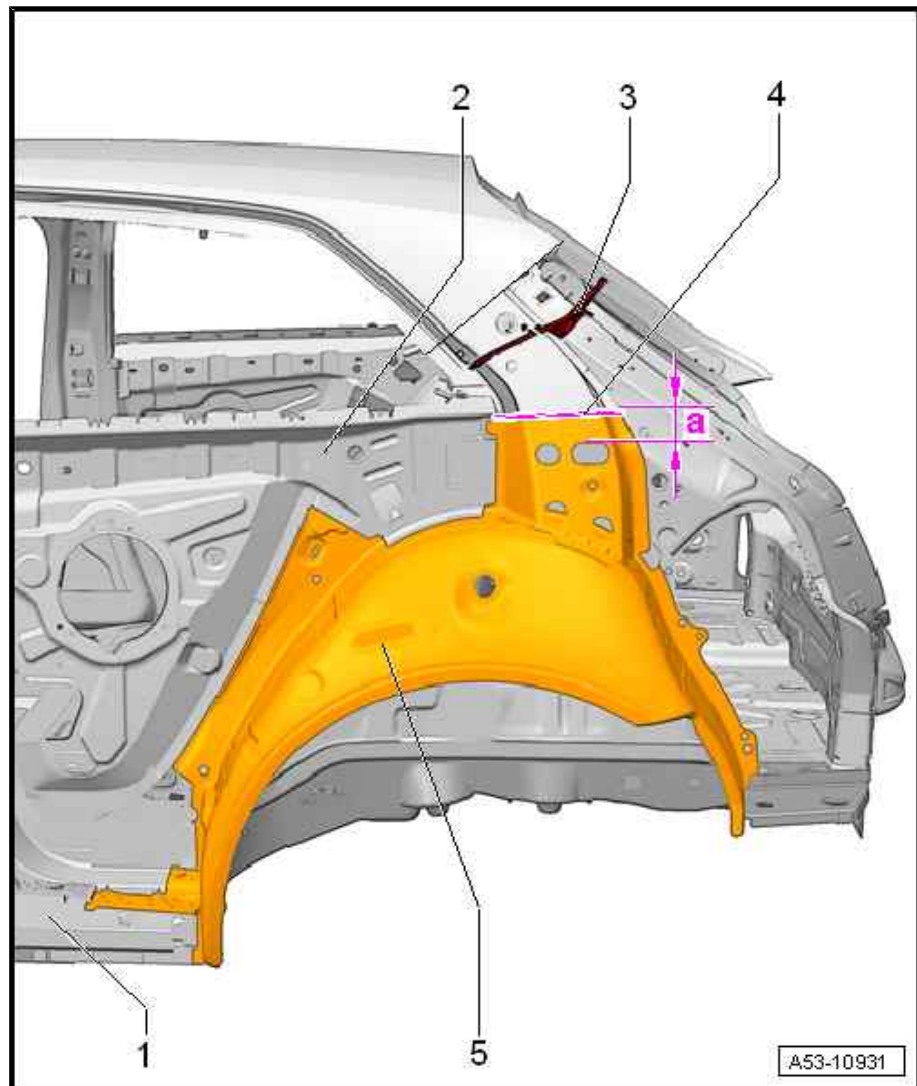
Includes: C-pillar reinforcement

### DANGER

#### Fuel tank and fuel pipes

Take extreme care when performing sanding and welding work near the tank or other components carrying fuel. If in doubt, always remove these components.

- 1 - Side member
- 2 - Inner side panel
- 3 - Moulded foam inserts
- 4 - Separating cut for C-pillar reinforcement
- 5 - Wheel housing



### 17.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder



- ◆ Body saw
- ◆ Spot weld breaker

**!** NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

## 17.2 Procedure

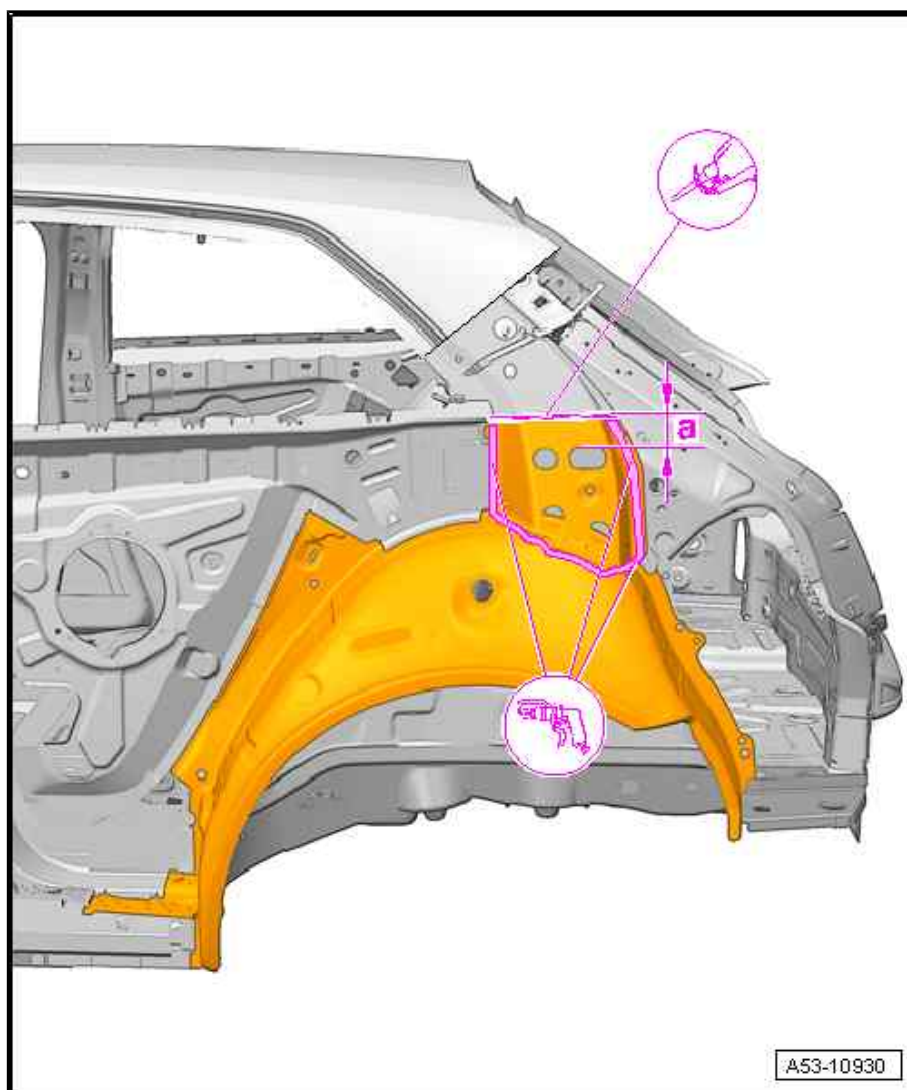
- Removing side panel ⇒ [page 499](#)

### Cutting locations

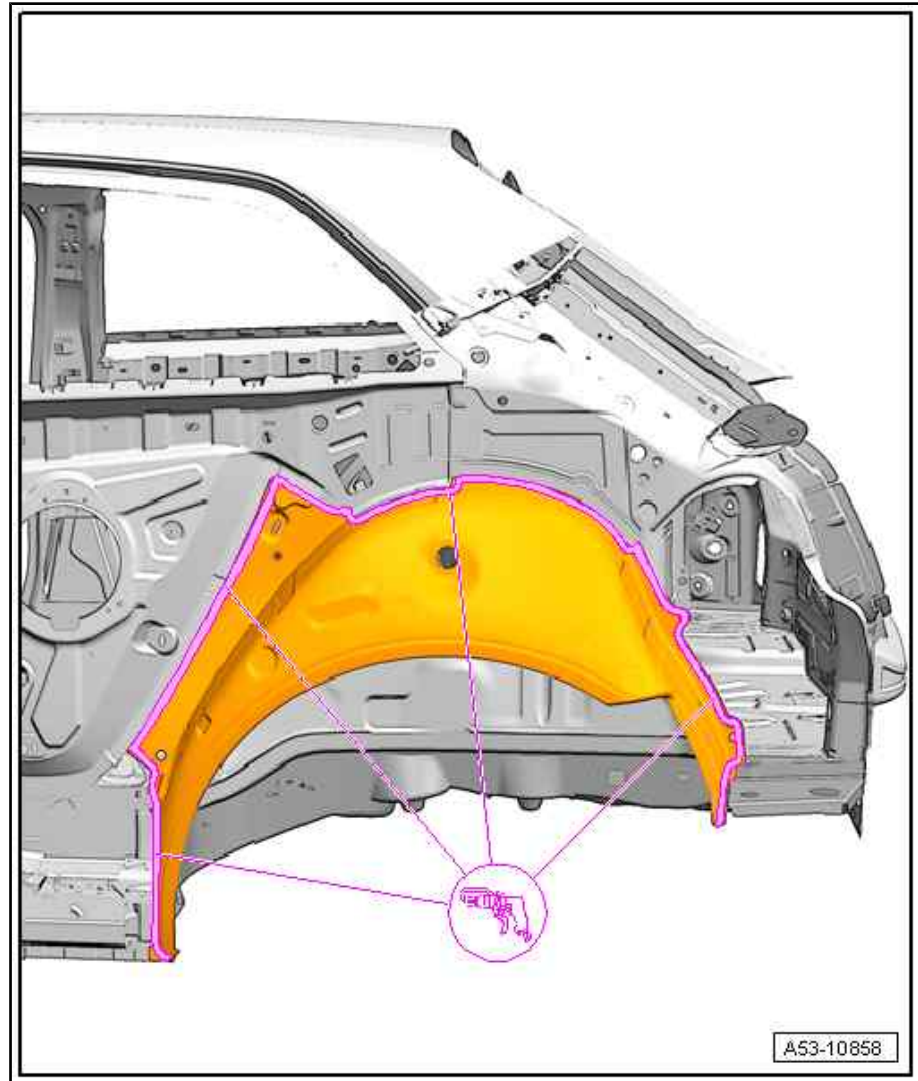
- Mark off separating cut on C-pillar reinforcement according to dimension -a- and make cut using body saw .

Dimension -a- = 60 mm

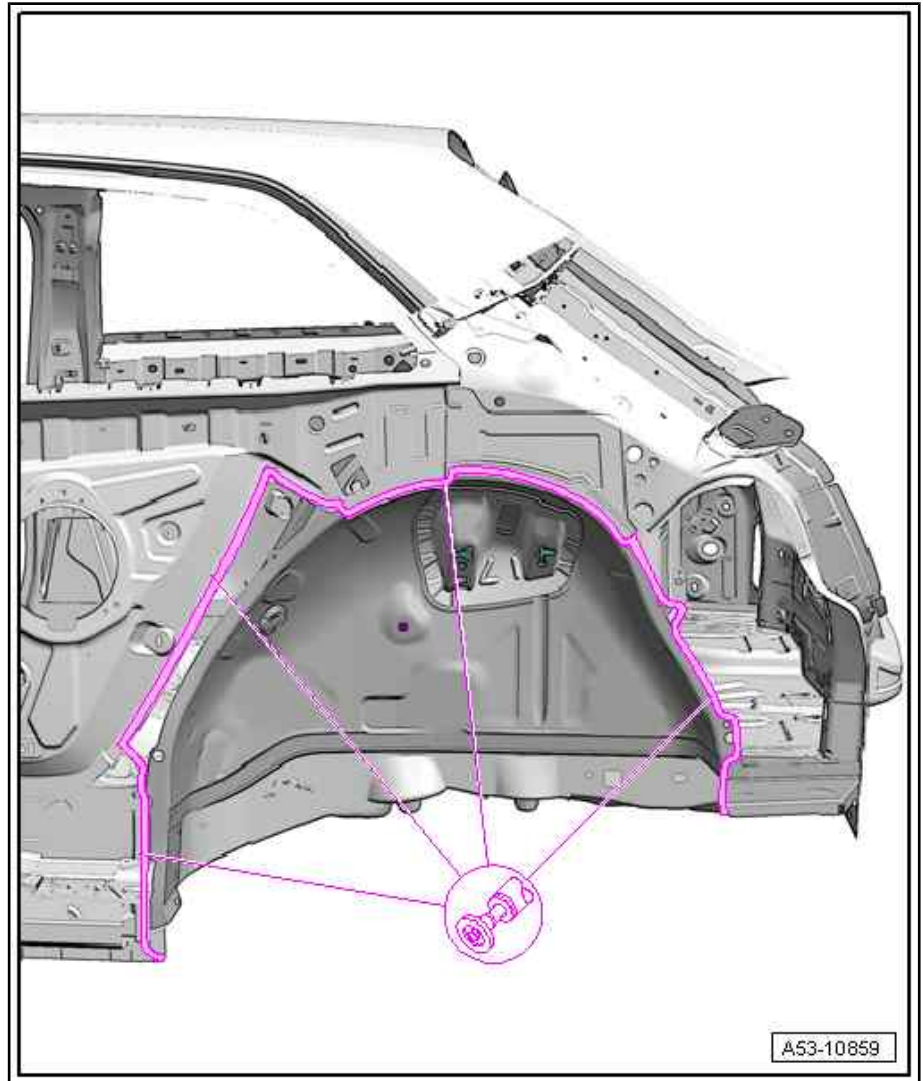
- Separate original joint using spot weld breaker .



- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.



#### Replacement part

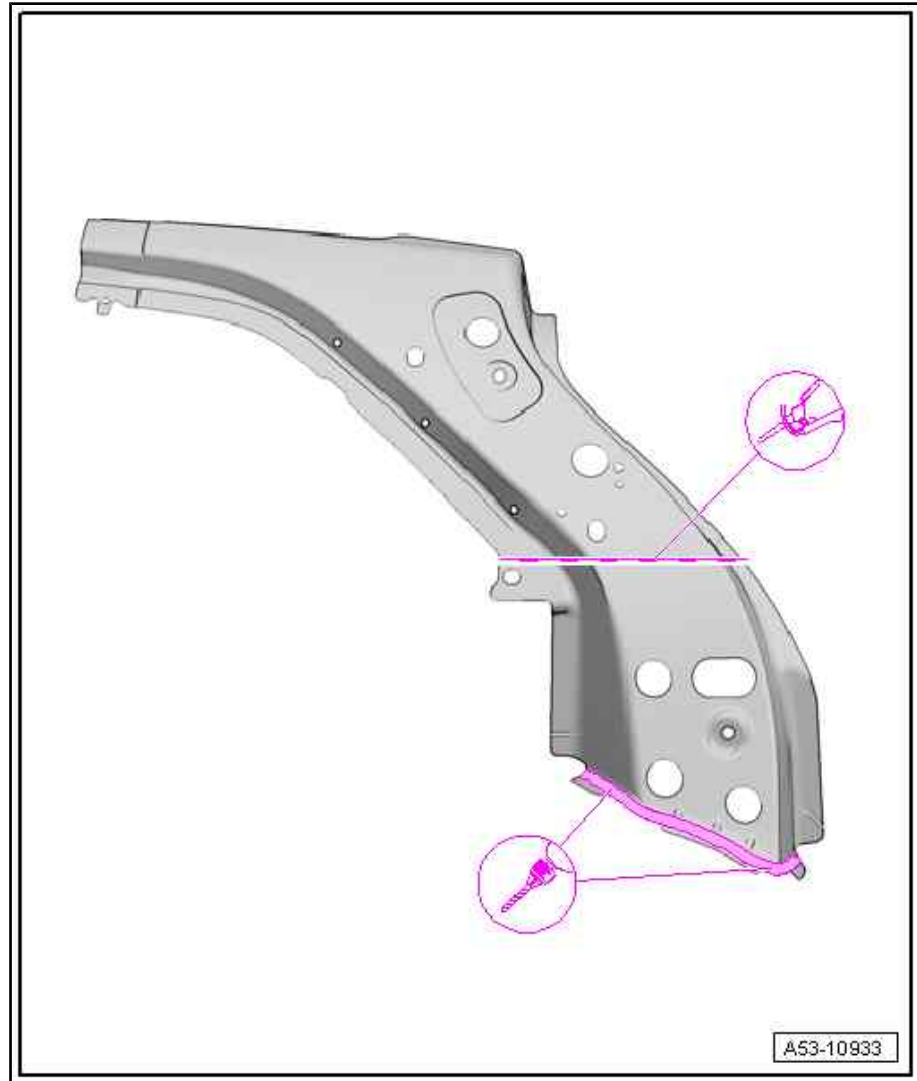
- ◆ Rear wheel housing liner
- ◆ C-pillar reinforcement

#### Pre-treatment - applies to replacement part only

- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.

#### Preparing new part

- Transfer separating cut to new part and cut to size using body saw .
- Drill holes for SG plug weld seam, 8 mm  $\varnothing$  using drill .

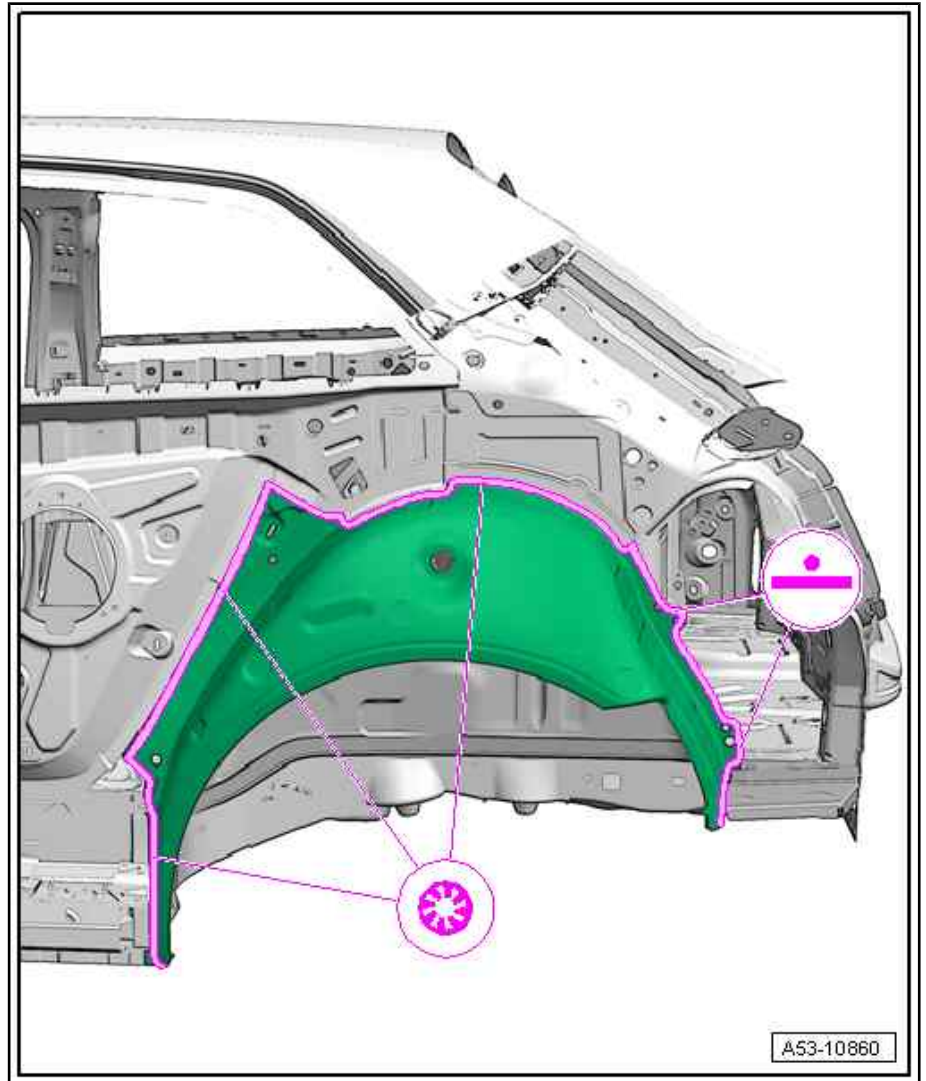


**!** NOTICE

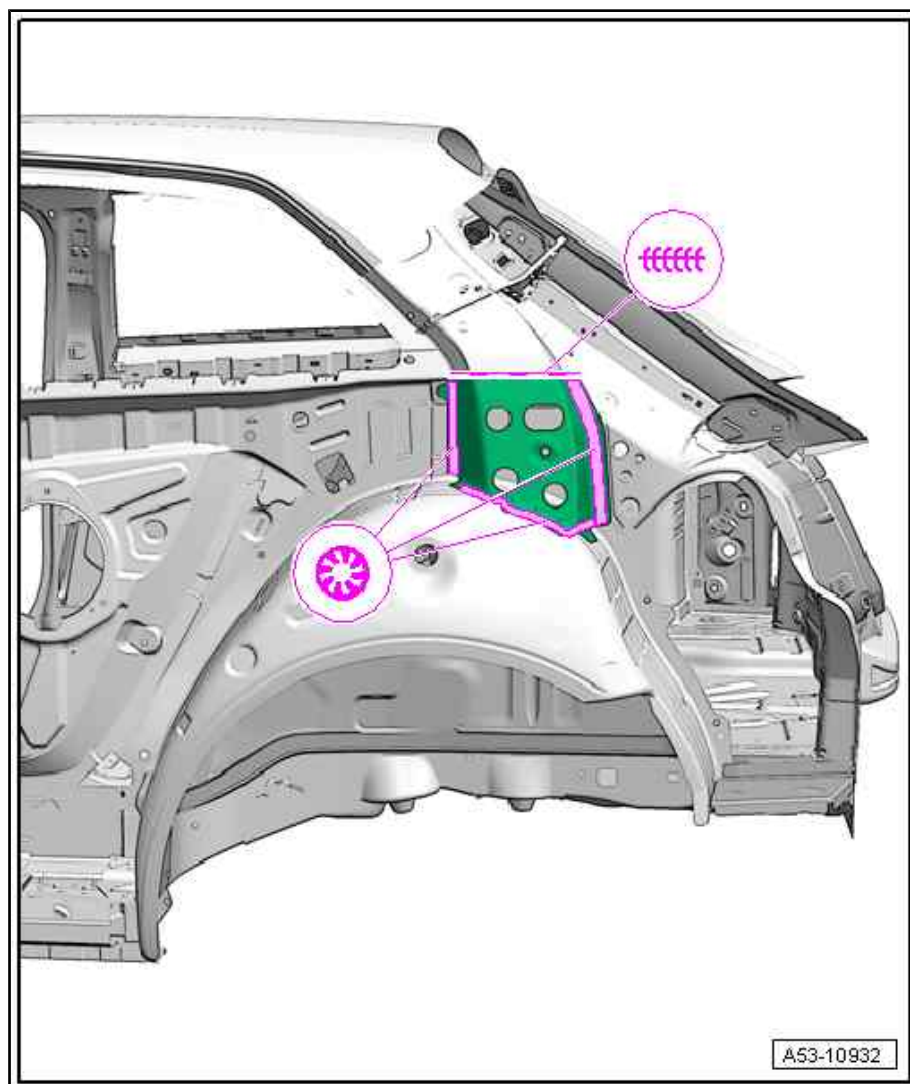
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Weld in wheel housing using shielded arc welding equipment : SG plug weld seam.
- Weld in wheel housing using resistance spot welder : RP spot weld seam.



- Weld in C-pillar reinforcement using shielded arc welding equipment : SG plug weld seam.
- Weld in at separating cut using shielded arc welding equipment : SG continuous seam.



- Welding in side panel ⇒ [page 499](#)



RO: 53 69 55 00

## 18 Rear wheel housing - Renewal (Sportback)

C-pillar and D-pillar reinforcements

### DANGER

Damaged natural gas fuel tanks constitute an explosion risk - risk of death!

- If components at the rear and/or rear side of the vehicle (e.g. bumper cover, rear lid, underbody trim, longitudinal member, rear cross panel, etc.) are removed due to accident damage, the natural gas fuel tanks must be checked for damage.
- Carry out assessment of damage to fuel tanks made of composite fibre materials ⇒ Natural gas engines - general information; Rep. gr. 20 ; Assessing damage to fuel tanks made of composite fibre materials; Assessing damage to fuel tanks made of composite fibre materials .

### DANGER

Only for vehicles with natural gas technology

When performing welding, cutting or drilling work in the vicinity of components that convey gas, these components must either be removed or safely covered up before performing repairs.

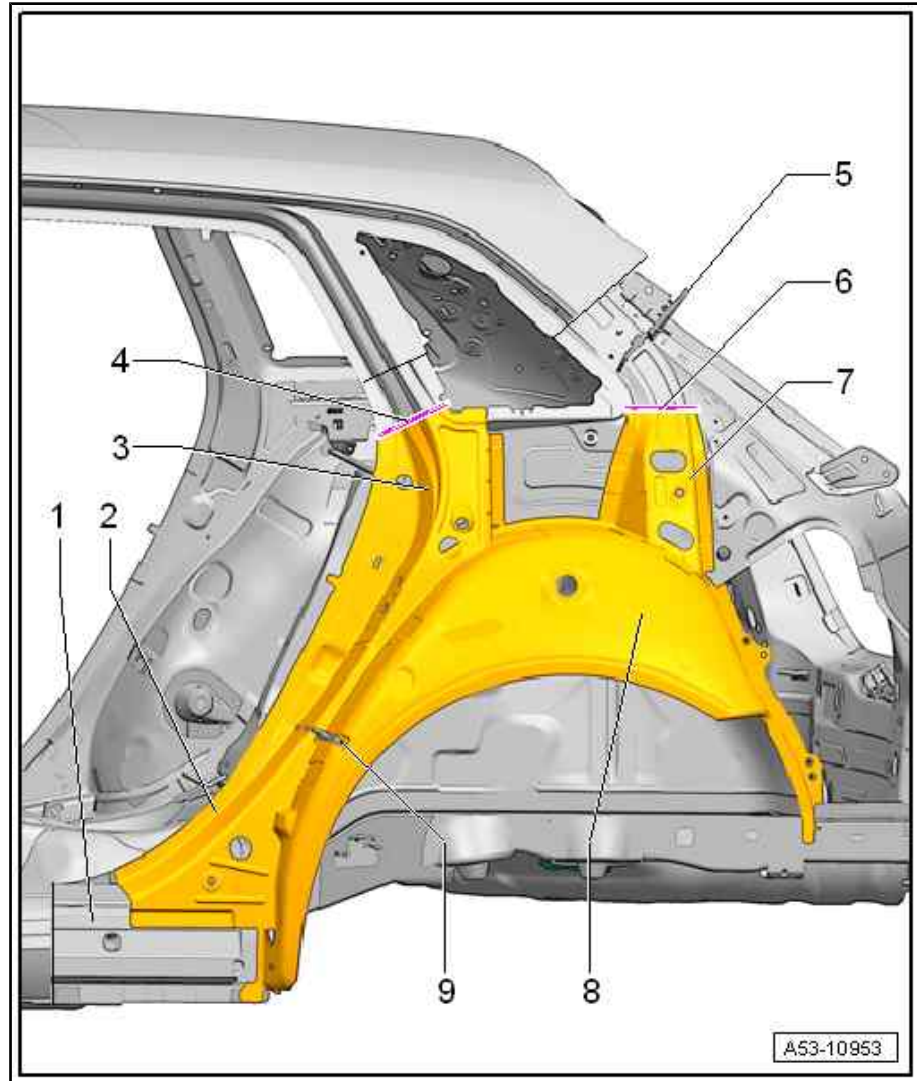
### DANGER

Fuel tank and fuel pipes

Take extreme care when performing sanding and welding work near the tank or other components carrying fuel. If in doubt, always remove these components.



- 1 - Side member
- 2 - Lower C-pillar reinforcement
- 3 - Upper C-pillar reinforcement
- 4 - Separating cut at upper C-pillar reinforcement
- 5 - Moulded foam insert
- 6 - Separating cut at D-pillar reinforcement
- 7 - D-pillar reinforcement
- 8 - Wheel housing
- 9 - Moulded foam insert



## 18.1 Tools

### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker



### NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

## 18.2 Procedure

- Side panel removed ⇒ [page 511](#)

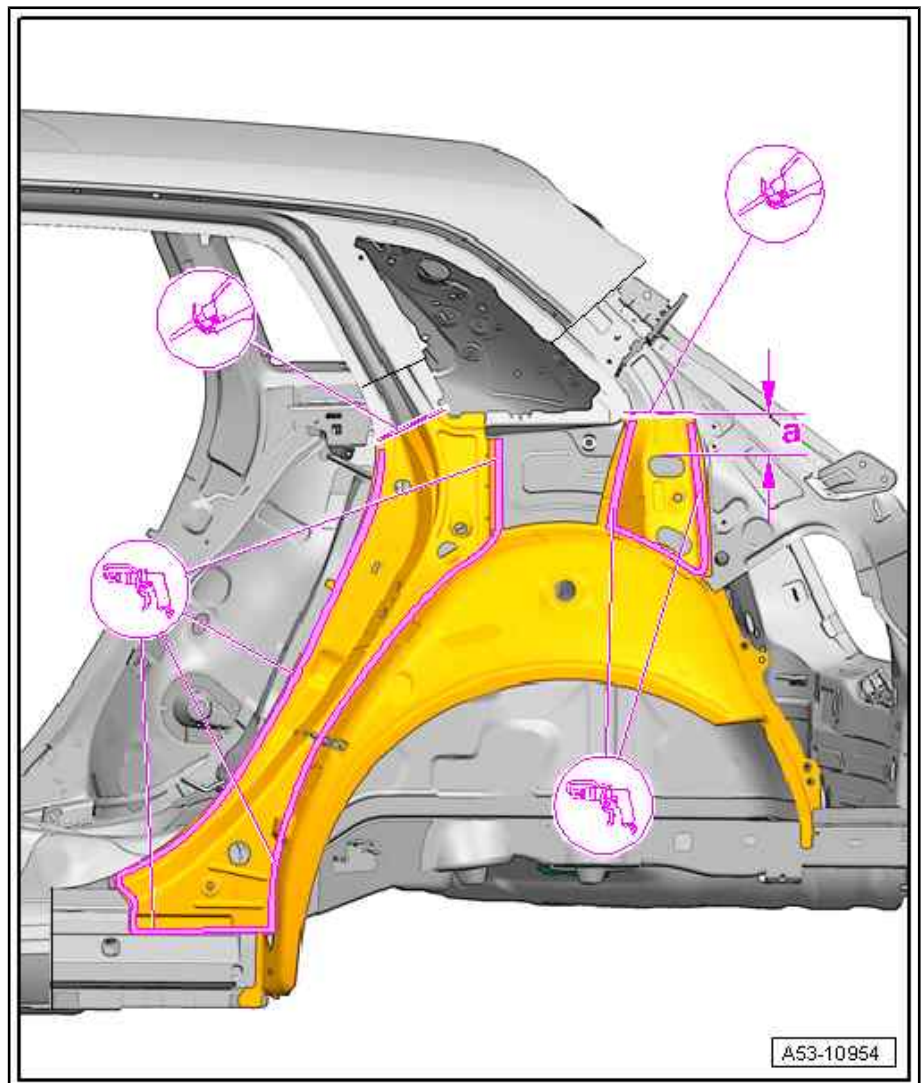


### Cutting locations

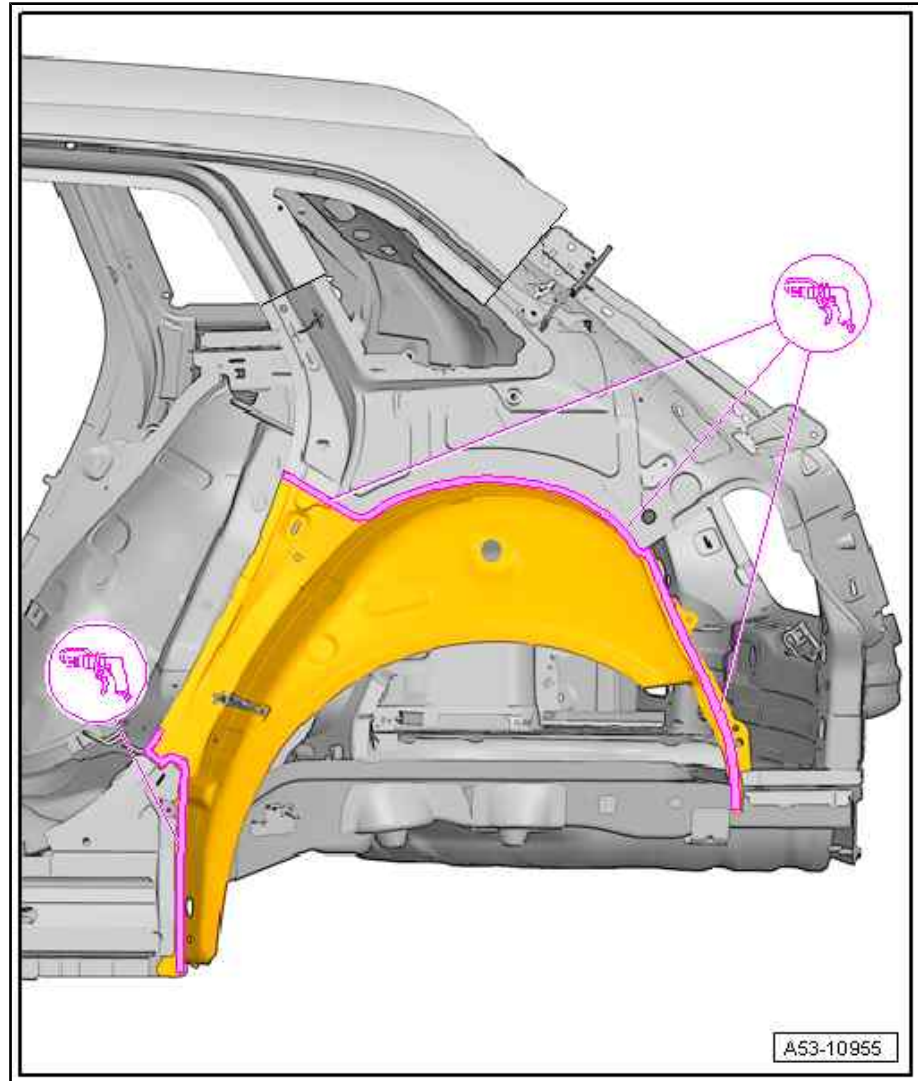
- Mark off separating cut on D-pillar reinforcement according to dimension -a- and make cut using body saw .

### Dimension -a- = 60 mm

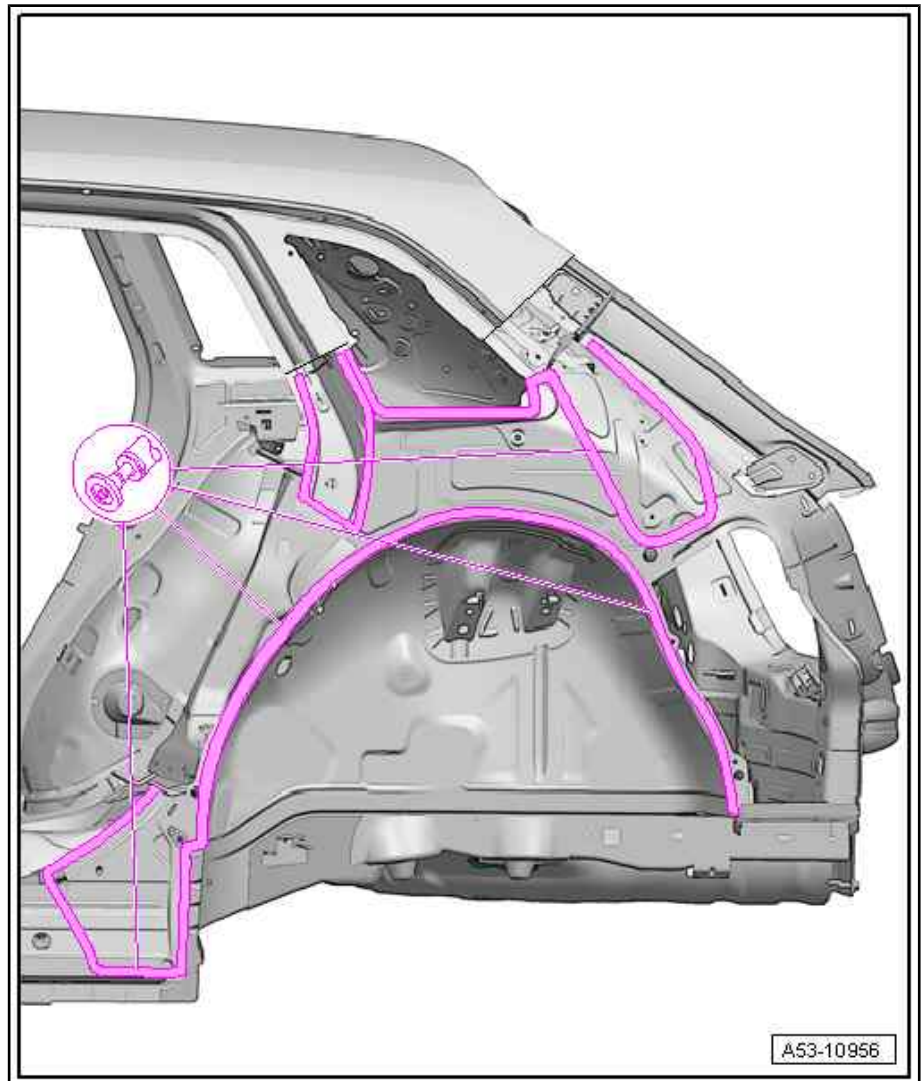
- Mark off separating cut on C-pillar reinforcement according to degree of damage and make cut using body saw .
- Separate original joint using spot weld breaker .



- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.



#### Replacement part

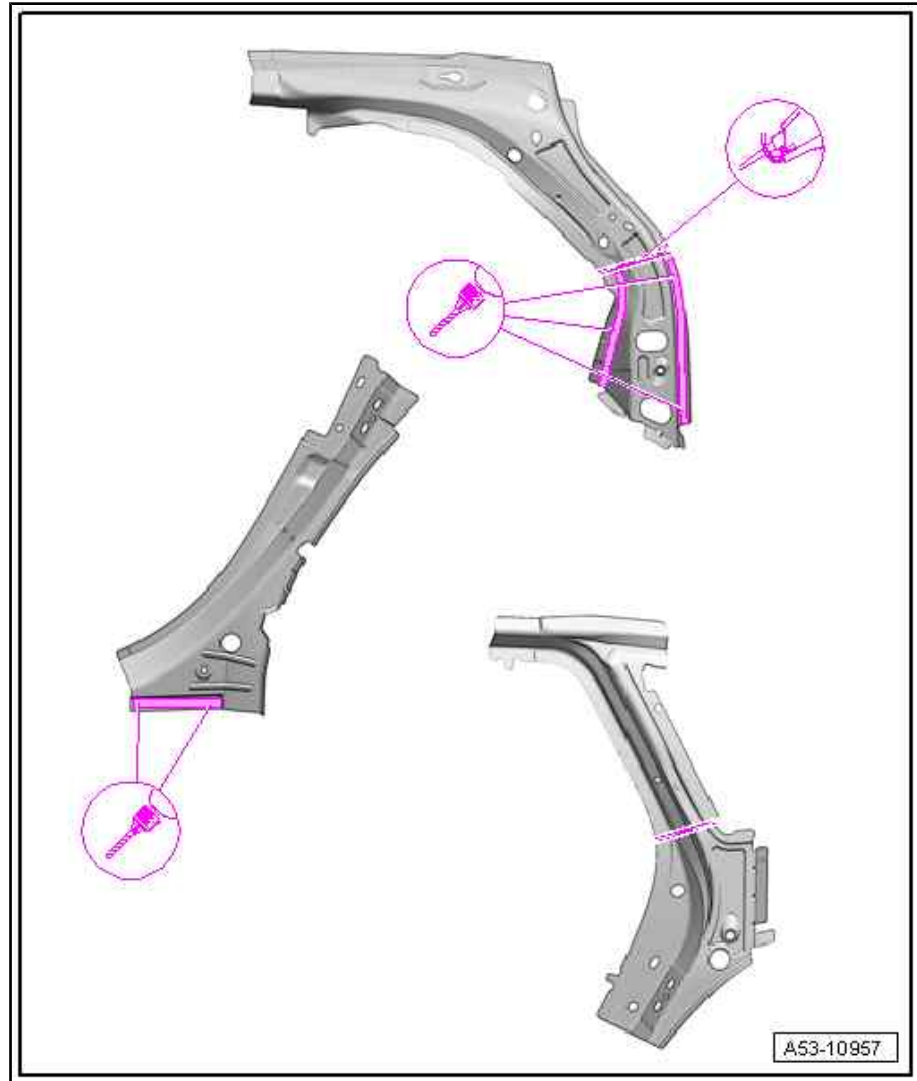
- ◆ Rear wheel housing liner
- ◆ C-pillar reinforcement

#### Pre-treatment - applies to replacement part only

- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.

#### Preparing new part

- Transfer separating cuts to new parts and cut to size using body saw .

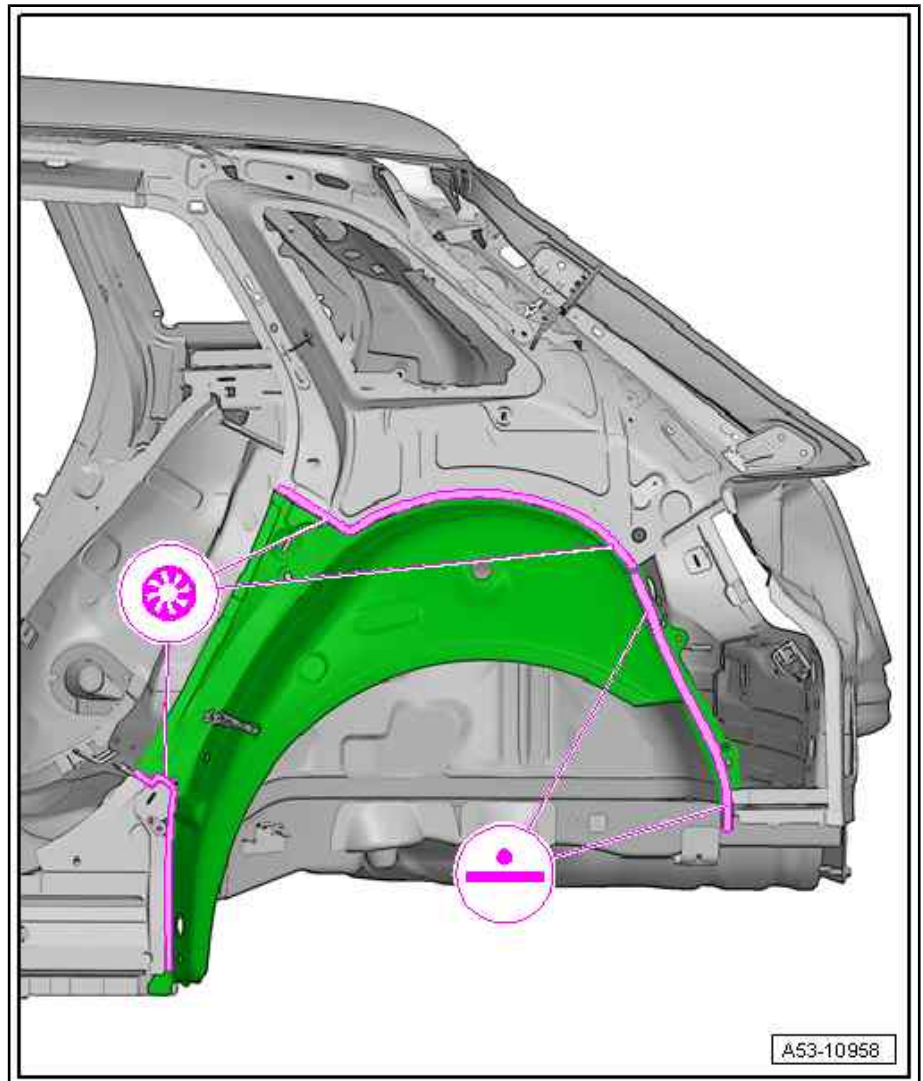


**!** NOTICE

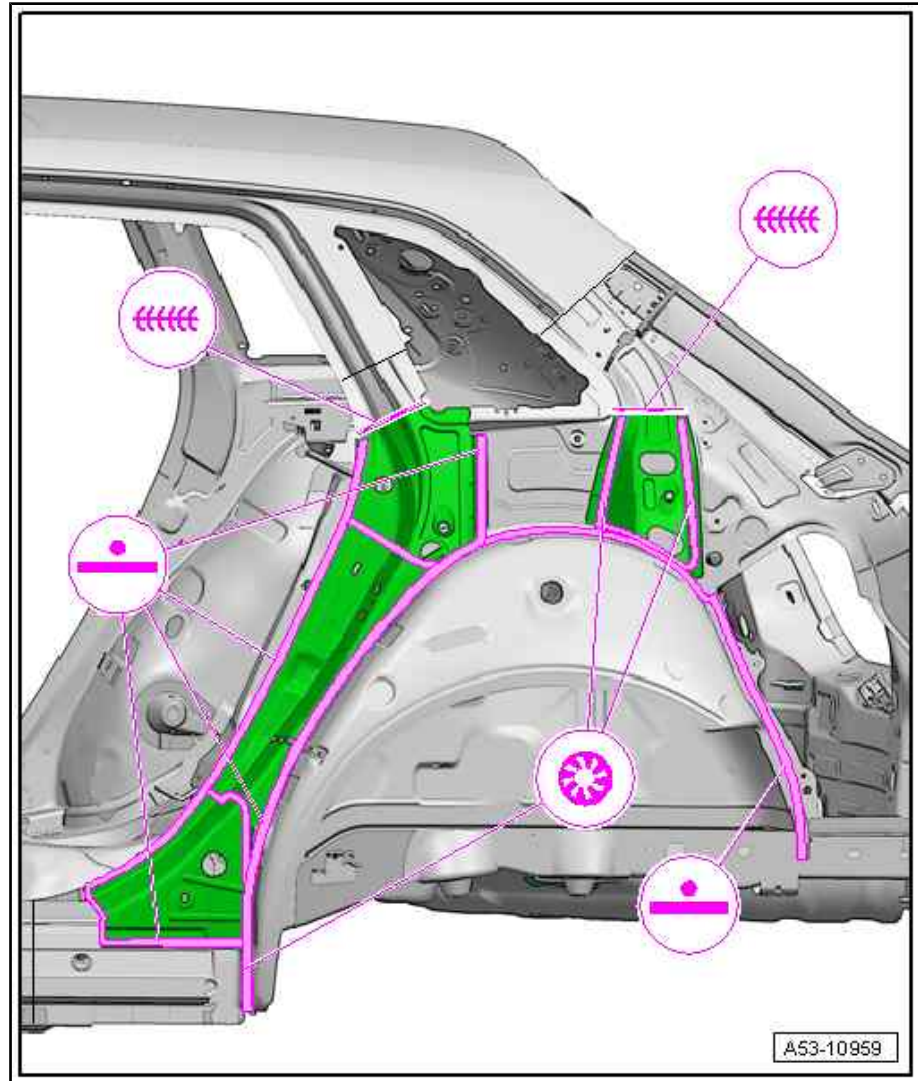
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Weld in wheel housing using shielded arc welding equipment : SG plug weld seam.
- Weld in wheel housing using resistance spot welder : RP spot weld seam.



- Weld in C-pillar reinforcement using resistance spot welder : RP spot weld seam.
- Weld in D-pillar reinforcement using shielded arc welding equipment : SG plug weld seam.
- Weld in wheel housing using resistance spot welder : RP spot weld seam.
- Weld in at separating cuts using shielded arc welding equipment : SG continuous seam.



- Welding in side panel ⇒ [page 499](#)



RO: 53 69 55 52

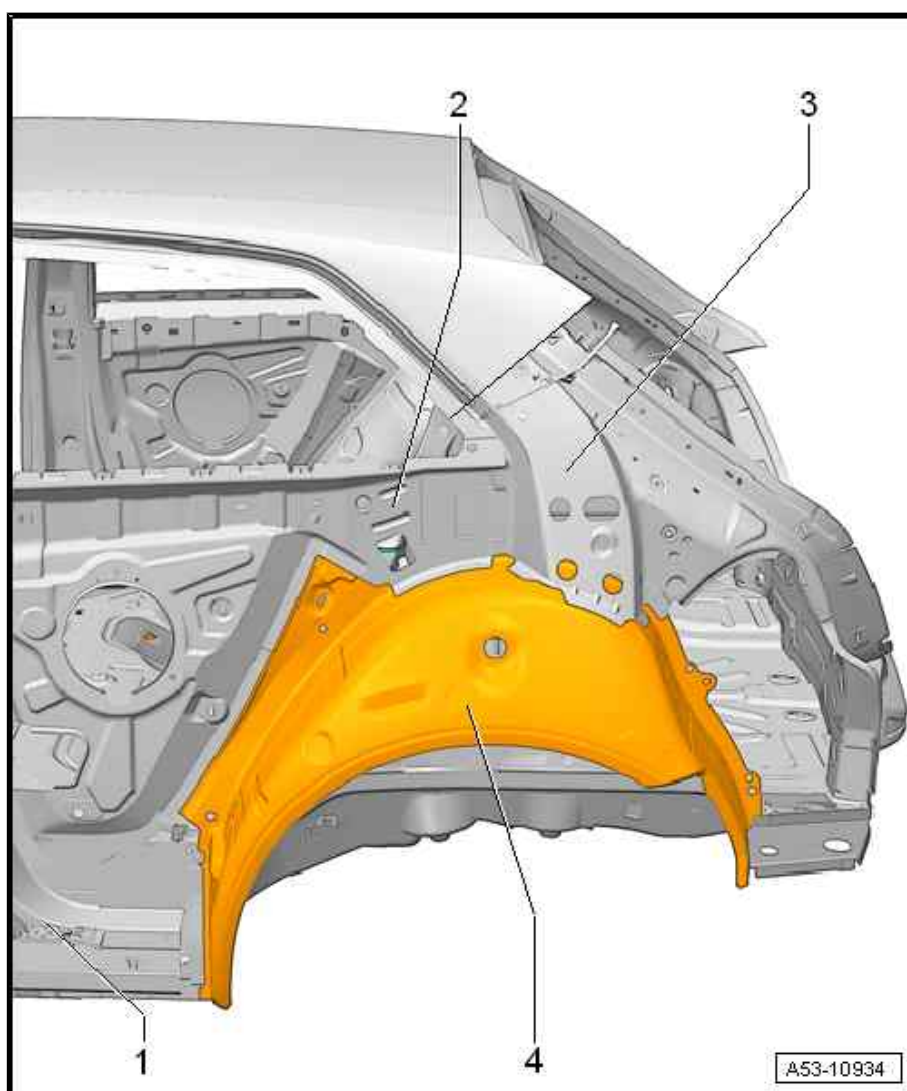
## 19 Rear wheel housing - Partial renewal (A3)

### DANGER

#### Fuel tank and fuel pipes

Take extreme care when performing sanding and welding work near the tank or other components carrying fuel. If in doubt, always remove these components.

- 1 - Side member
- 2 - Inner side panel
- 3 - D-pillar reinforcement
- 4 - Wheel housing



### 19.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder



- ◆ Body saw
- ◆ Spot weld breaker

**!** NOTICE

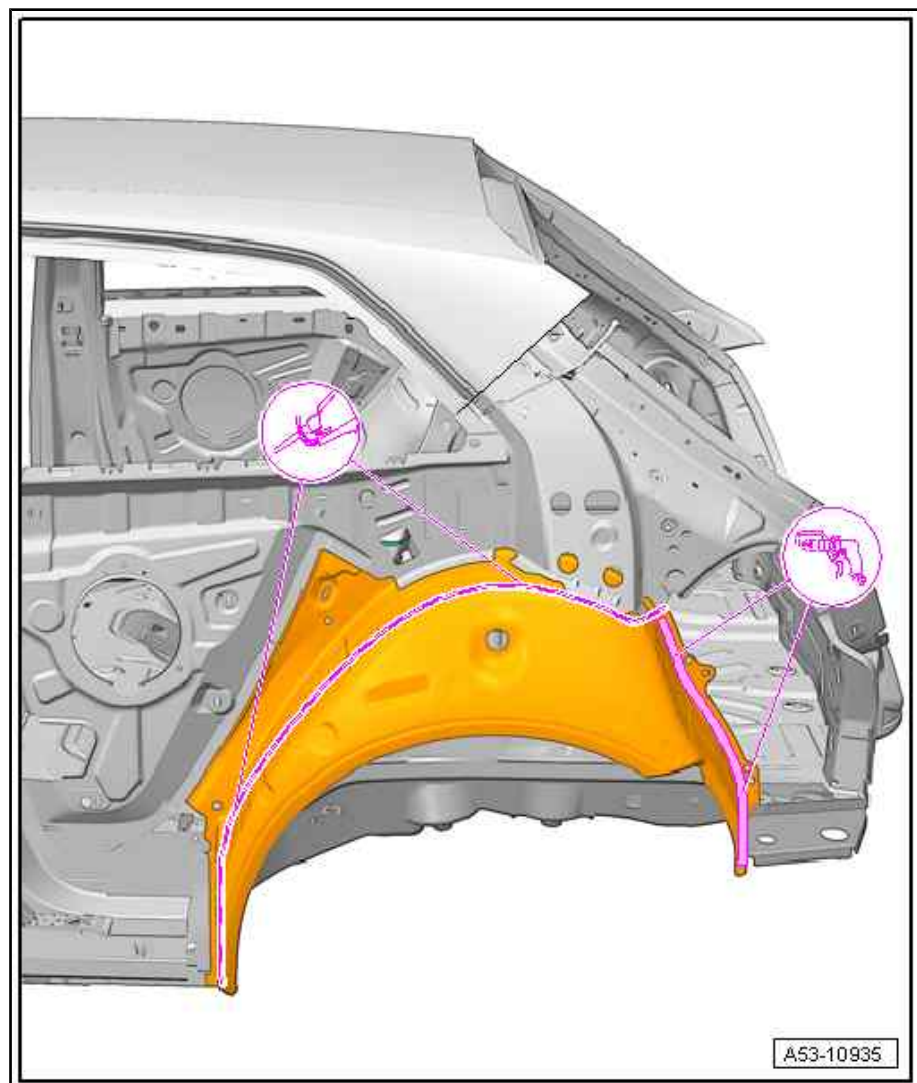
One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

## 19.2 Procedure

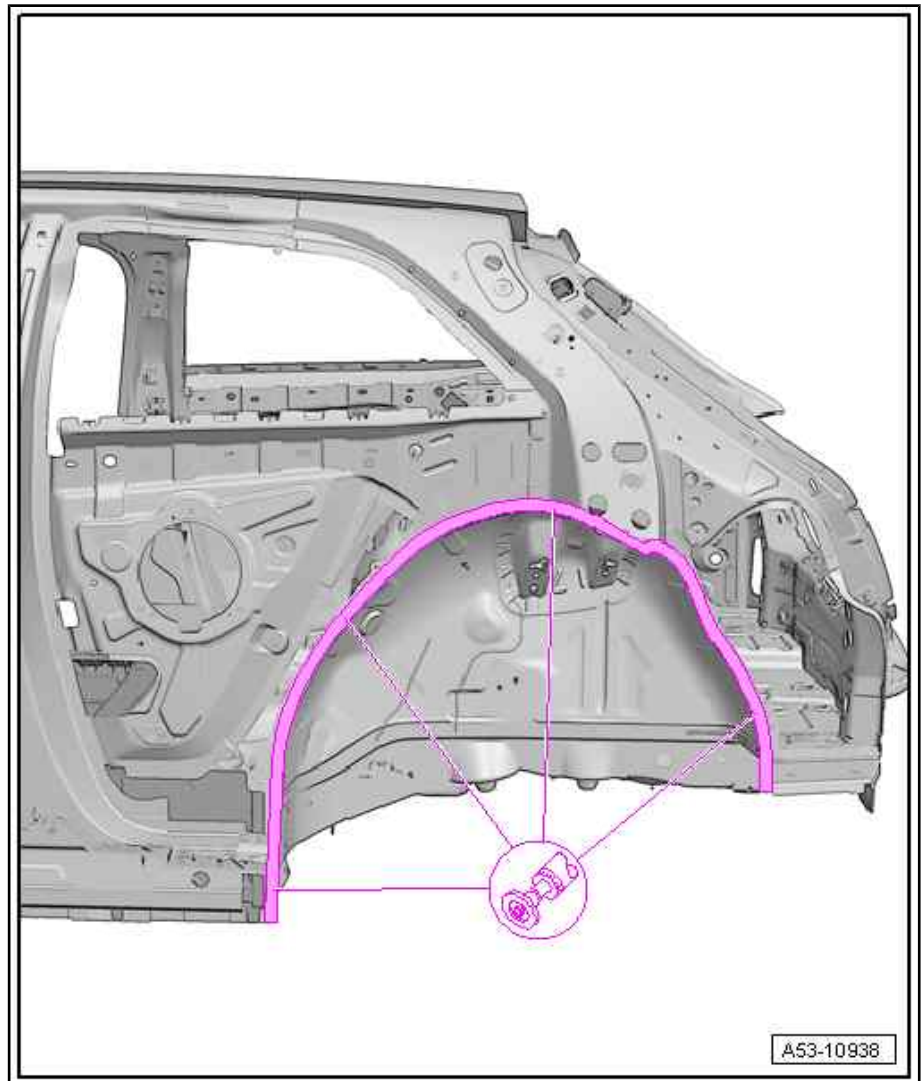
- Removing side panel ⇒ [page 499](#)

### Cutting locations

- Make separating cut as shown using body saw .
- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.



#### Replacement part

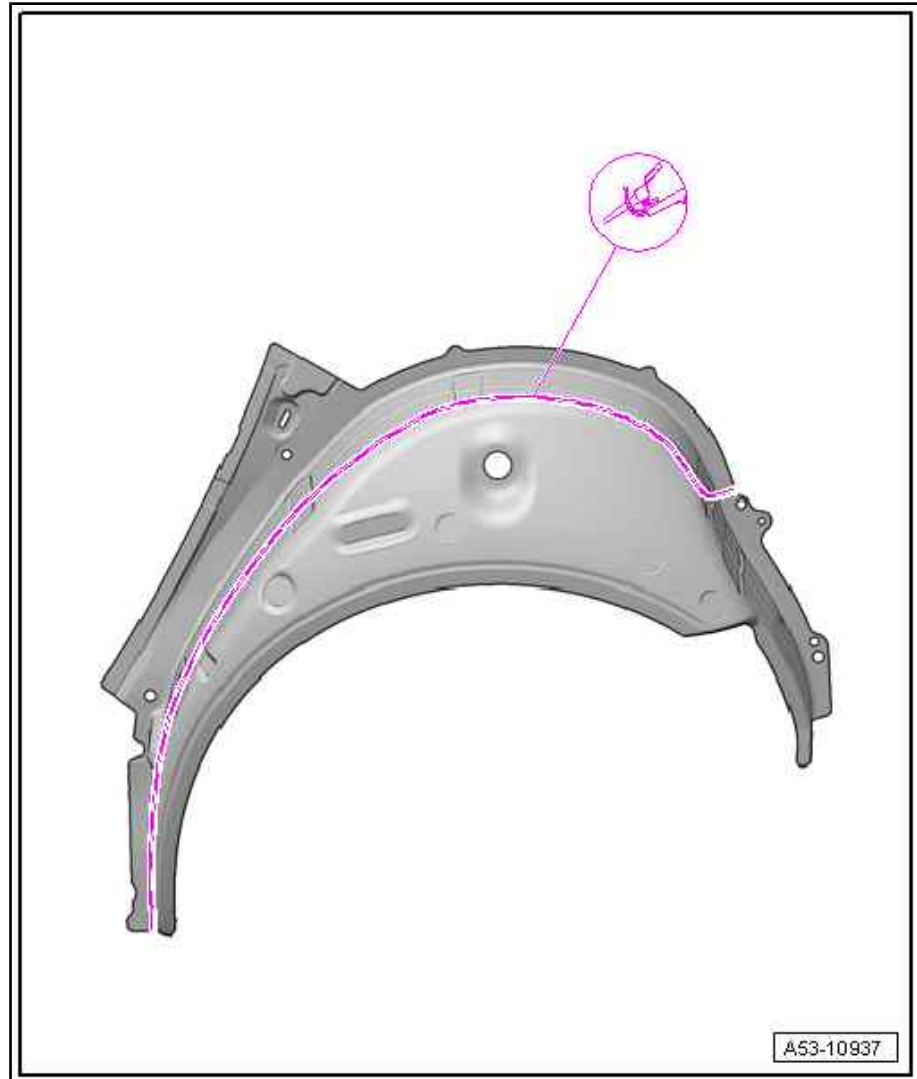
- ◆ Rear wheel housing liner
- ◆ C-pillar reinforcement

#### Pre-treatment - applies to replacement part only

- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.

#### Preparing new part

- Transfer separating cut to new part and cut to size using body saw .

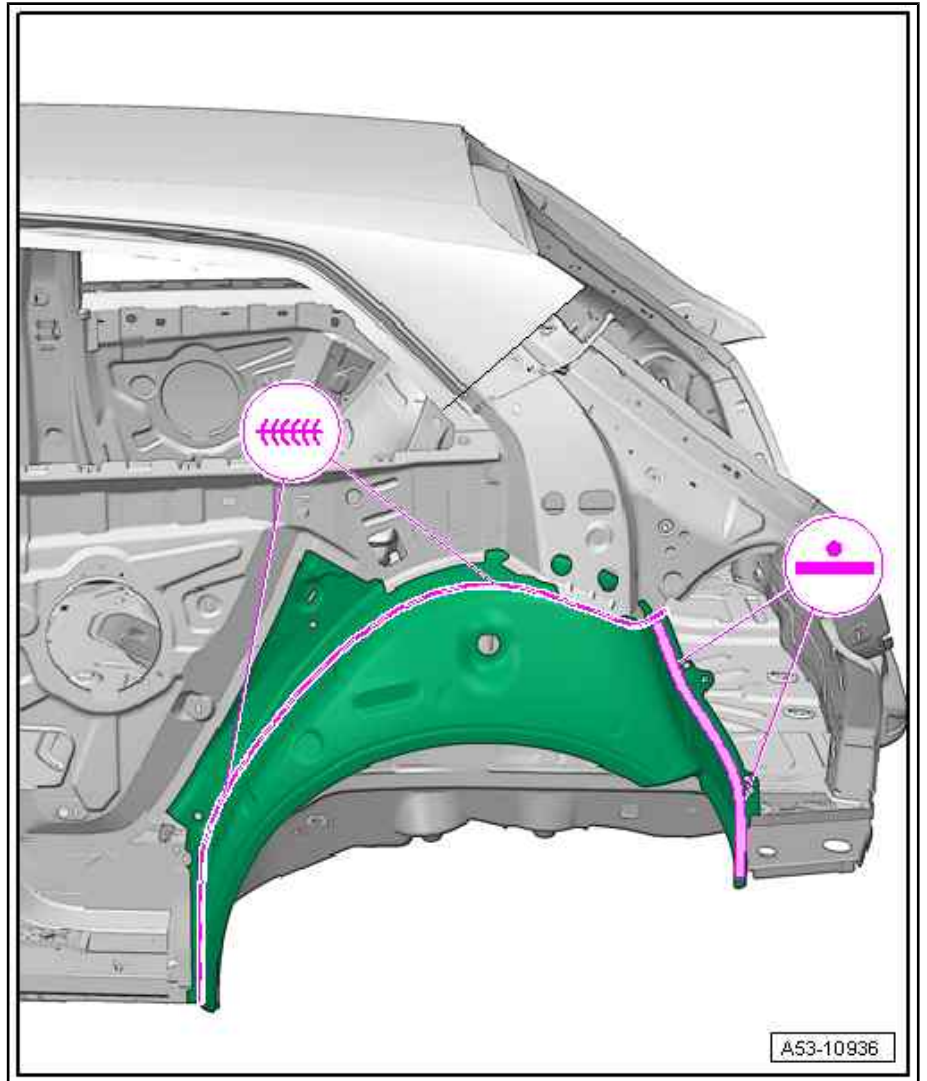


**!** NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Weld in wheel housing using resistance spot welder : RP spot weld seam.
- Weld in wheel housing using shielded arc welding equipment : SG continuous seam.



- Welding in side panel ⇒ [page 499](#)



RO: 53 69 55 52

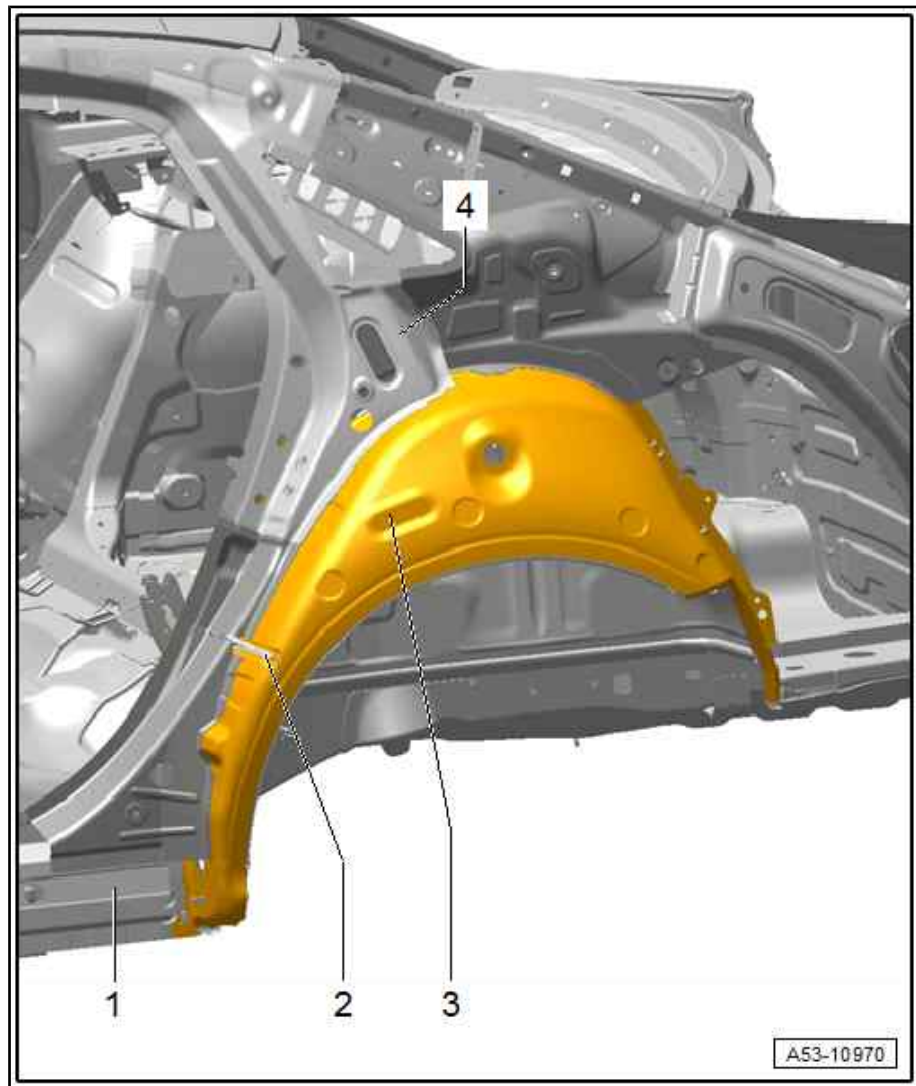
## 20 Rear wheel housing - Partial renewal (Saloon)

### DANGER

#### Fuel tank and fuel pipes

Take extreme care when performing sanding and welding work near the tank or other components carrying fuel. If in doubt, always remove these components.

- 1 - Inner side member
- 2 - Moulded foam insert
- 3 - Wheel housing
- 4 - C-pillar reinforcement



### 20.1 Tools

#### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder



- ◆ Body saw
- ◆ Spot weld breaker

**!** NOTICE

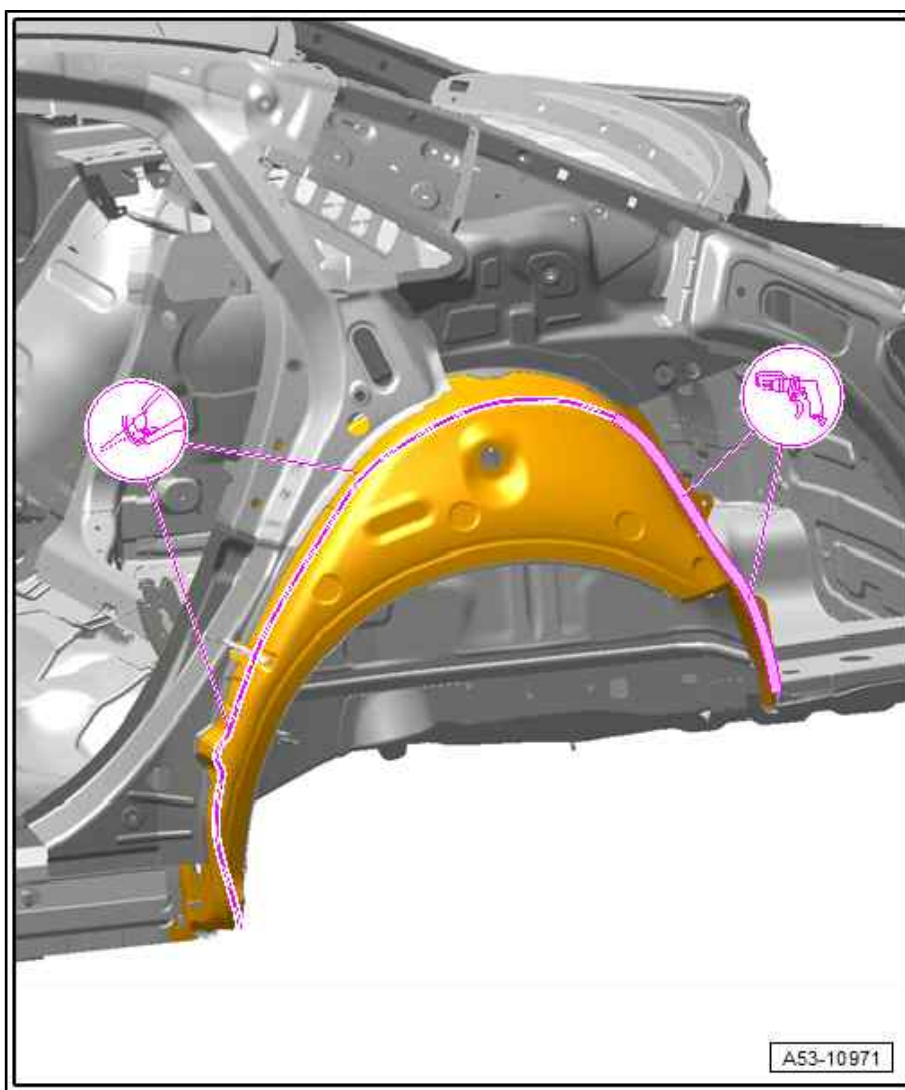
One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

## 20.2 Procedure

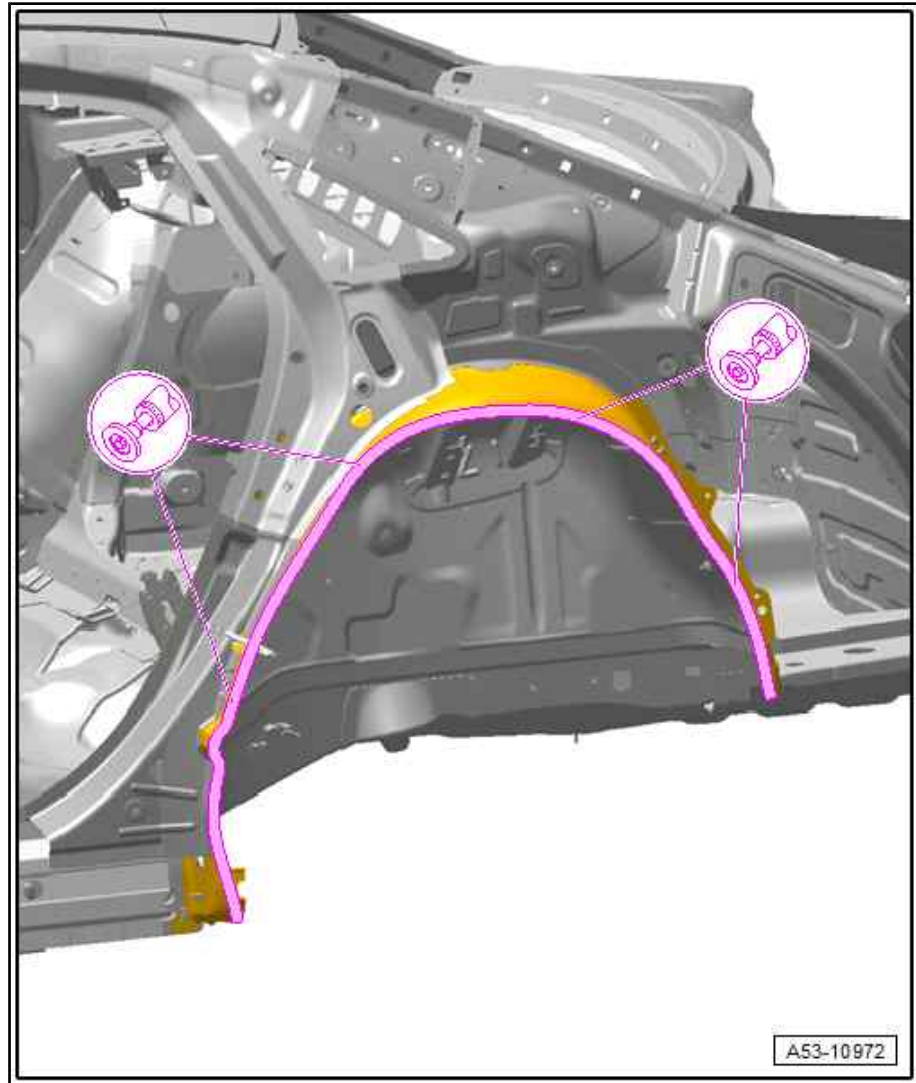
- Removing side panel ⇒ [page 520](#)

### Cutting locations

- Make separating cut according to extent of damage using body saw .
- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.



### Replacement part

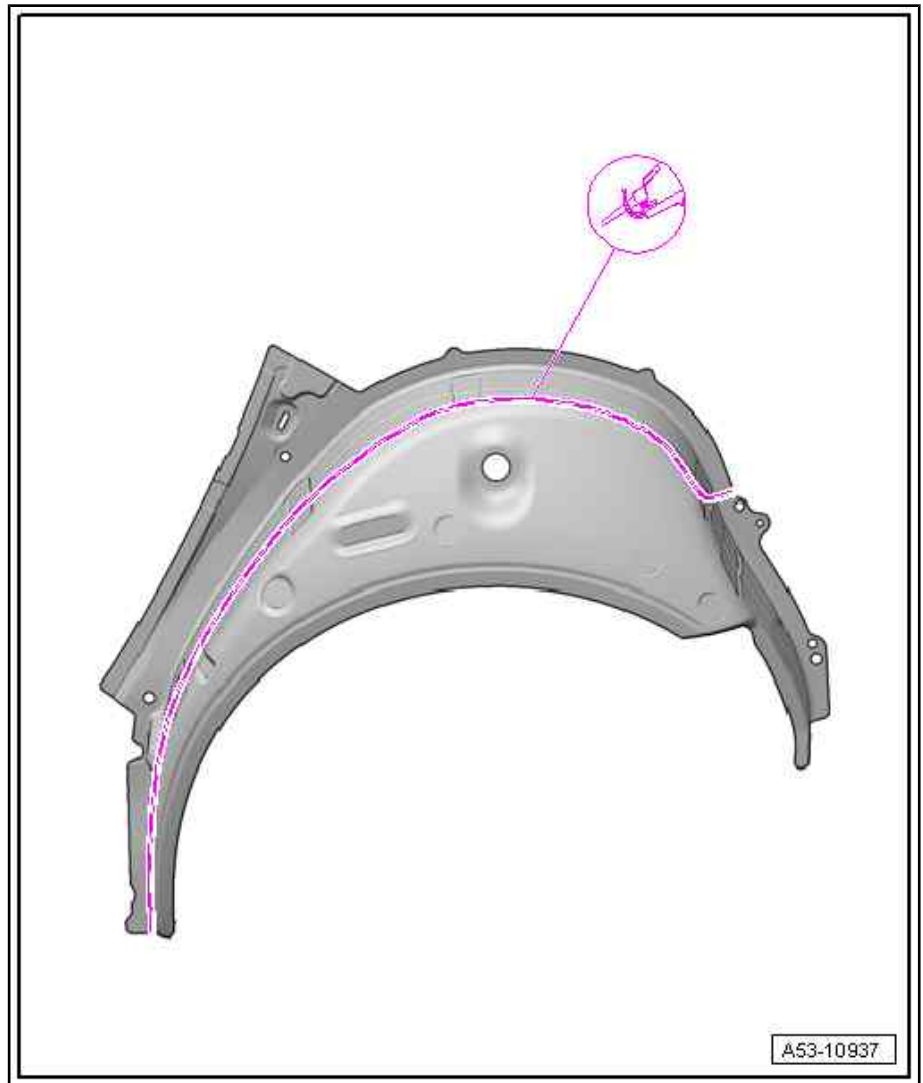
- ◆ Rear wheel housing liner

### Pre-treatment - applies to replacement part only

- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.

### Preparing new part

- Transfer separating cut to new part and cut to size using body saw .

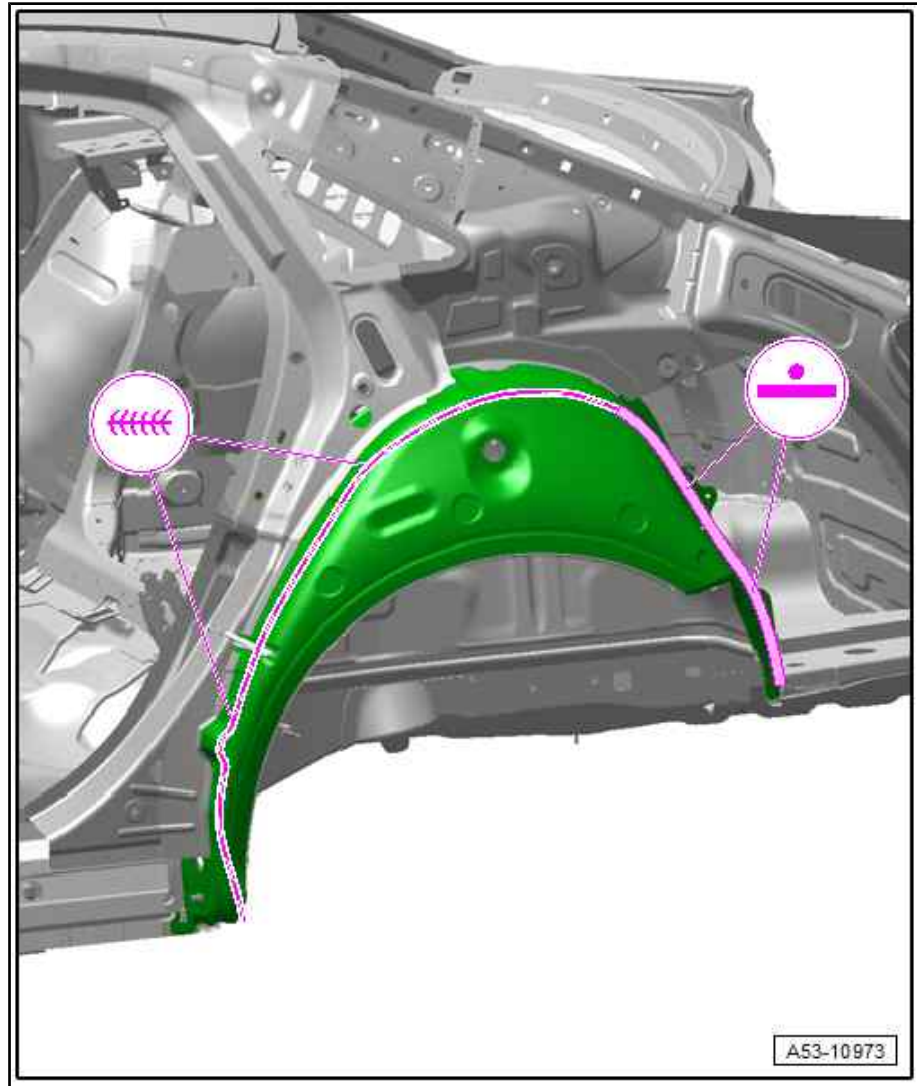


**!** NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Weld in wheel housing using resistance spot welder : RP spot weld seam.
- Weld in wheel housing using shielded arc welding equipment : SG continuous seam.



- Welding in side panel ⇒ [page 520](#)



RO: 53 69 55 00

## 21 Rear wheel housing - Renewal (Saloon)

Includes: C-pillar reinforcement

### DANGER

Damaged natural gas fuel tanks constitute an explosion risk - risk of death!

- If components at the rear and/or rear side of the vehicle (e.g. bumper cover, rear lid, underbody trim, longitudinal member, rear cross panel, etc.) are removed due to accident damage, the natural gas fuel tanks must be checked for damage.
- Carry out assessment of damage to fuel tanks made of composite fibre materials ⇒ Natural gas engines - general information; Rep. gr. 20 ; Assessing damage to fuel tanks made of composite fibre materials; Assessing damage to fuel tanks made of composite fibre materials .

### DANGER

Only for vehicles with natural gas technology

When performing welding, cutting or drilling work in the vicinity of components that convey gas, these components must either be removed or safely covered up before performing repairs.

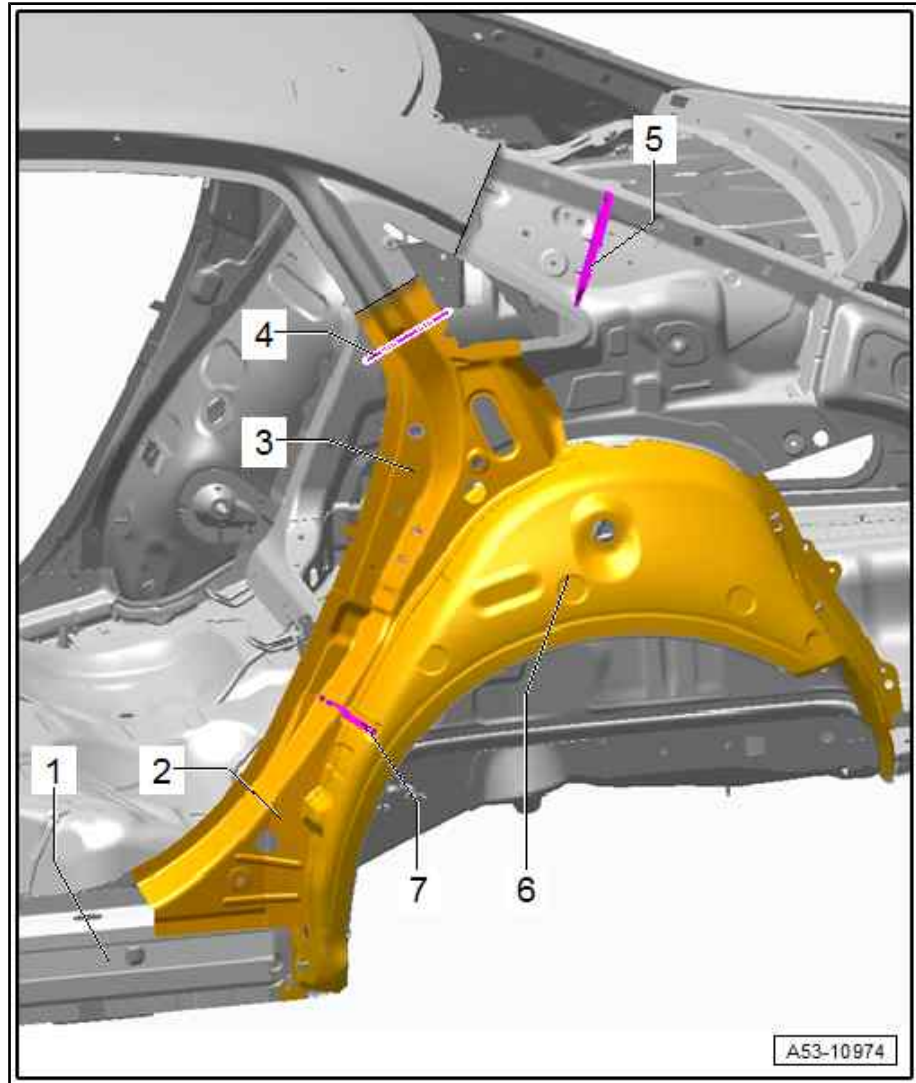
### DANGER

Fuel tank and fuel pipes

Take extreme care when performing sanding and welding work near the tank or other components carrying fuel. If in doubt, always remove these components.



- 1 - Inner side member
- 2 - Lower C-pillar reinforcement
- 3 - Upper C-pillar reinforcement
- 4 - Separating cut at upper C-pillar reinforcement
- 5 - Moulded foam insert
- 6 - Wheel housing
- 7 - Moulded foam insert



## 21.1 Tools

### Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker



### NOTICE

One of the tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 48](#) .

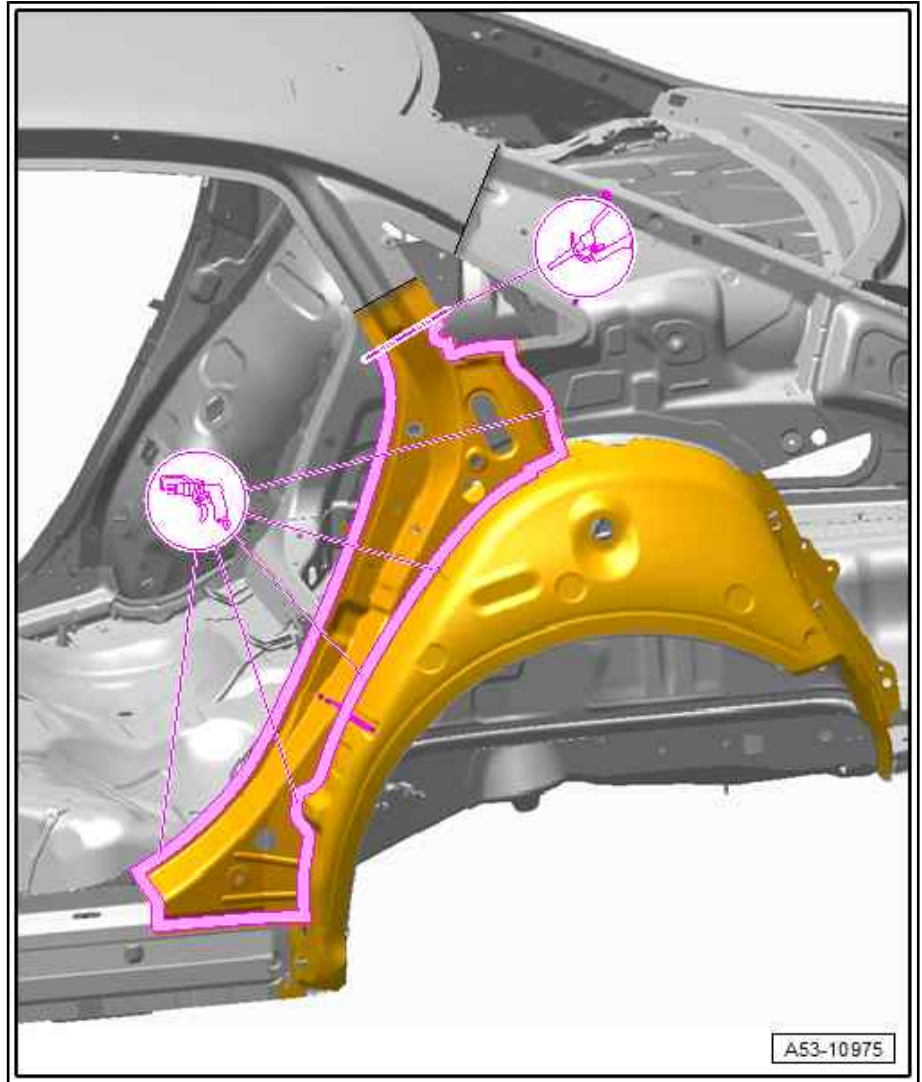
## 21.2 Procedure

- Removing side panel ⇒ [page 520](#)

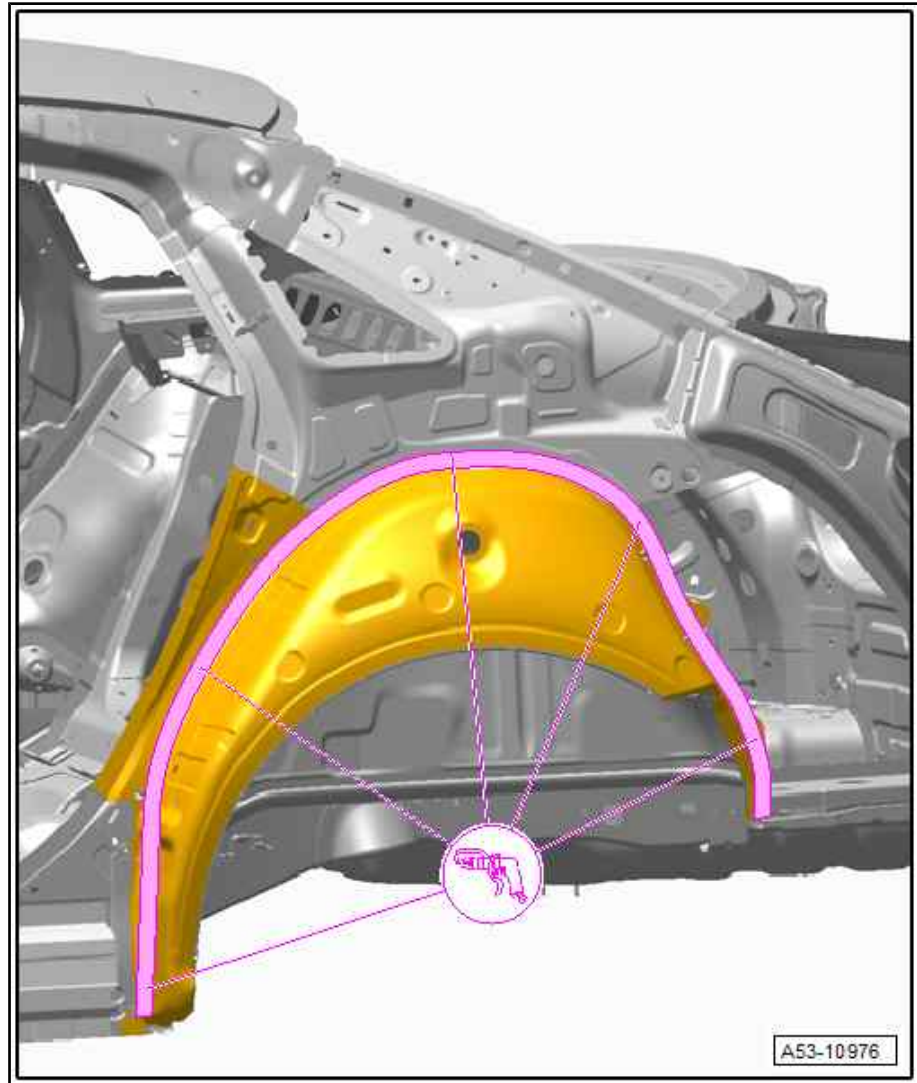


### Cutting locations

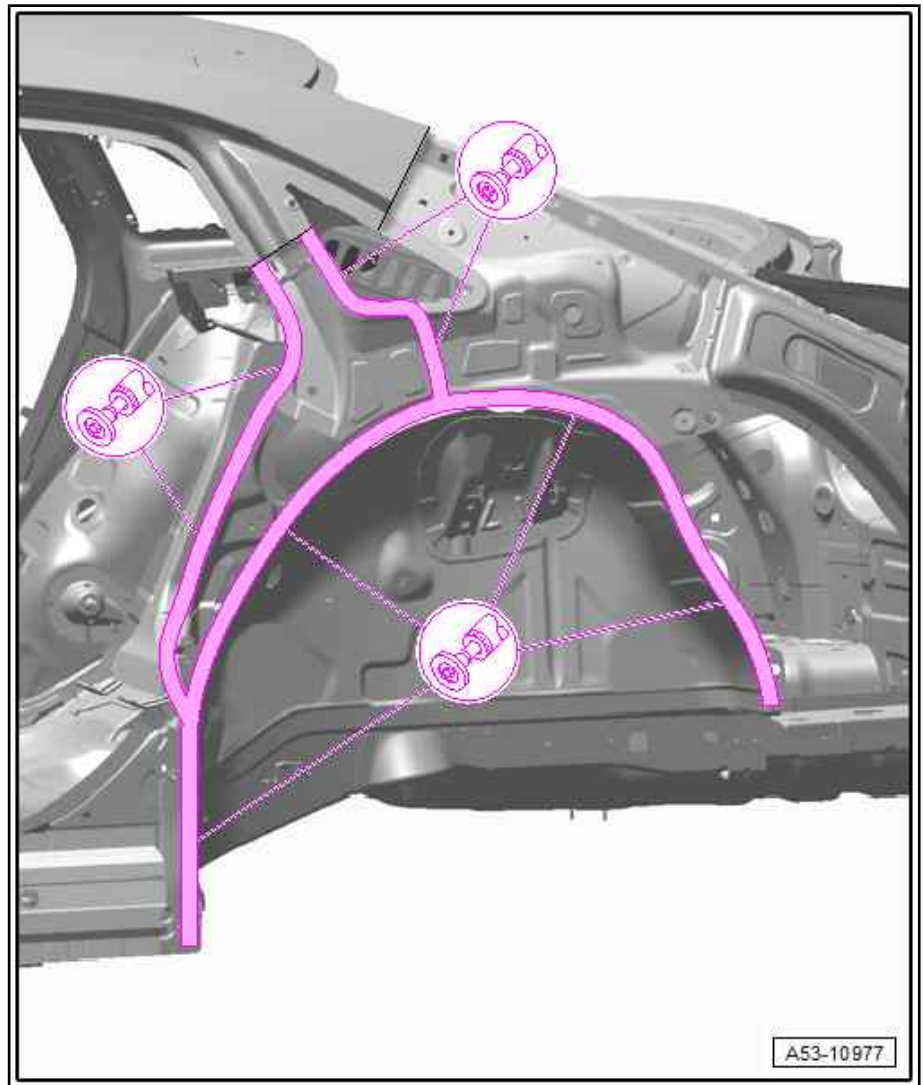
- Mark off separating cut on upper C-pillar reinforcement according to degree of damage and make cut using body saw .
- Separate original joint using spot weld breaker .



- Separate original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .
- Grind welding surfaces down to bare metal.



#### Replacement part

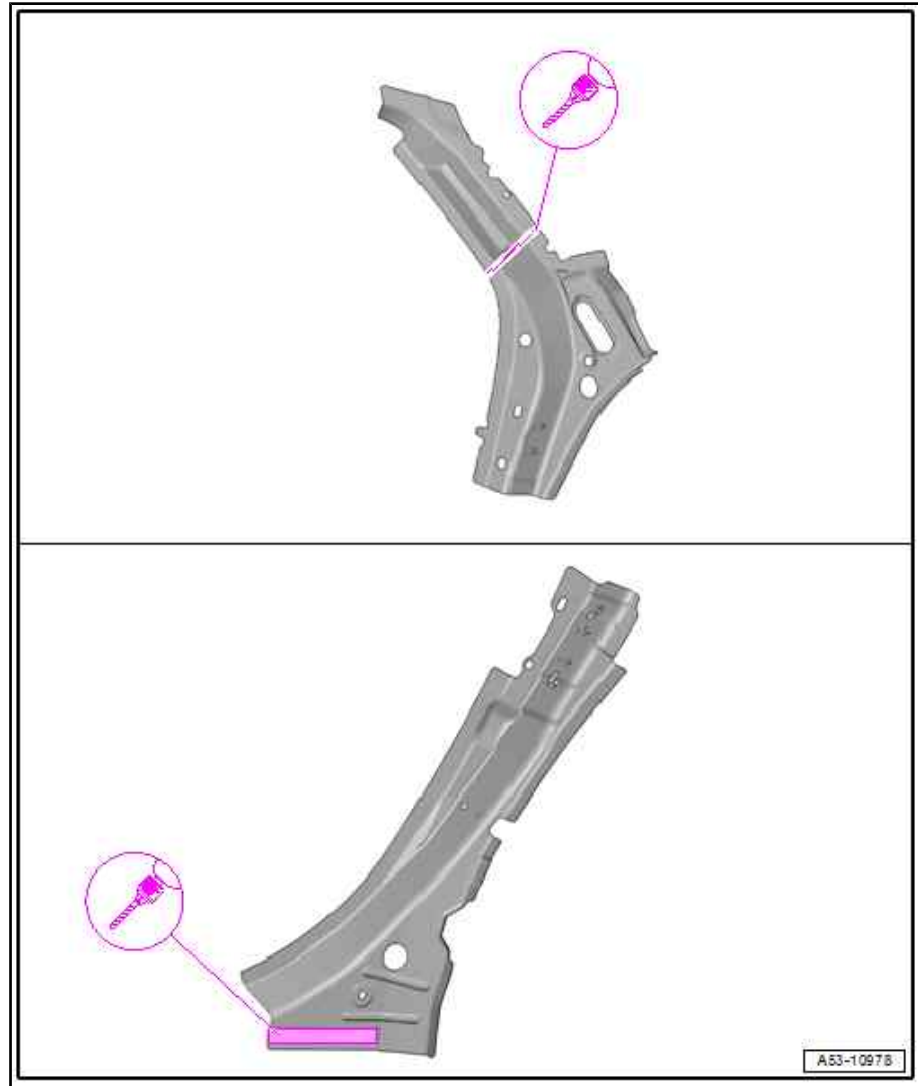
- ◆ Rear wheel housing liner
- ◆ C-pillar reinforcement

#### Pre-treatment - applies to replacement part only

- Grind welding surfaces down to bare metal.
- Prepare flanges on new part for welding.

#### Preparing new part

- Transfer separating cuts to new parts and cut to size using body saw .

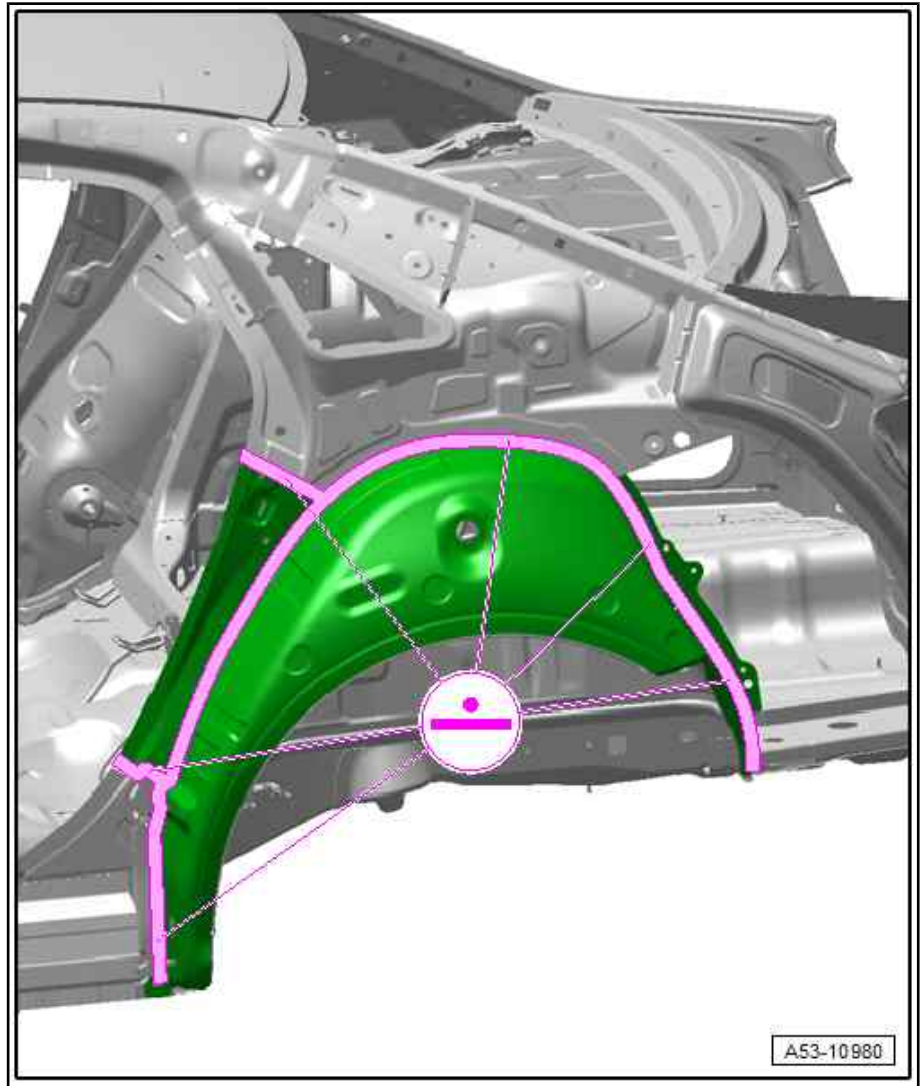


**!** NOTICE

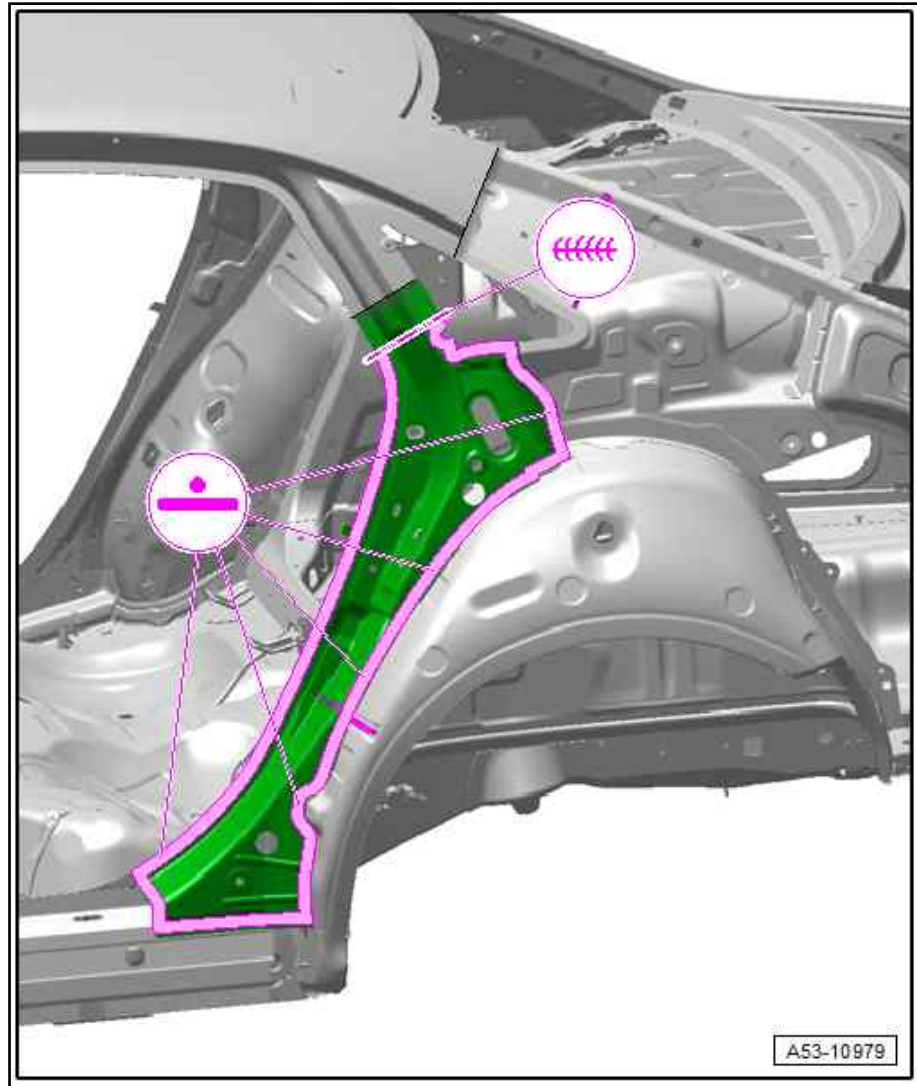
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed in this manual and approved by AUDI AG must be used to ensure correct results when spot welding.

**Welding in**

- Weld in wheel housing using resistance spot welder : RP spot weld seam.



- Weld in C-pillar reinforcement using resistance spot welder : RP spot weld seam.
- Weld in wheel housing using resistance spot welder : RP spot weld seam.
- Weld in at separating cuts using shielded arc welding equipment : SG continuous seam.



- Welding in side panel ⇒ [page 520](#)