



Body Repairs

Audi A5 Cabriolet 2017 ➤

Edition 12.2019



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Repair Group overview for Body Repairs

Repair Group

00 - Technical data

50 - Body - front

51 - Body - centre

53 - Body - rear



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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

(AKI000315; Edition 12.2019)

1.1 Vehicle identification number

The vehicle identification number can be found in the infotainment system; it also appears on the vehicle data sticker, in the windscreen on the driver's side and on the right side of the engine compartment. The type plate is located on the A-pillar on the right side of the vehicle. Vehicles for certain export countries have no type plate.



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. Audi AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.

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 Vehicle data sticker

The vehicle data sticker is located 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 Safety precautions

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 accident prevention and trade association regulations must be observed.

CAUTION

Always observe safety precautions.

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

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Additional safety requirements for Automatic Rollover Support System



WARNING

- ◆ Always disconnect the power supply before working on the Automatic Rollover Support System.
- ◆ Ensure that no persons are in the vicinity of the rollover bars (safety distance approx. 1 metre) when connecting the battery.
- ◆ ALWAYS carry out a final control diagnosis after repairing the electrical wiring or connectors for the Automatic Rollover Support System.
- ◆ ALWAYS carry out a final control diagnosis after removing and installing the rollover bars (this also applies when new parts have been installed).
- ◆ Only perform the final control diagnosis after you have completed all repairs.
- ◆ Before starting the final control diagnosis, unclip all covers for the rollover bars from the convertible roof compartment lid and place them clear of the area where the rollover bars are deployed.
- ◆ Always remove the rollover bars when performing body repairs in the area of the rollover bars.
- ◆ After completing body repairs in the area of the rollover bars, inspect the body for weld spatter, deformation and chafing by comparing it with other side of the vehicle.
- ◆ The rollover bars must always be installed immediately after removal from their transportation container.
- ◆ When the rollover bars have been pressed in and have engaged, there must be approx. 1 to 2 mm clearance beneath them.
- ◆ The Automatic Rollover Support System must never be left lying unattended.
- ◆ Following removal, the rollover bars must be stored in a horizontal position with the support plates pointing upwards.
- ◆ The Automatic Rollover Support System must not be dismantled or repaired. Always use new parts.
- ◆ Rollover bars which have been dropped onto a hard surface or which show signs of damage must not be used.
- ◆ Do not carry out any repair work on the lid of the convertible roof compartment in the area of the rollover bar cover or on the cover itself.
- ◆ If the rollover bars are removed following an accident, renew the securing bolts for the rollover bars.



3 Important notes

This Manual describes only selected repair operations. A description is given where the repair method differs from the original manufacturing process.

Where the repair operation is not described: Separate the original joint and repair using a replacement part.

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

Please refer to the information in the Workshop Manual, General Information - Body Repairs.



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4 Surface treatment

Only use stainless steel wire brushes.

Rough-filing discs must not be used because of the smear effect.

Use sanding discs of grit size P 80 to P 200.

Always use cleaning block D 009 802 with sanding discs, drill bits, millers and cutting discs.

Clean surface with paint thinner.

Surface treatment otherwise as for steel.



Note

Aluminium components must be covered when grinding and welding steel parts. If metal swarf/dust makes contact with aluminium, remove immediately to avoid contact corrosion.



CAUTION

Use separate tools for steel and aluminium.

Recommended: aluminium tool set with trolley -V.A.G 2010/2-

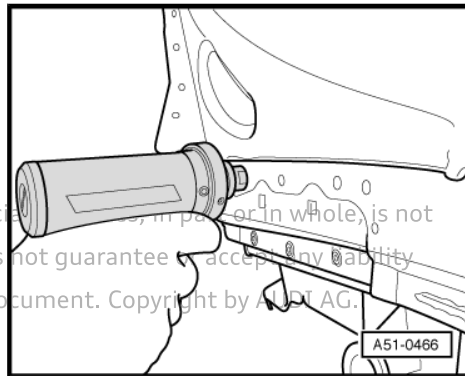


5 Rivets accessible from one side only

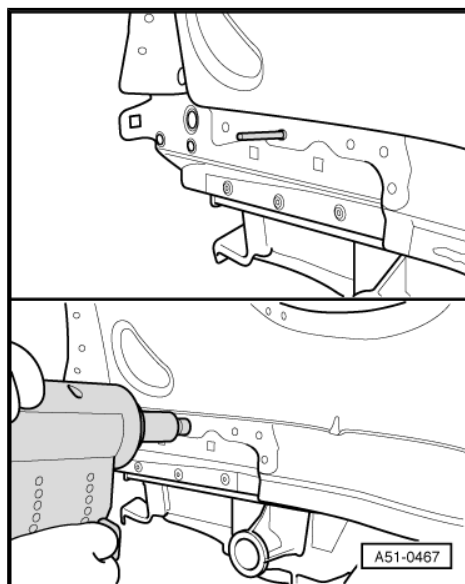
- Remove paint and oxide layer from rivet head and attachment point for earth clamps.
- Attach earth clamps as close as possible to rivets.
- Weld on weld stud - VAS 852 001/1 oder VAS 852 001/2- using dent removal system - VAS 852 001- approved by AUDI AG.



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- Pull out weld stud VAS 852 001/1 or VAS 852 001/2 using compact riveter - VAS 6792- .





6 Bonded joints with aluminium

NOTICE

Pre-treatment applies to old flange only.

- Remove remnants of adhesive, paint, wax, etc.
- Sand bonding surface down to bare metal using a clean sanding disc (grit size P 80 or P 100).
- Use clean brush to remove sanding dust.
- Clean bonding surfaces with cleaning solution - D 009 401 04- .
- Treat flanges with silicate stone - D 009 800 - and holder - V.A.G 1931- .
- Apply a thin coat of aluminium primer - DA 009 801 - using applicator - D 009 500 25 - and allow to flash off.

A silicate adhesive layer is formed which ensures long-term durability of the bonded joint. The surface becomes matt.

Do NOT use solvents.

NOTICE

Mask bonding surfaces when painting inner sides.

Parts must be joined and secured in position within 30 minutes as otherwise the formation of a surface skin will result in inadequate adhesion at the flanges.

- Fit rivets and wipe off emerging adhesive.

At temperatures up to 20° C, rivets must be fitted within 90 minutes and at temperatures above 20° C within 40 minutes starting from application of adhesive.



Note

- ◆ *For large parts, e.g. roof, the assistance of a second person is required, as otherwise the adhesive will dry before work is completed.*
- ◆ *In the event of interruptions lasting up to 30 minutes, press out and discard an approx. 100 mm long bead to ensure that new material is properly mixed. In the event of interruptions lasting longer than 30 minutes, replace mixing nozzle and press out a 100 mm long bead. If several cartridges are required for repair work, the same mixing nozzle can be used.*



7 Contact corrosion

Contact corrosion can occur if unsuitable fasteners (bolts, nuts, washers etc.) are used.

For this reason, only fasteners with a special surface coating are fitted.

In addition, all rubber and plastic parts and all adhesives are made of non-conductive materials.

Always renew parts if you are in any doubt as to whether the old part can be used again.



Note

Please note:

Always use genuine replacement parts (same as original equipment). These have been tested and are aluminium-compatible.

Accessories must be approved by AUDI AG.

Damage caused by contact corrosion is not covered by the warranty.

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8 Overview of riveting attachments (pairs of tools)



Note

- ◆ This list is intended for general information. Please refer to the operating instructions provided for a description of the procedure and areas of application.
- ◆ To increase the life of the riveting attachments, please use cutting oil (commercially available).

D 1 + D 2 - Pressing out Ø 3.2 mm punch rivet

D 2 + D 3 - Pressing out Ø 3.2 mm punch rivet

D 2 + D 5 - Pressing out Ø 5 mm punch rivet

D 3 + D 5 - Pressing out Ø 5 mm punch rivet

D 4 + D 5 - Pressing out Ø 5 mm punch rivet

D 5 + D 12 - Punching Ø 8 mm hole for weld joint

D 6 + D 7 - Punching and countersinking hole for Ø 4.8 mm pop rivet

D 8 + D 8 - Re-forming metal panel

D 8 + D 9 - Setting Ø 4 mm solid rivet

D 10 + D 11 - Punching and countersinking hole for Ø 4 mm solid rivet

D 13 + D 14 - Pressing out Ø 5.3 x 7.5 mm punch rivet

D 17 + D 17 - Re-forming metal panel

D 15 + D 16 - Punching and countersinking hole for Ø 6.0 mm solid rivet

D 17 + D 17 - Setting Ø 6.0 mm solid rivet

S 1 + D 2 - Pressing out Ø 3.2 mm punch rivet

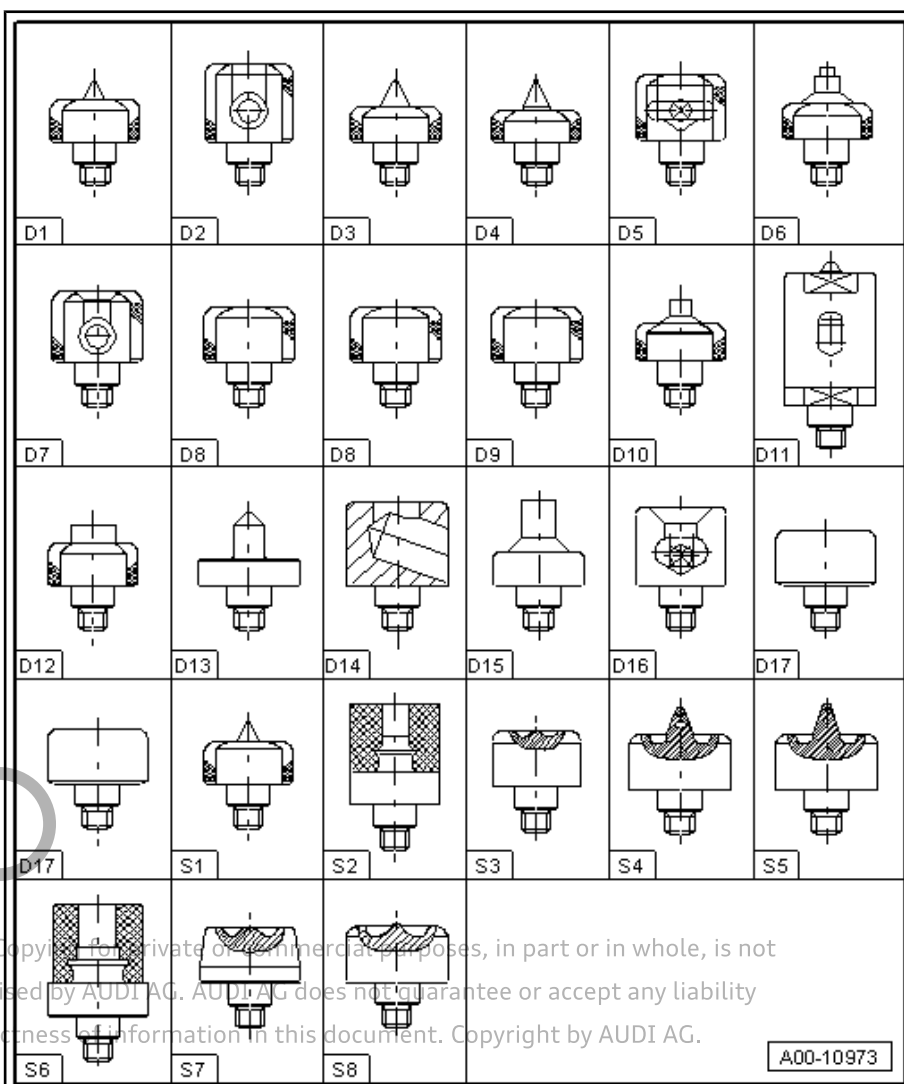
S 2 + S 3 - Inserting and setting Ø 3.2 mm punch rivet

S 4 + D 5 - Pressing out Ø 5.3 x 5.5 mm punch rivet

S 5 + D 5 - Pressing out Ø 5.3 x 6.5 mm punch rivet

S 6 + S 7 - Inserting and setting Ø 5.3 x 5.5 mm punch rivet

S 6 + S 8 - Inserting and setting Ø 5.3 x 6.5 mm punch rivet





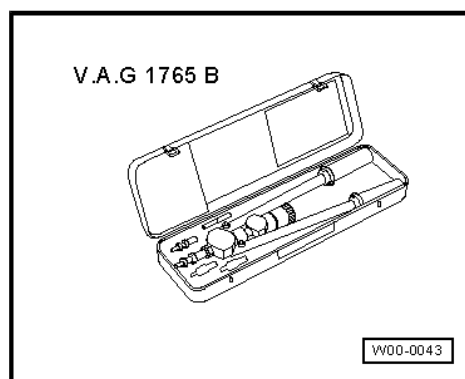
9 Overview of rivets and tools

Pop rivet pliers - VAG 1753 B-

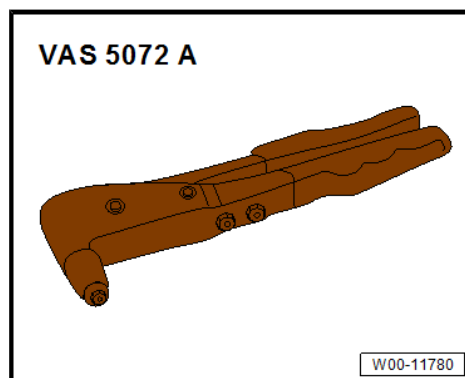
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Pop rivet nut pliers - V.A.G 1765-

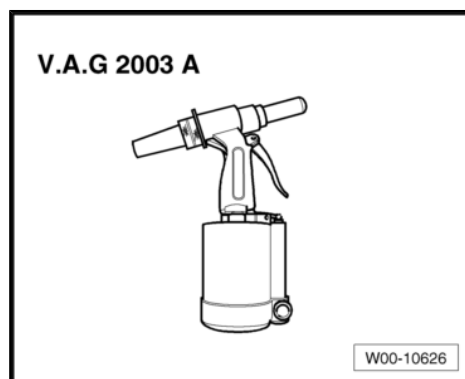


Pop rivet pliers - VAS 5072 A-



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

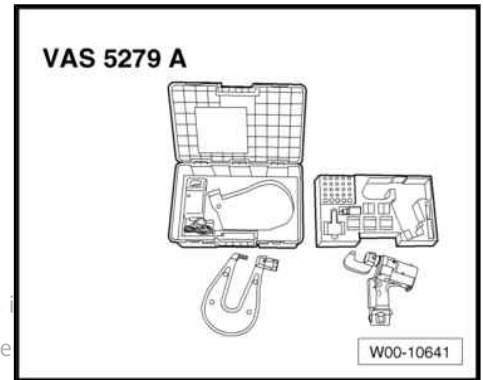
Pneumatic/hydraulic pop rivet pliers - VAS 6759-





Rechargeable riveter - VAS 5279 A-
Rechargeable riveter - VAS 843 001-
Compact booster - VAS 6790-
Compact riveter - VAS 6792-
Socket for flow-drill screws - VAS 852 007-
Dent remover - VAS 852 001-

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Rivet	Order number Size	V.A G 176 5	V A S 52 79	V A S 50 72	V A G 17 53 B	V A G 20 03 A	V A S 67 90	V A S 67 92	V A S 84 300 1	V A S 67 59	V A S 85 20 07	V A S 85 20 01
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	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									
Aluminium pop rivet with counter-sunk head	4E0 809 864 A						x	x	x	x		

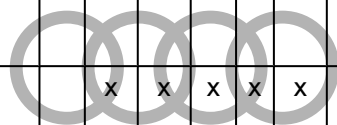
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Rivet	Order number Size	V.A G 176 5	V A S 52 79	V A S 50 72	V.A G 17 53 B	V.A G 20 03 A	V A S 67 90	V A S 6 7 9 2	V.A S 84 3 00 1	V A S 6 7 5 9	V A S 8 5 2 0 07	V A S 8 5 2 0 1
Alumi- nium pop rivet with round head	8Z0 809 864						x	x	x	x		
Flow- 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 rive- ted: 5 – 9 mm				x	x	x	x	x	x		
Pop rivet	WHT 005 697 6.5 mm Panel thick- ness that can be rive- ted: 3 – 4.8 mm				x	x	x	x	x	x		



Rivet	Order number Size	V.A .G 176 5	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	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	WHT 911 527 01 6.5 mm Panel thick- ness that can be rive- ted: 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 rive- ted: 2.4 – 4.8 mm				x	x	x	x	x	x		
Pop rivet	N 906 924 02 4.8 mm Panel thick- ness that can be rive- ted: 1.5 – 3.5 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 176 5 C/ 2										
Pop rivet bolt	N 910 011 01	V.A .G 176 5 C/ 4										
Pop rivet nut	N 910 377 01 M10	V.A .G 176 5										
Pop rivet nut	N 908 568 02 M8	V.A .G 176 5										



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Rivet	Order number Size	V.A 176 5	V A S 52 79	V A S 50 72	V A G 17 53 B	V A G 20 03 A	V A S 67 90	V A S 67 92	V A S 84 30 01	V A S 67 59	V A S 85 20 07	V A S 85 20 01
Weld stud	VAS 852 001/1 5 mm							x				x
Weld stud	VAS 852 001/2 4 mm							x				x

9.1 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

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10 Thread repair for M6 pop rivet nut

If the thread-forming screws/WHT 002 612 should fail to hold or are otherwise damaged, the repair screws WHT 006 778 can be used as a substitute. It is then not necessary to drill holes and set the pop rivet nuts.



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11 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.*

The body of this vehicle is partly manufactured from galvanised steel panels.

11.1 Ultra-high-strength hot-formed steel

For reasons of weight, ultra-high strength steels (hot-formed) are used on the Audi A5 Cabriolet. These panels may only be cut and butt-welded at the specified locations. The required repair method for these joints is indicated in this manual.

Spot-welding may only be performed with the factory-approved inverter welding equipment.

The outer side panel and roof are removed to give a clearer illustration.

11.2 Aluminium panels



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3



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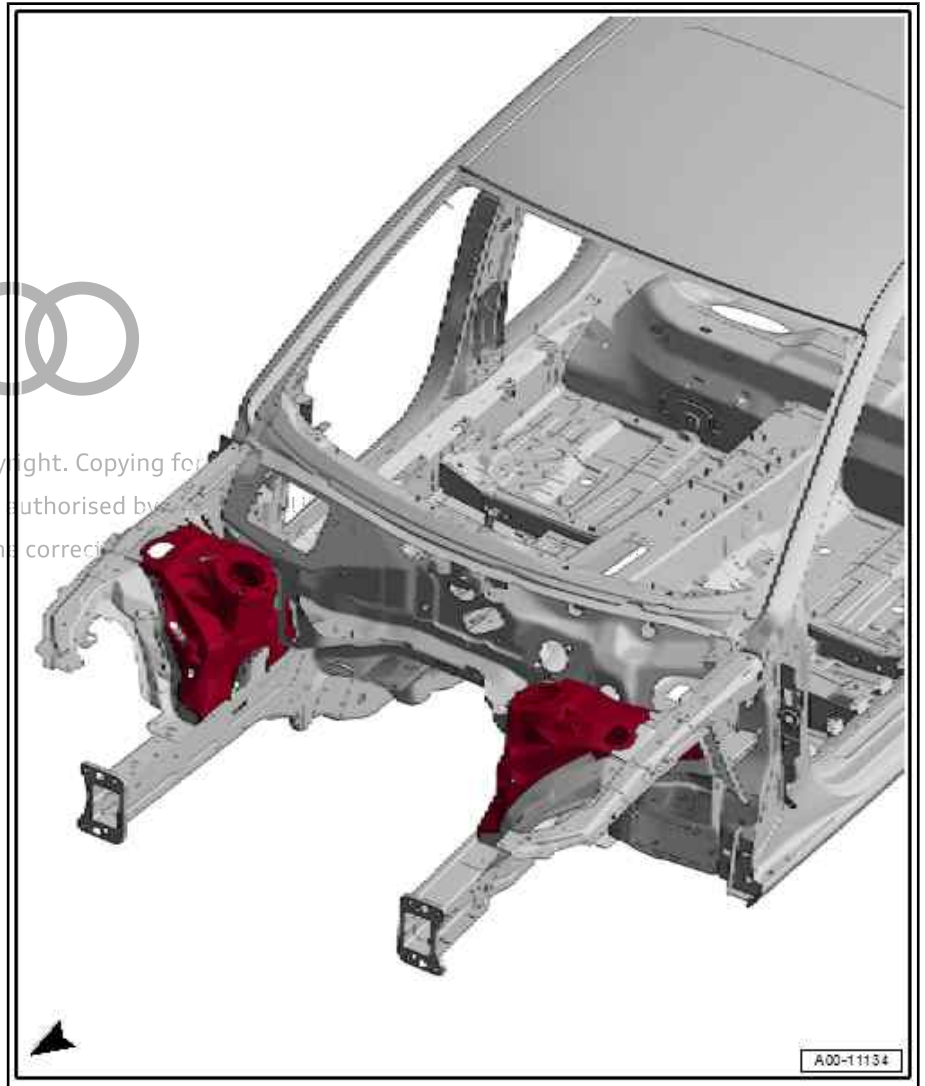


5

A00-10518

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

Suspension turret





12 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 - D 787 300 A2 -

For vehicles with aluminium body

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



NOTICE

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



Note

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13 Moulded foam inserts

Various body cavities of the Audi A5 Cabriolet are fitted with moulded foam inserts.

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

The moulded foam inserts are fitted during body manufacture and subsequently increase in volume in the paint shop drying booth at temperatures above approx. 180 °C after priming.

NOTICE

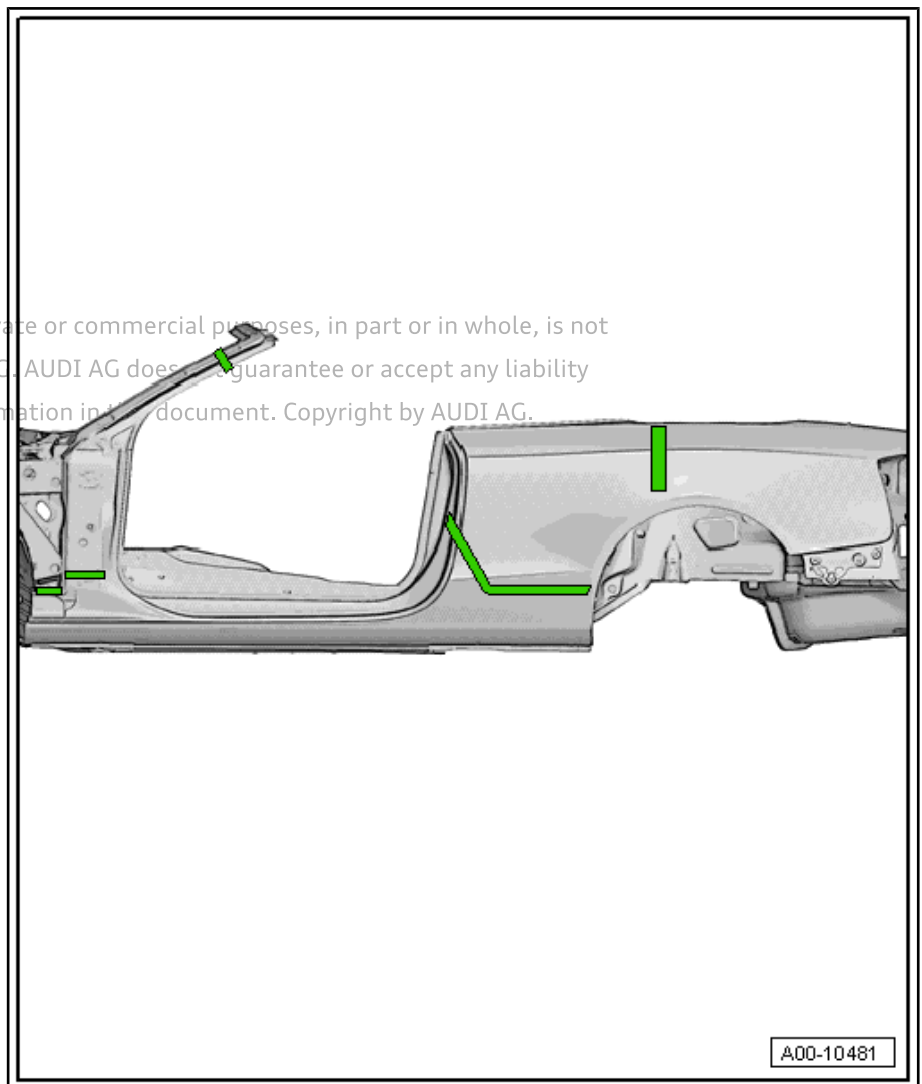
The replacement foam inserts expand only after reaching about 180 °C. For this reason, an additional filler foam is used when performing repairs.

Filler foam required for repairs: D 506 KD 1 A3.

As temperatures of approx. 180° C are not attained under workshop conditions, filler foam - D 506 KD1 A3- is used when performing repairs.



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A00-10481



Note

- ◆ *The foam hardens within 25 minutes.*
- ◆ *No SG weld seams within 15 mm of the filler foam.*
- ◆ *Before continuing with the following operations, ensure that the replacement panel is ready for installation, e.g. cut to size, matched up to the vehicle and corrosion protection applied.*
- Remove residue of foam material on vehicle.
- Restore the paintwork structure; apply two coats (wet on wet) of glass/paint primer D 009 200 02 as required - flash-off time approx. 10 minutes.

Renewing moulded foam insert

- Fix moulded foam insert to vehicle.

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

- Secure the new part in position. To do so gently press in the new part in the area of the moulded foam insert and weld in.
- After painting the vehicle the repaired area must be cavity-sealed.



14 Laser welding

AUDI AG employs laser welding in the production of the Audi A5 Cabriolet.

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 welded joint both with and without additional material.

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



15 Body dimensions



NOTICE

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

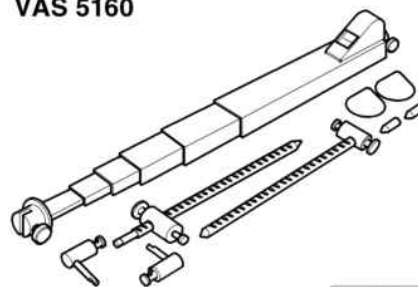
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Note

- ◆ 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.

VAS 5160



W00-10624

Body - front

a - 872 ± 2 mm

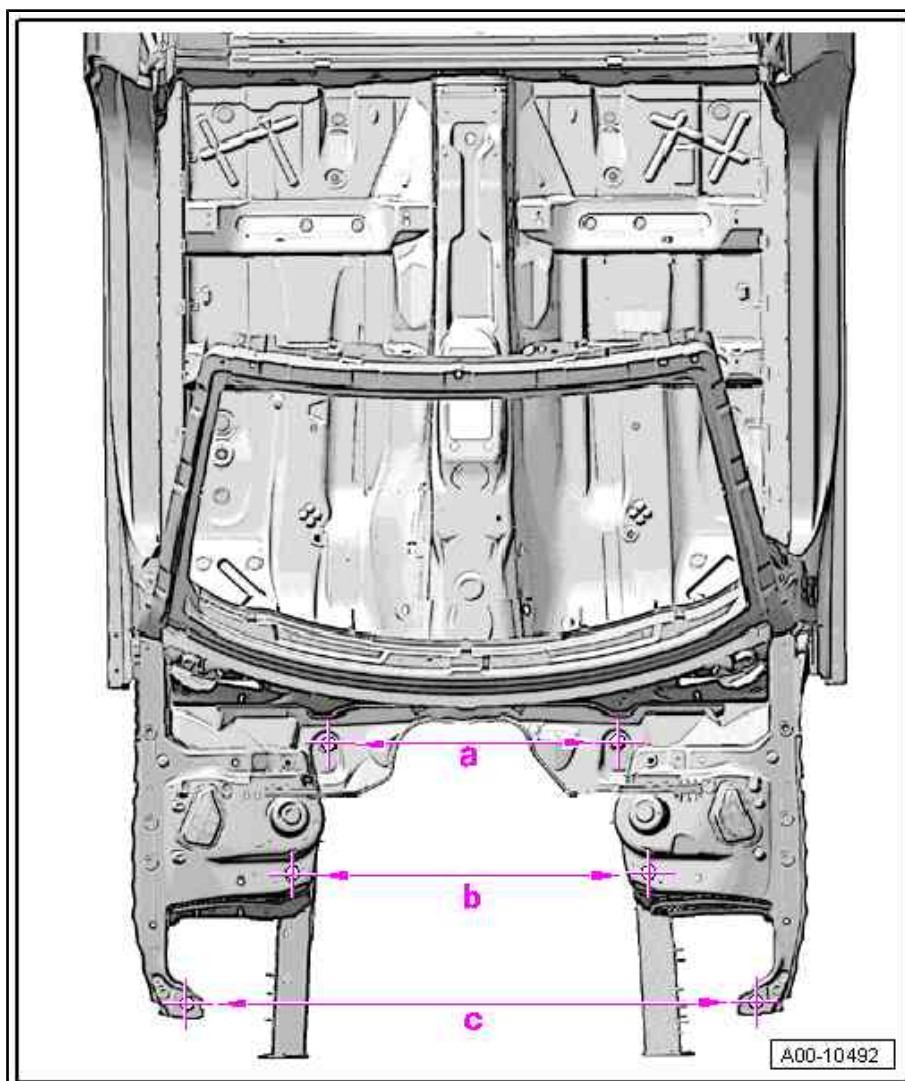
Distance between rear suspension strut mountings

b - 858 ± 2 mm

Distance between front suspension strut mountings

c - 1373 ± 2 mm

Distance between wing panel mountings (front)



A00-10492



a - 1535 ± 2 mm

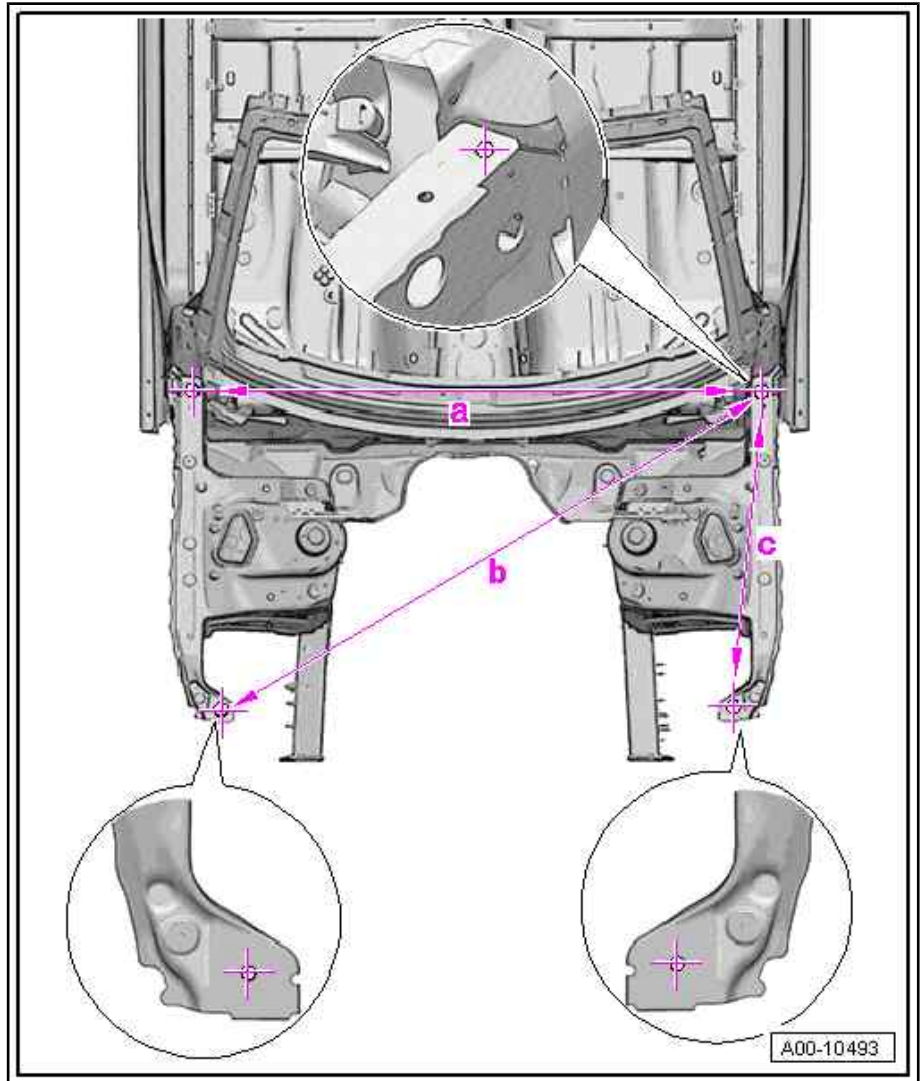
Distance between wing panel mountings (rear)

b - 1693 ± 2 mm

Diagonal distance between rear and front wing panel mountings

c - 872 ± 2 mm

Distance between rear and front wing panel mountings



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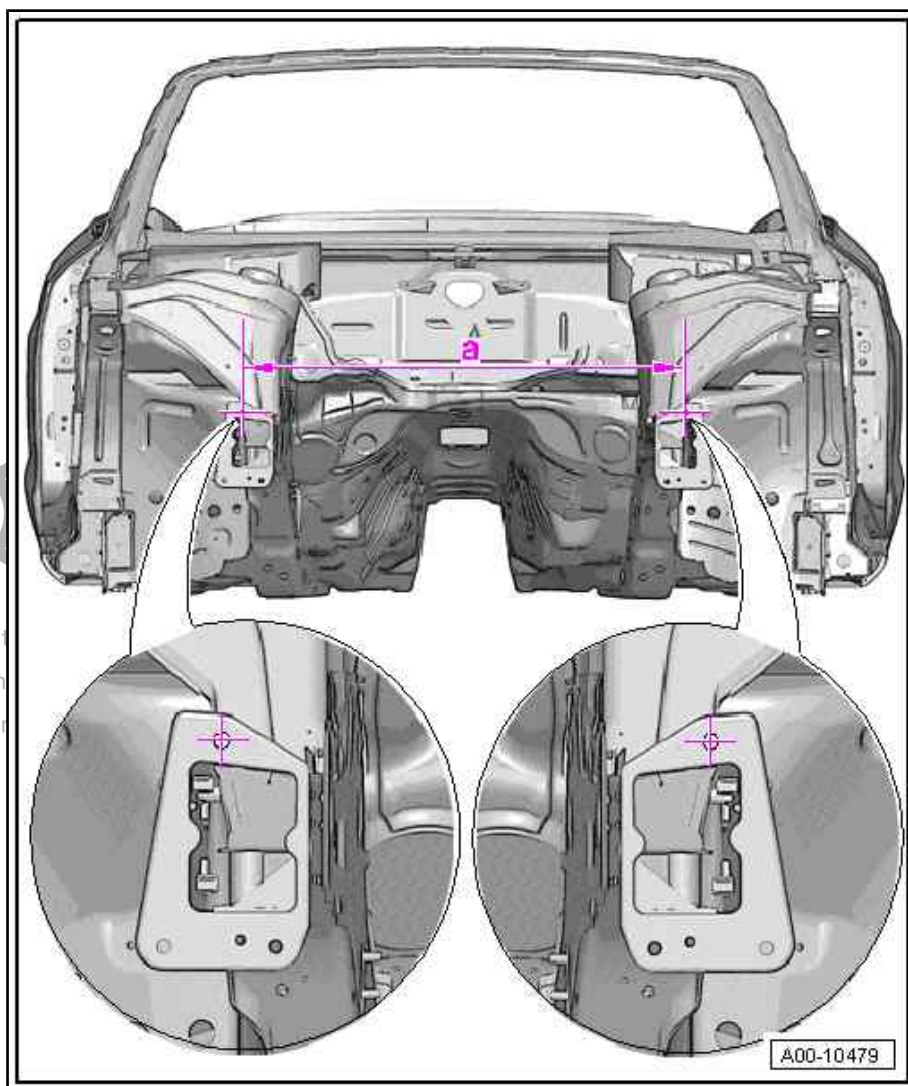


a - 930 ± 2 mm

Distance between impact
damper mountings



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Body - centre

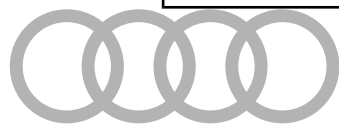
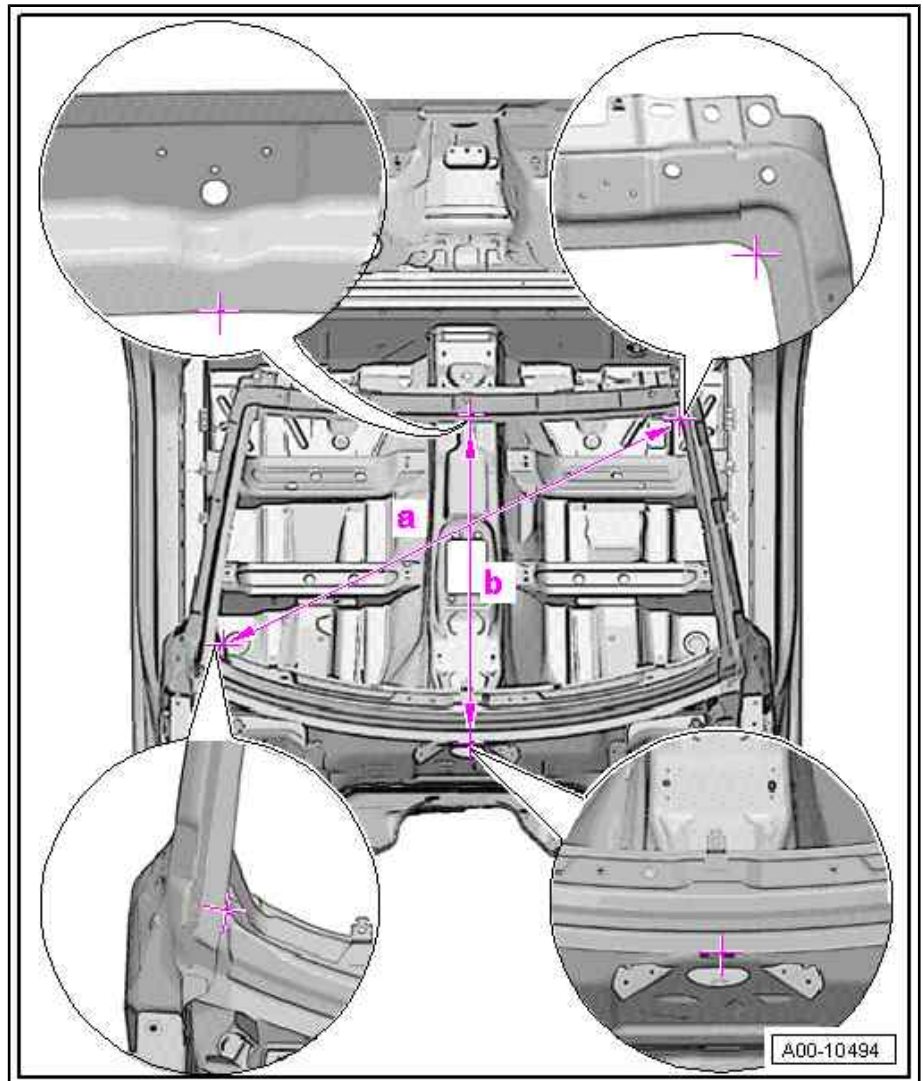


a - 1387 ± 2 mm

Diagonal distance between
upper and lower corners of
windscreen flange

b - 853 ± 2 mm

Distance between upper and
lower windscreen flange



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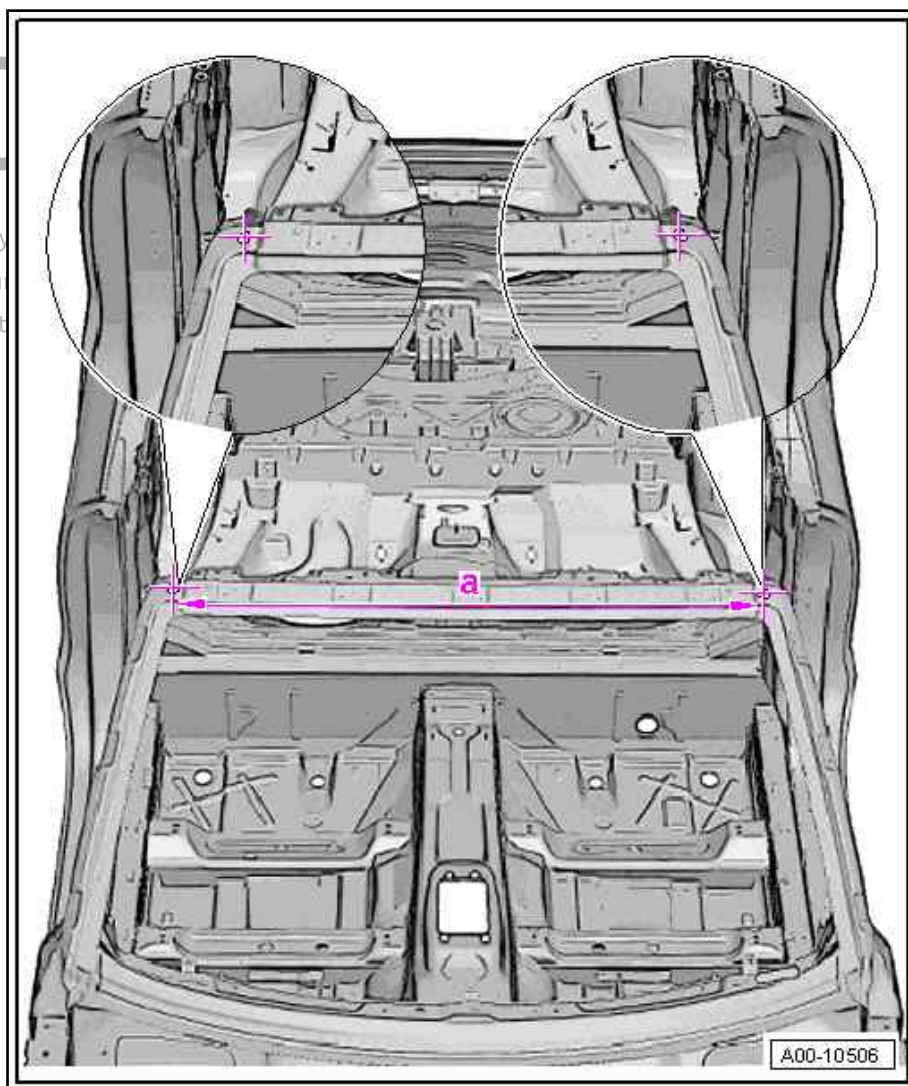


a - 1135 ± 2 mm

Distance between reference
holes in A-pillars



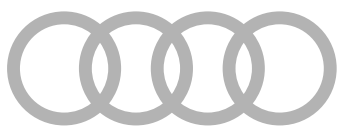
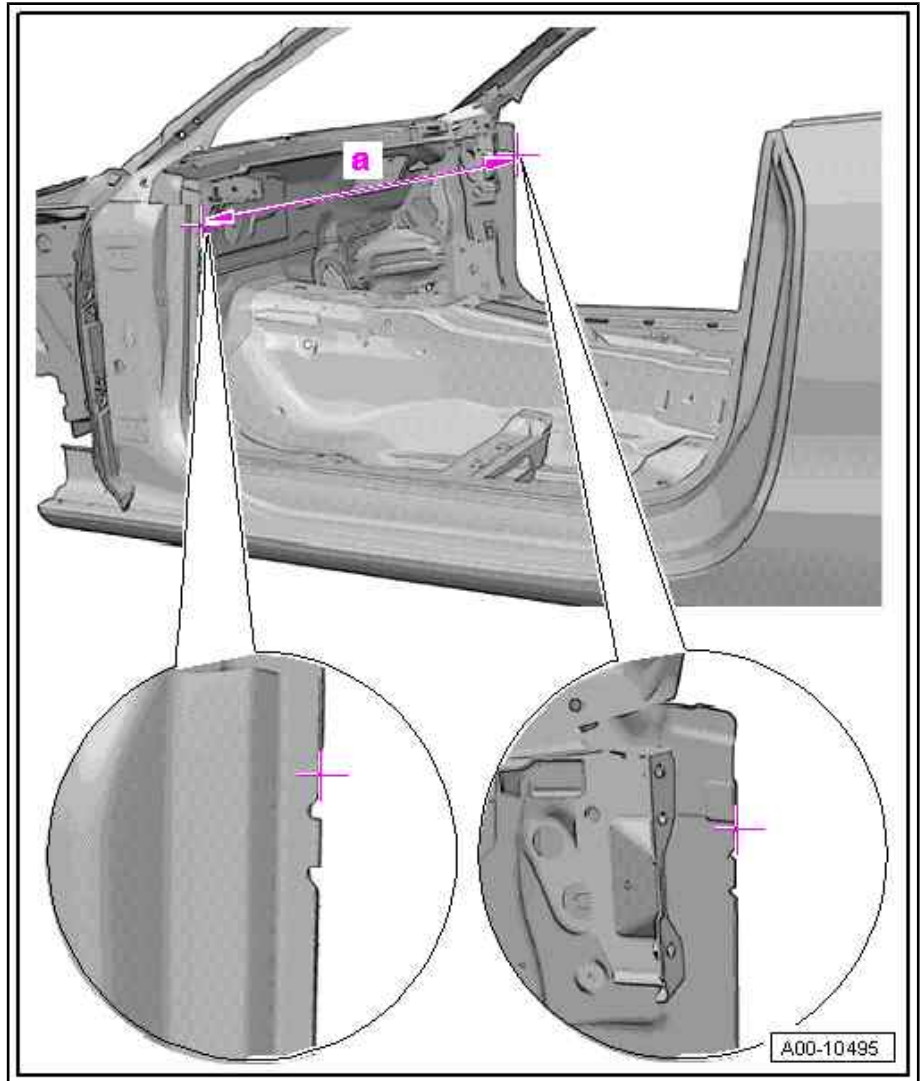
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a - 1446 ± 2 mm

Distance between A-pillars



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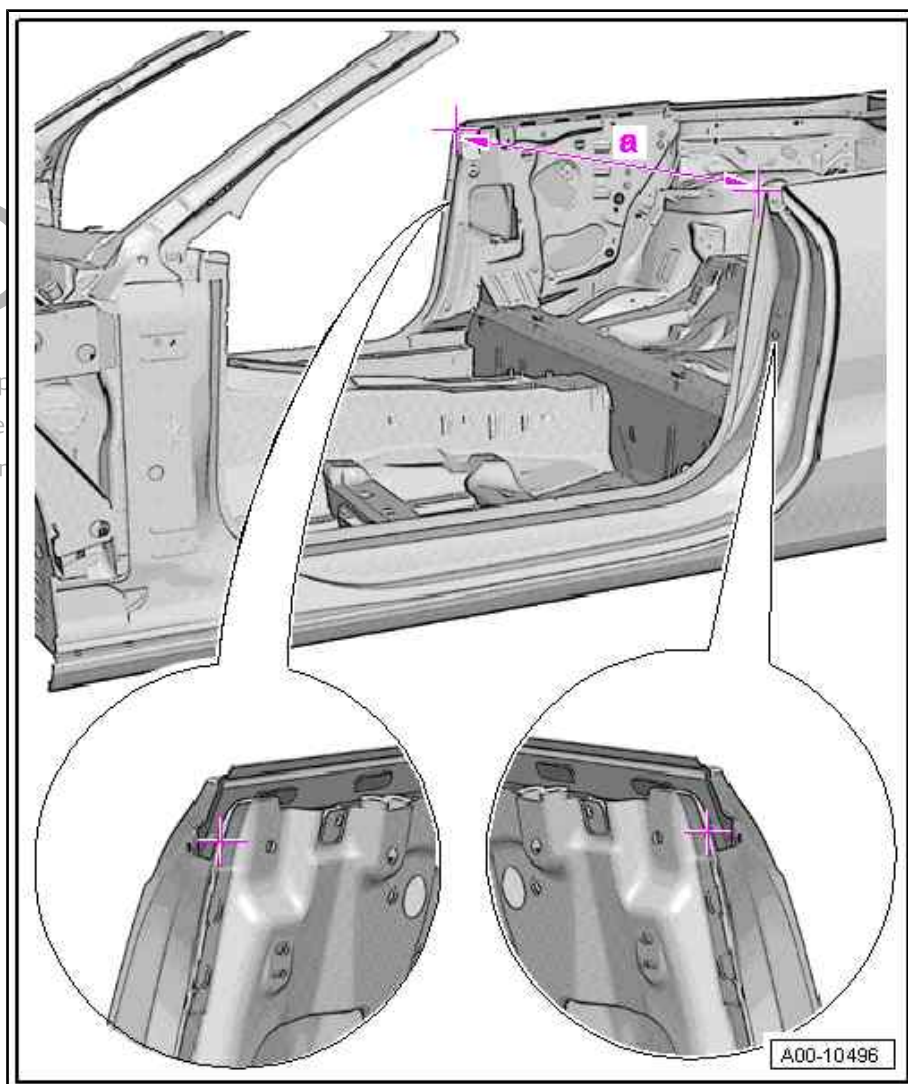


a - 1473 ± 2 mm

Distance between B-pillars



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a - 920 ± 2 mm

Distance between corner of
roof frame and side member
sealing flange

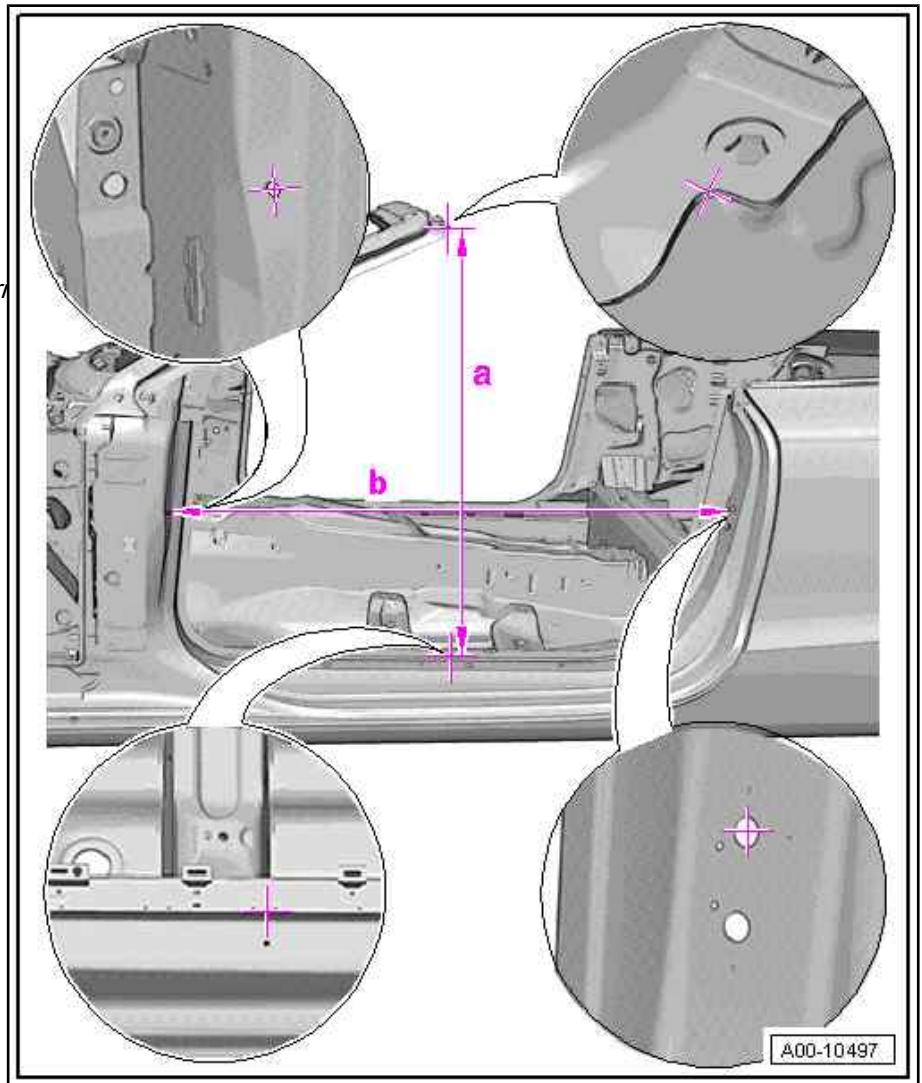
b - 1195 ± 2 mm



Note

*Measured with measure
threaded holes*

Distance between threaded
hole in A-pillar and top threaded
hole for striker plate in B-
pillar



Body - rear



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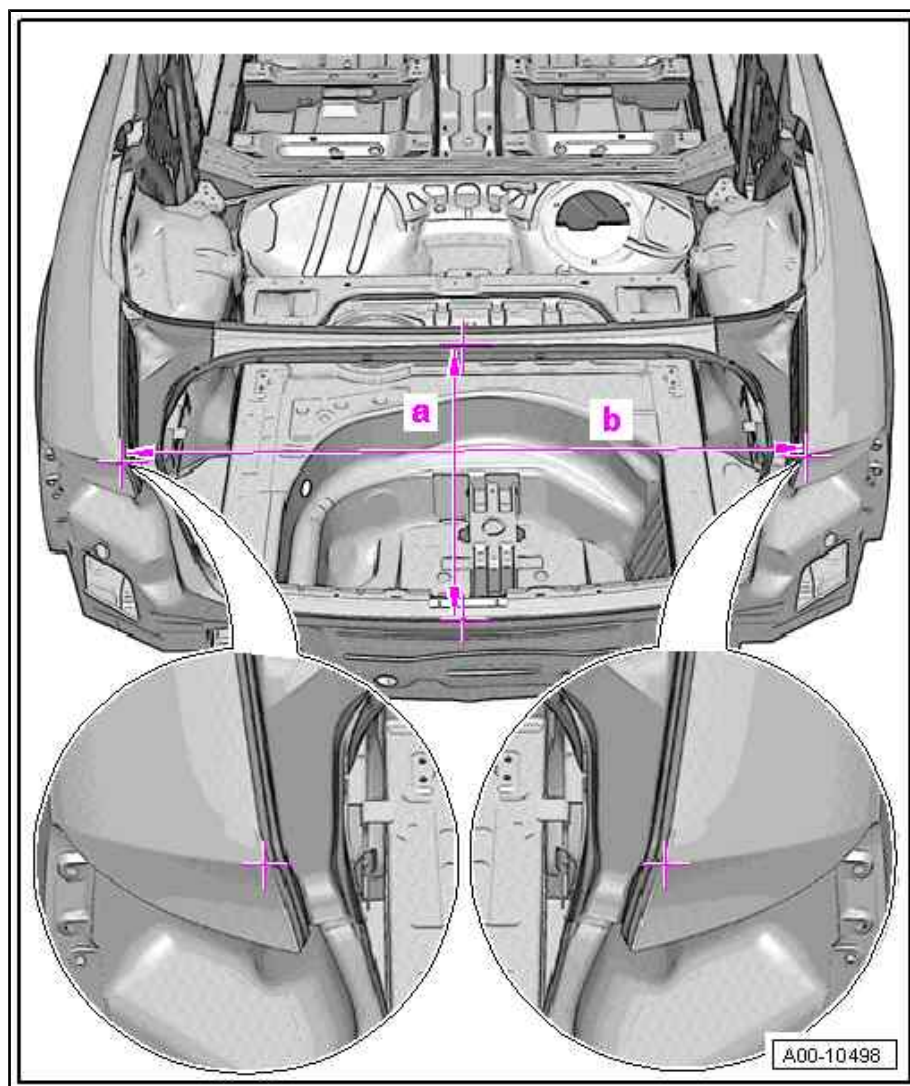


a - 505 ± 2 mm

Distance between top and bottom sealing flanges of rear lid

b - 1182 ± 2 mm

Distance between left and right side panels

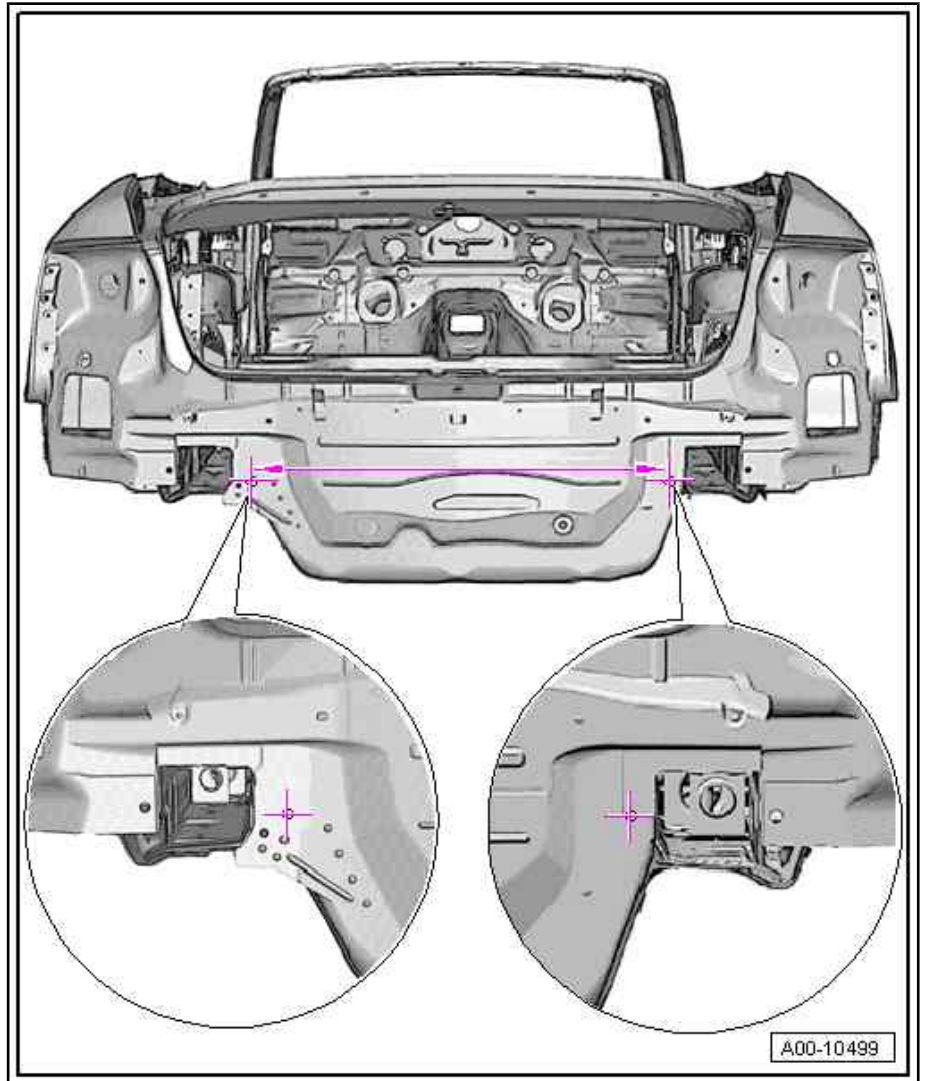


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a - 756 ± 2 mm

Distance between alignment
holes next to left and right lon-
gitudinal members



Floor group, front



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a - 892 ± 2 mm

Distance between front longitudinal members

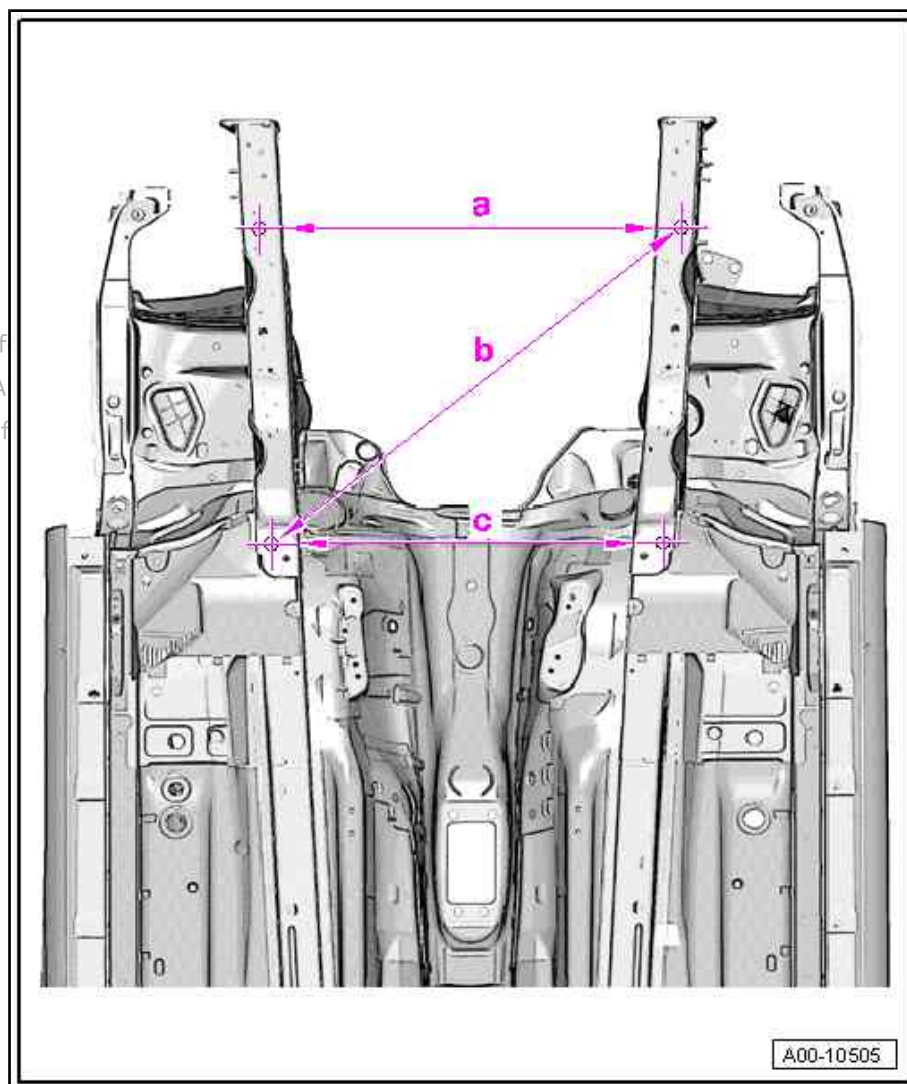
b - 1128 ± 2 mm

Diagonal distance between front longitudinal members

c - 826 ± 2 mm

Distance between rear longitudinal members

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Floor group, rear



a - 944 ± 2 mm

Distance between rear longitudinal members

b - 1052 ± 2 mm

Diagonal distance between rear subframe mounting and hole in rear longitudinal member

c - 926 ± 2 mm

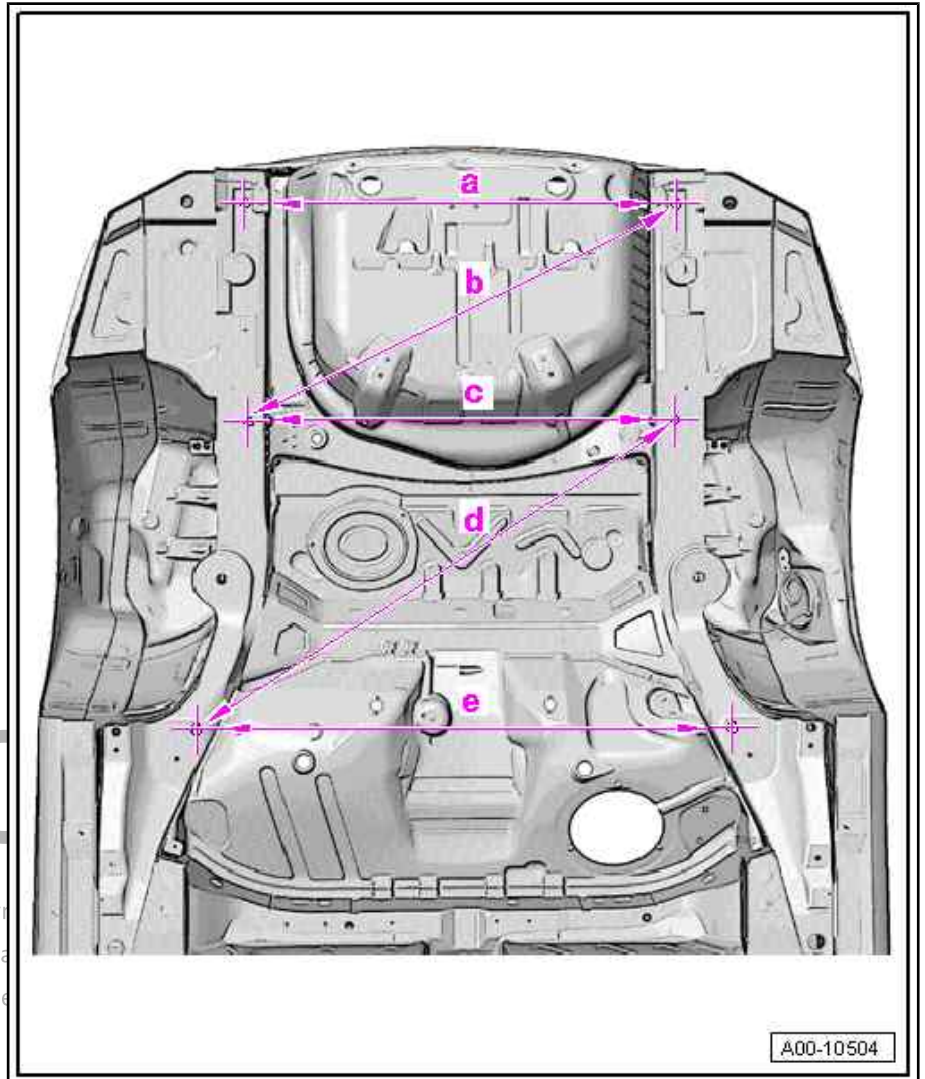
Distance between rear subframe mountings

d - 1298 ± 2 mm

Diagonal distance between front and rear subframe mountings

e - 1207 ± 2 mm

Distance between front subframe mountings



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16 Bonded joints



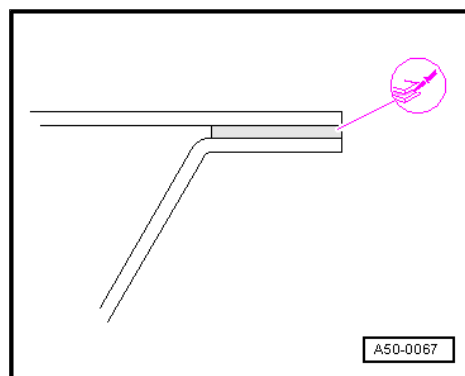
CAUTION

Cutting, grinding and welding operations in the presence of adhesive will cause certain gases to be given off which can be damaging to health and to the environment. You must therefore always use an extraction system when performing this work.

Bonded joints and spot-welded/bonded joints are employed on the body of the A5 Cabriolet to increase rigidity and strength.

16.1 Bonded joints

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



16.2 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 area is not accessible for pop rivets, reworking must be performed using SG seams. In this case the complete area must be repaired as the heat generated by welding damages the adhesive joint irreparably. The SG seams should be welded working from the thin to the thick panel.

16.3 Repair methods for replacing body parts



Note

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

When performing repair work all spot-welded/bonded joints can be replaced by welded joints.

For repair purposes, certain bonded joints can also be replaced by welded joints if no suitable body adhesive is available.



It is not sufficient to just re-establish the same spot welds and weld seams originally used in production when performing repairs; these alone are not adequate for a proper joint.

Ensure good root penetration at all welded joints.

Seal off repaired joint flanges and apply cavity sealing.

The individual repair methods are described on the following pages.



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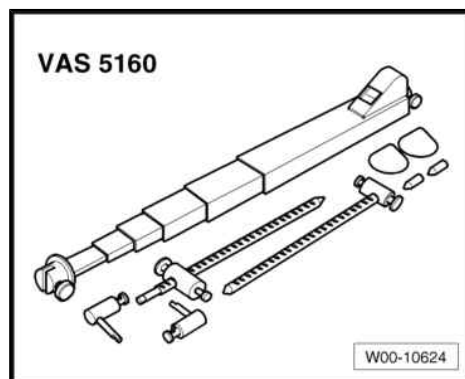
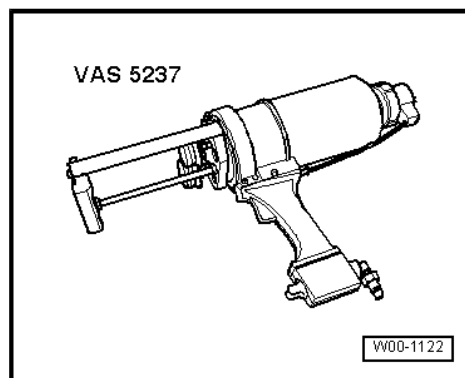


17 Tools

Special tools and workshop equipment required

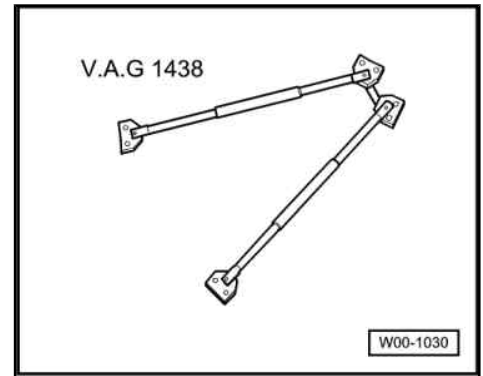
- ◆ Resistance spot welder - VAS 6239 A-
- ◆ Resistance spot welder - VAS 6525-
- ◆ Resistance spot welder - VAS 6530-
- ◆ Resistance spot welder - VAS 6535-
- ◆ Resistance spot welder - VAS 6545-
- ◆ Shielded arc welding equipment - VAS 6044- or -VAS 6045-
- ◆ Shielded arc welding equipment - VAS 6388-
- ◆ 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-
- ◆ Flat 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- .

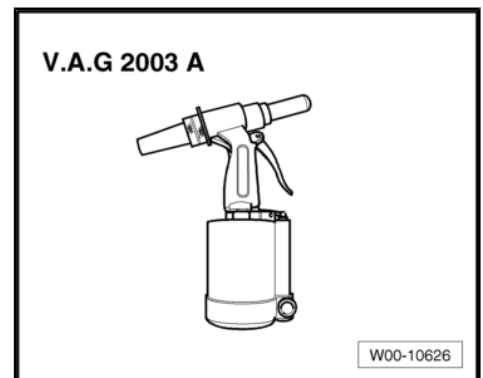




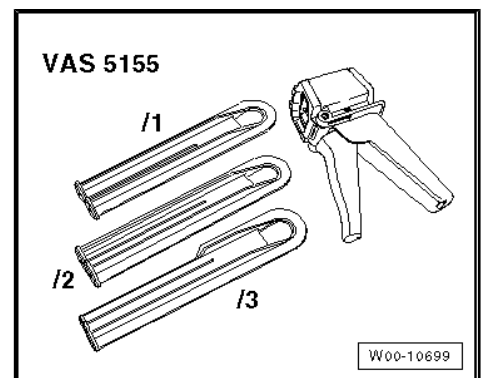
◆ Mechanical door tensioner - V.A.G 1438-



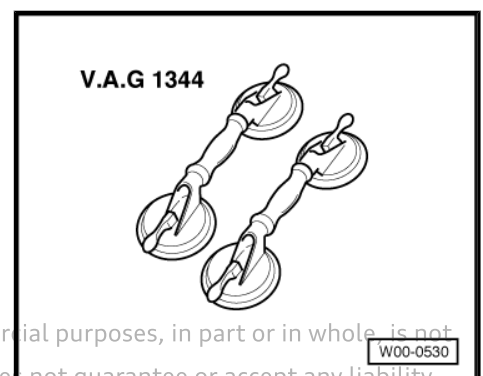
◆ Pneumatic pop riveter - V.A.G 2003 A-



◆ Hand cartridge gun - VAS 5155-



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



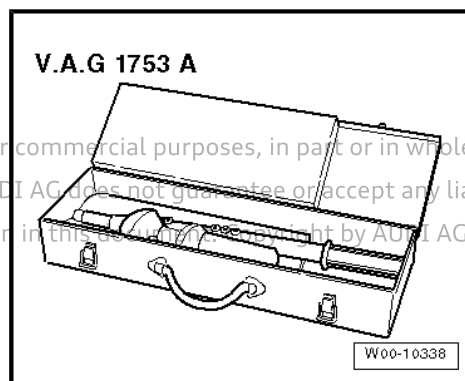
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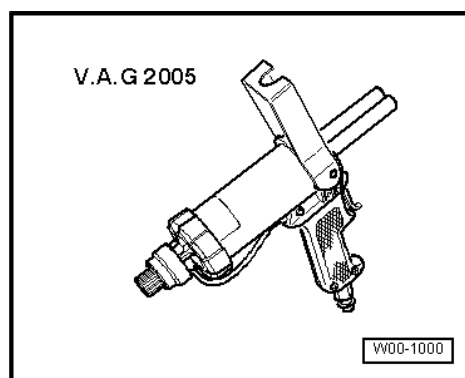
◆ Pop rivet pliers - V.A.G. 1753 A-



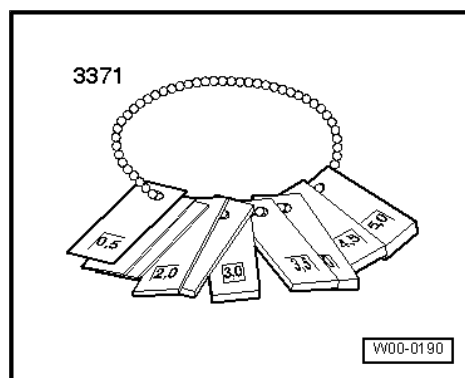
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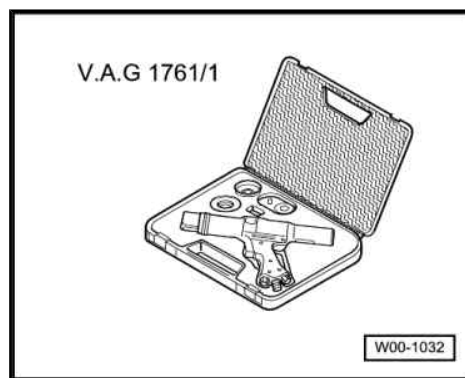
◆ Pneumatic glue gun - V.A.G 2005 B-



◆ Setting gauge - 3371-

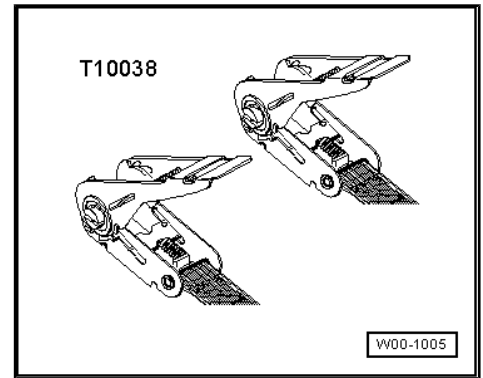


◆ Compressed-air gun - V.A.G 1761/1-

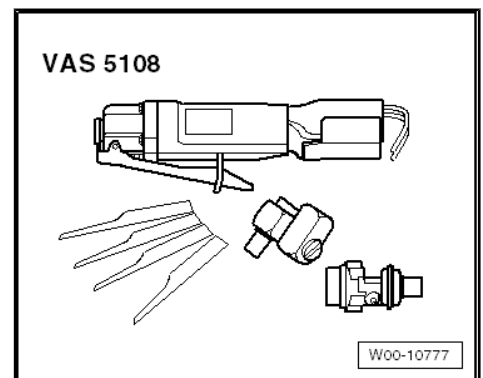




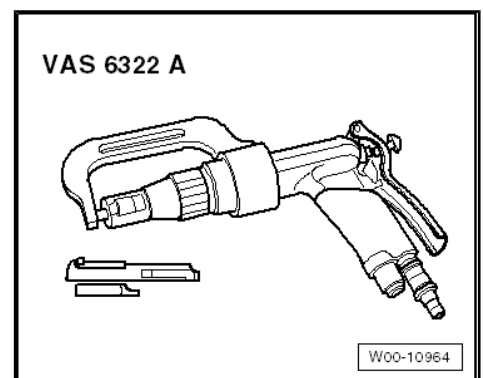
- ◆ Tensioning strap - T 10038-



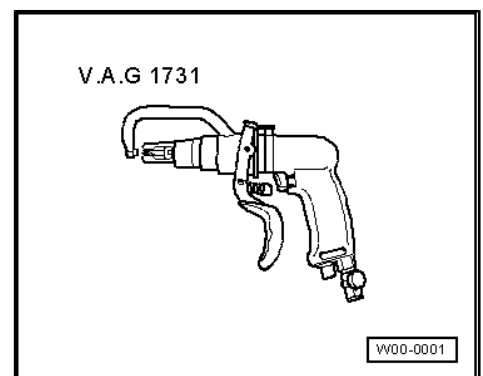
- ◆ Body saw - VAS 5108 - or - VAS 6598 - or -VAS 6780-



- ◆ Spot weld breaker - VAS 6322 A- or



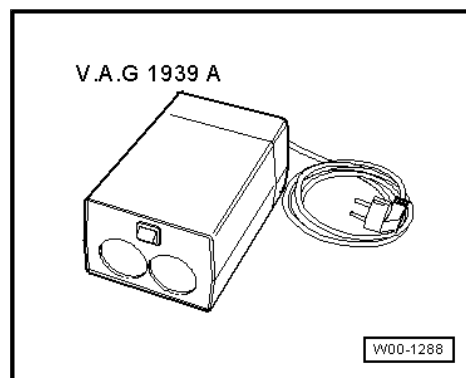
- ◆ Spot weld breaker - V.A.G 1731 -



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◆ Cartridge heater - V.A.G 1939 A-



Rechargeable riveter - VAS 843 001-



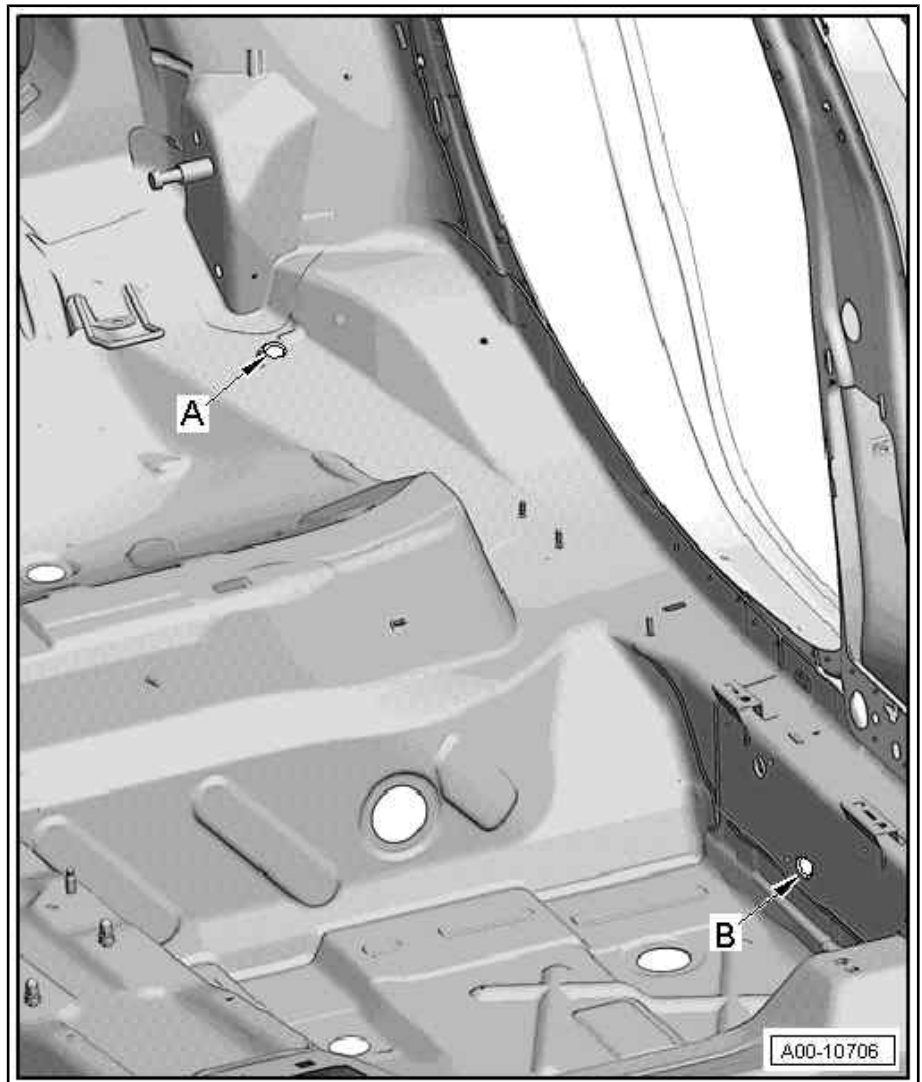
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18 Repairing thread for seat belt anchorage

The procedure for repairing the thread is described in the installation instructions supplied with the repair set for belt anchorage - VAS 6733-.

- The rear seat belt anchorage -A- and the front seat belt anchorage -B- can be repaired with the repair set for belt anchorage - VAS 6733-.





19 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.*

Alignment bracket set supplement (bracket set, Audi A5 Cabriolet 2017 - VAS 801 055-)

Portal gauge, Audi - VAS 802 055-

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



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50 – Body - front

RO: 50 80 55 00

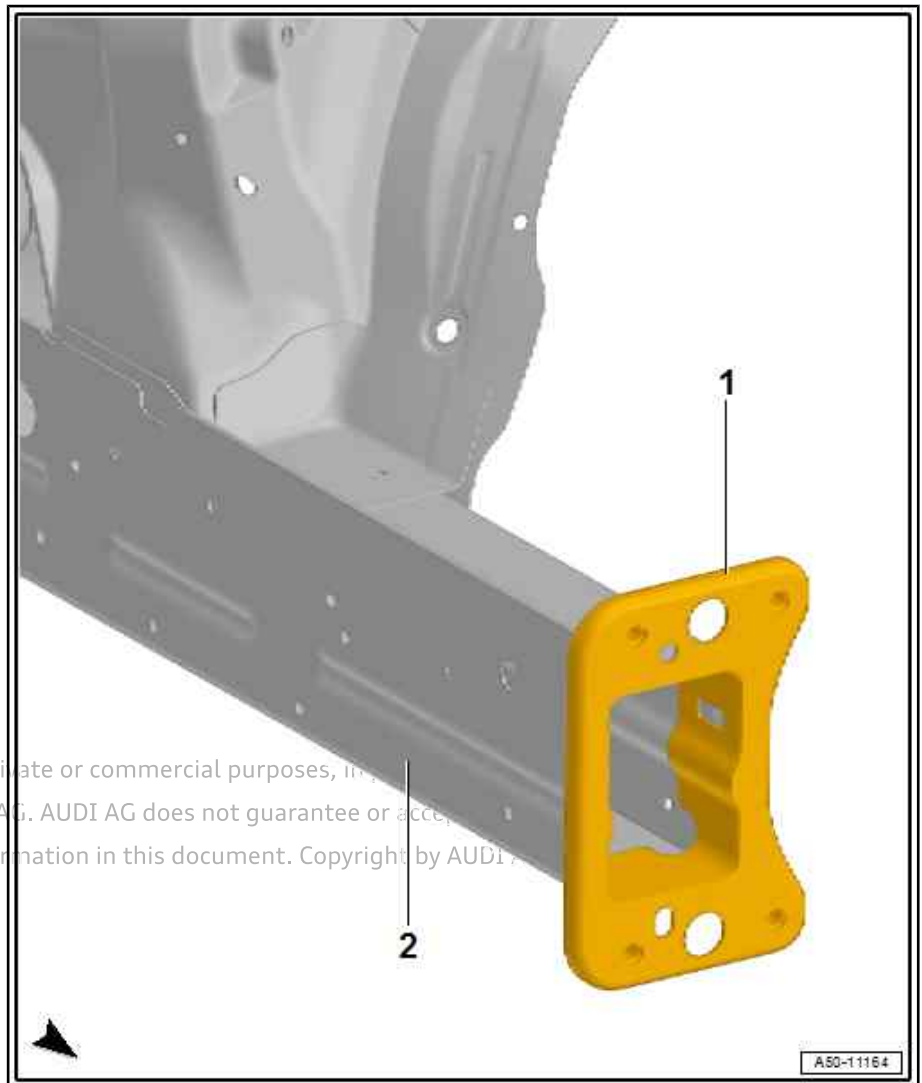
1 Impact damper mounting - Renewal

1 - Impact damper mounting

2 - Front longitudinal member



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1.1 Tools

Special tools and workshop equipment required

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

Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 38](#) .

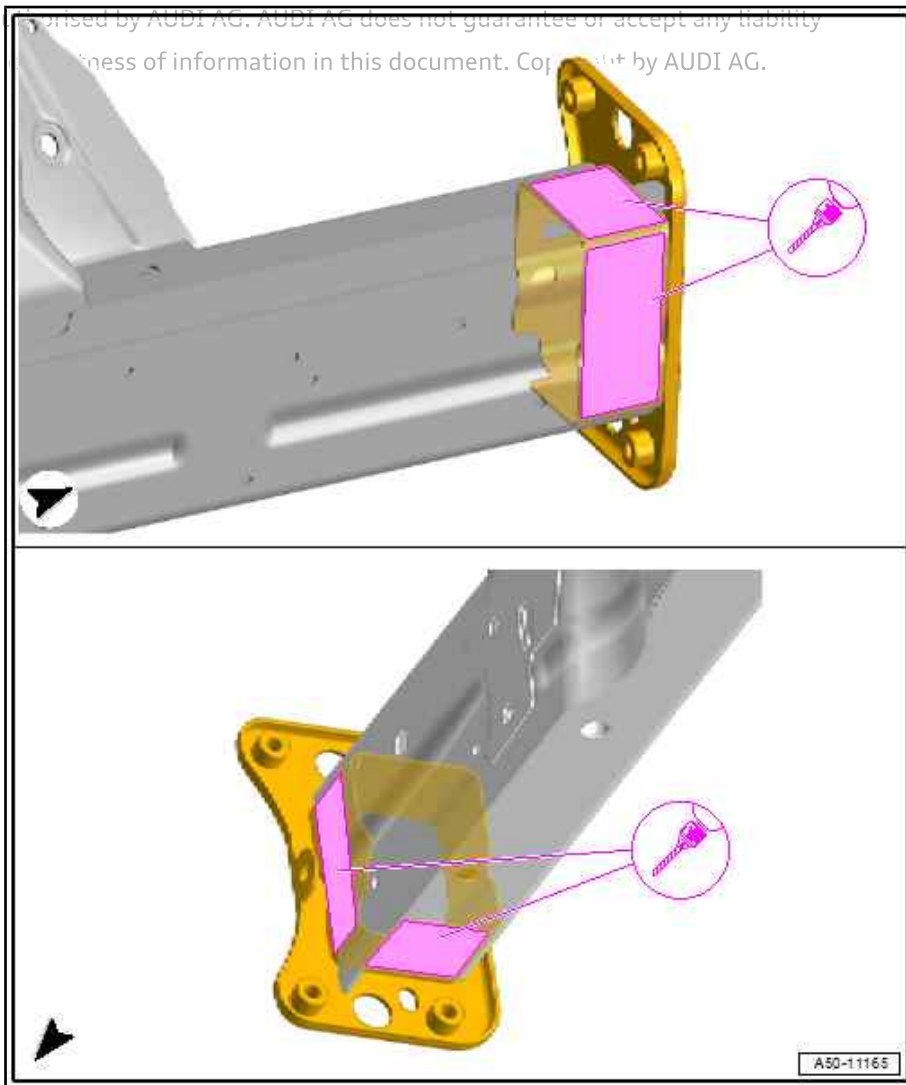


1.2 Procedure

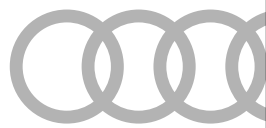
Cutting locations

- Separate original joint using spot weld breaker .

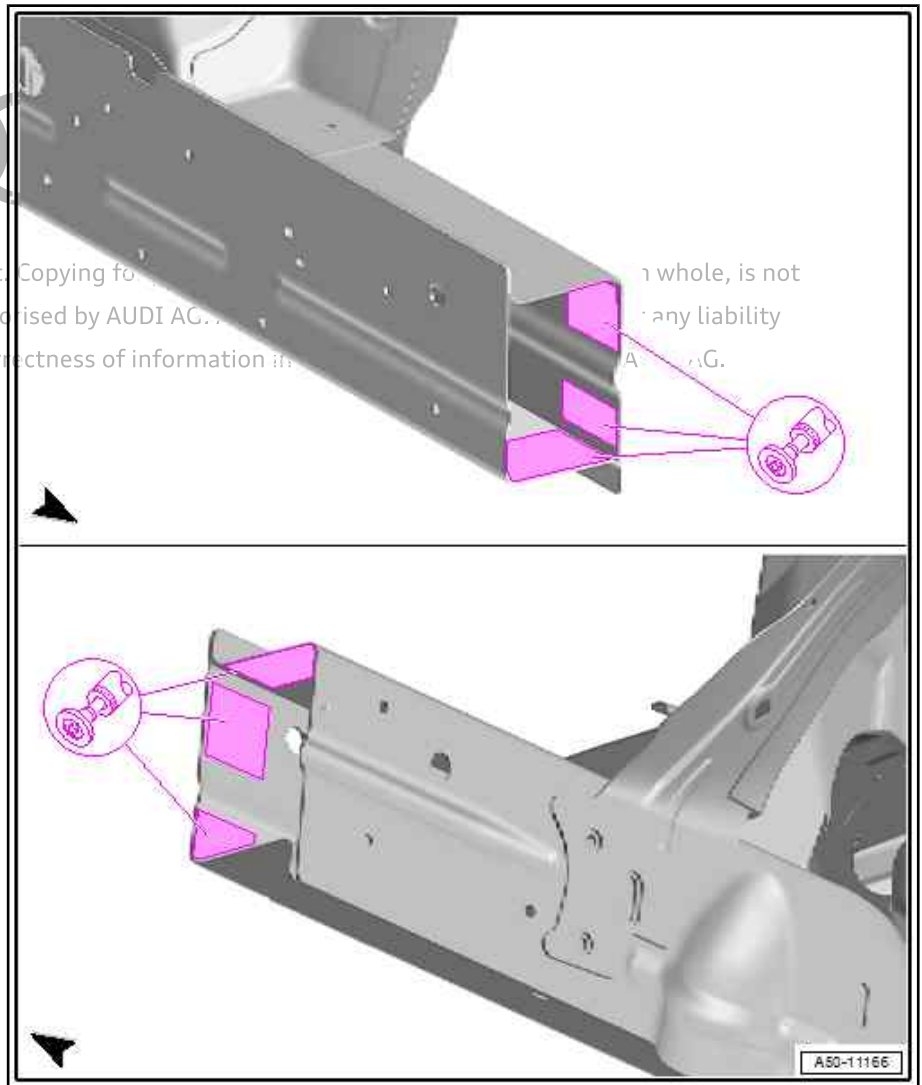
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- Remove remaining material using compact angle grinder .
- Grind welding areas down to bare metal.



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Replacement part

- ◆ Impact damper mounting

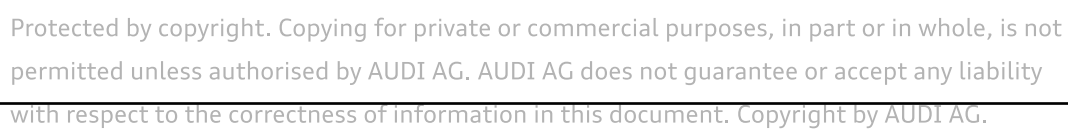


NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" 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 new part using shielded arc welding equipment : SG plug weld seam.





RO: 50 72 55 02

2 Upper wheel housing longitudinal member - Partial renewal

1 - Upper wheel housing longitudinal member

□ Upper part

2 - Suspension turret

3 - Moulded foam insert

4 - A-pillar joint

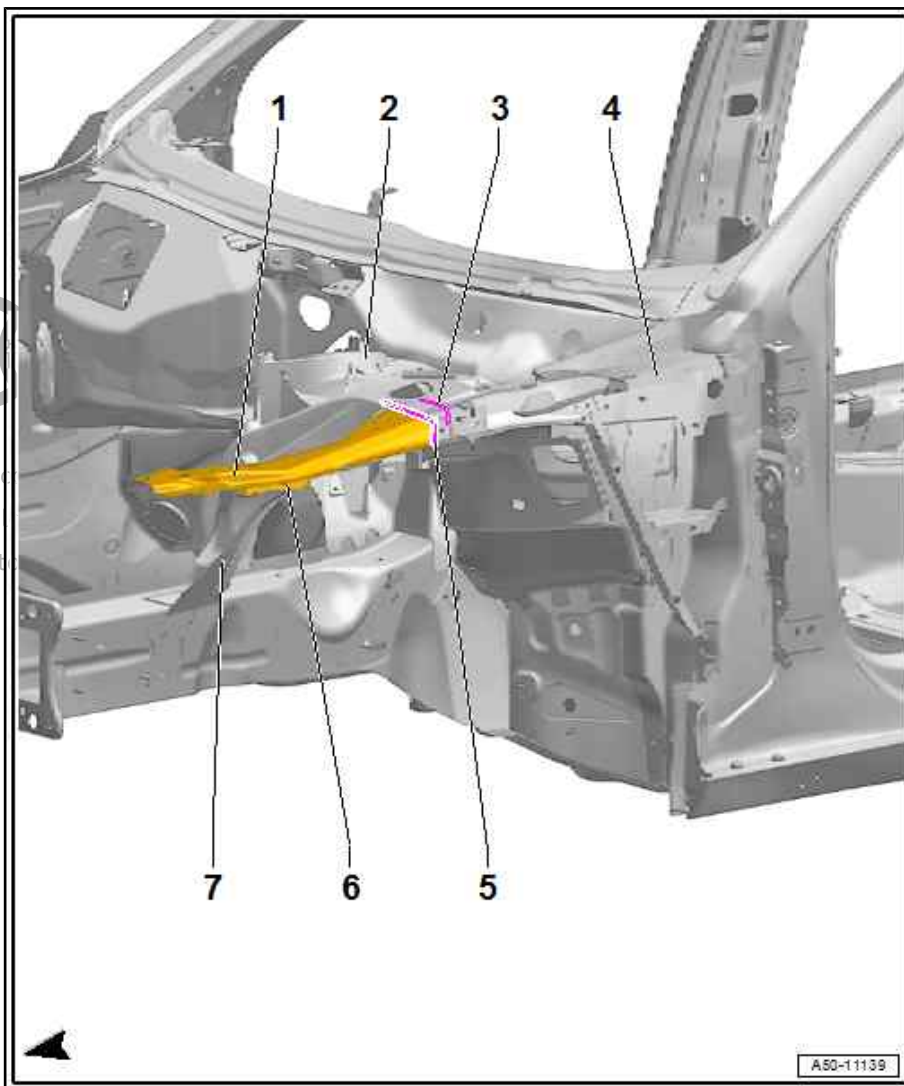
5 - Separating cut

6 - Upper wheel housing longitudinal member

□ Lower part

7 - Front wheel housing

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2.1 Tools

Special tools and workshop equipment required

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

Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 38](#) .

2.2 Procedure

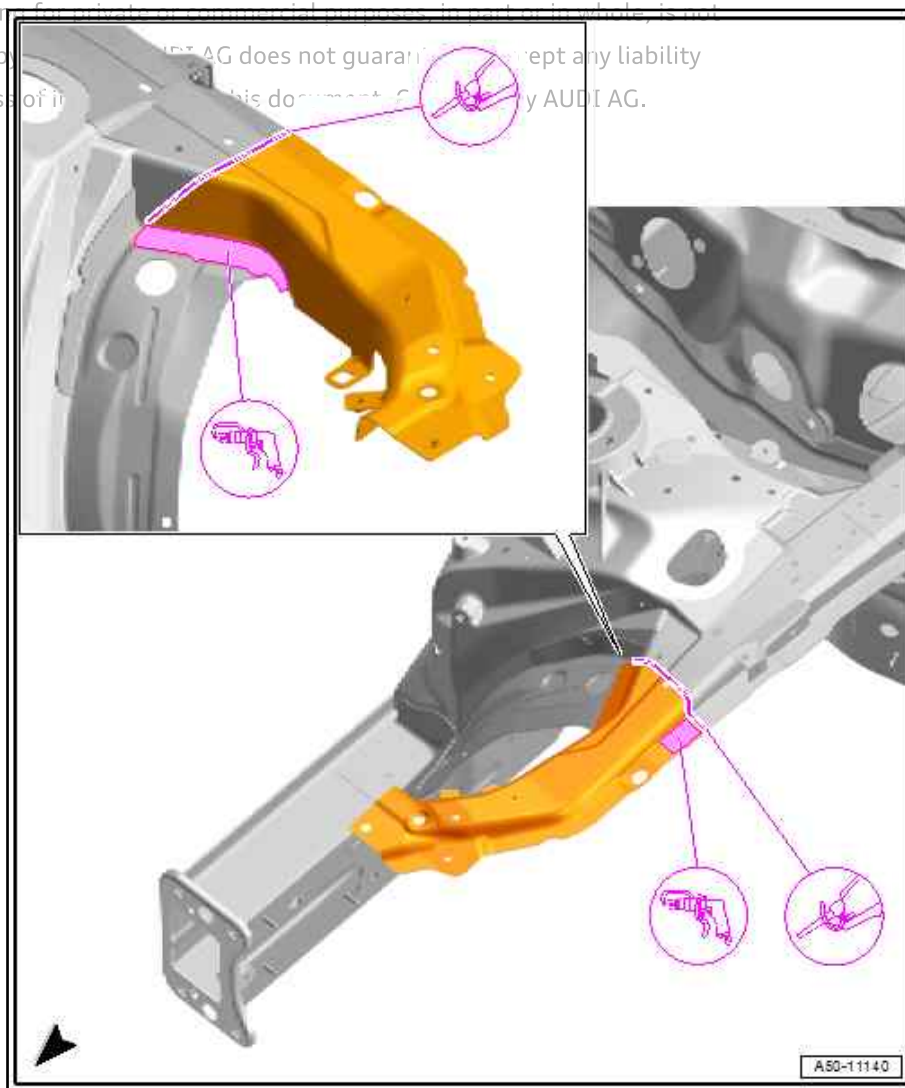
⚠ CAUTION

Straightening and re-alignment work must not be carried out on the front section of the Audi A5 body, because this could cause cracking in the aluminium castings that may not be externally visible.

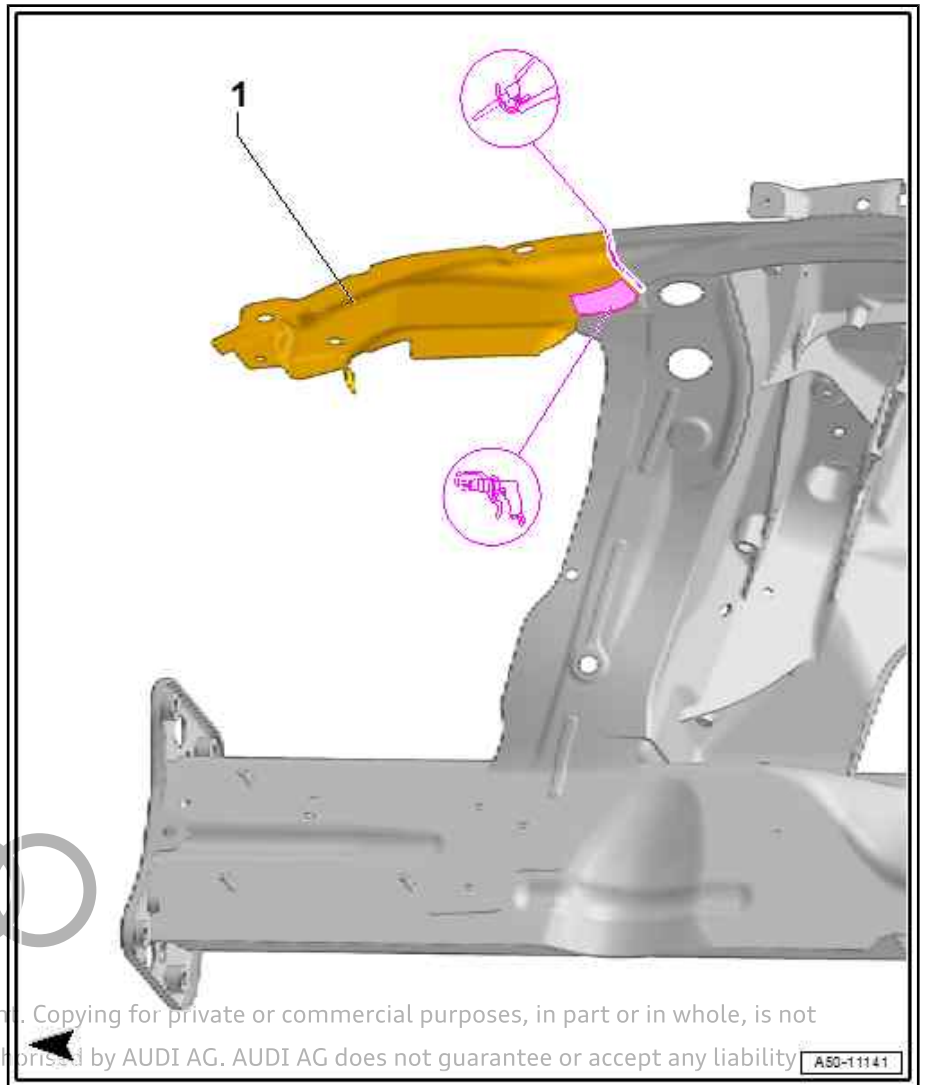
Cutting locations

- The separating cuts at the top and bottom should be made as shown using the body saw so that they are offset; this will provide the necessary strength when welding in.
- Separate original joint using spot weld breaker .

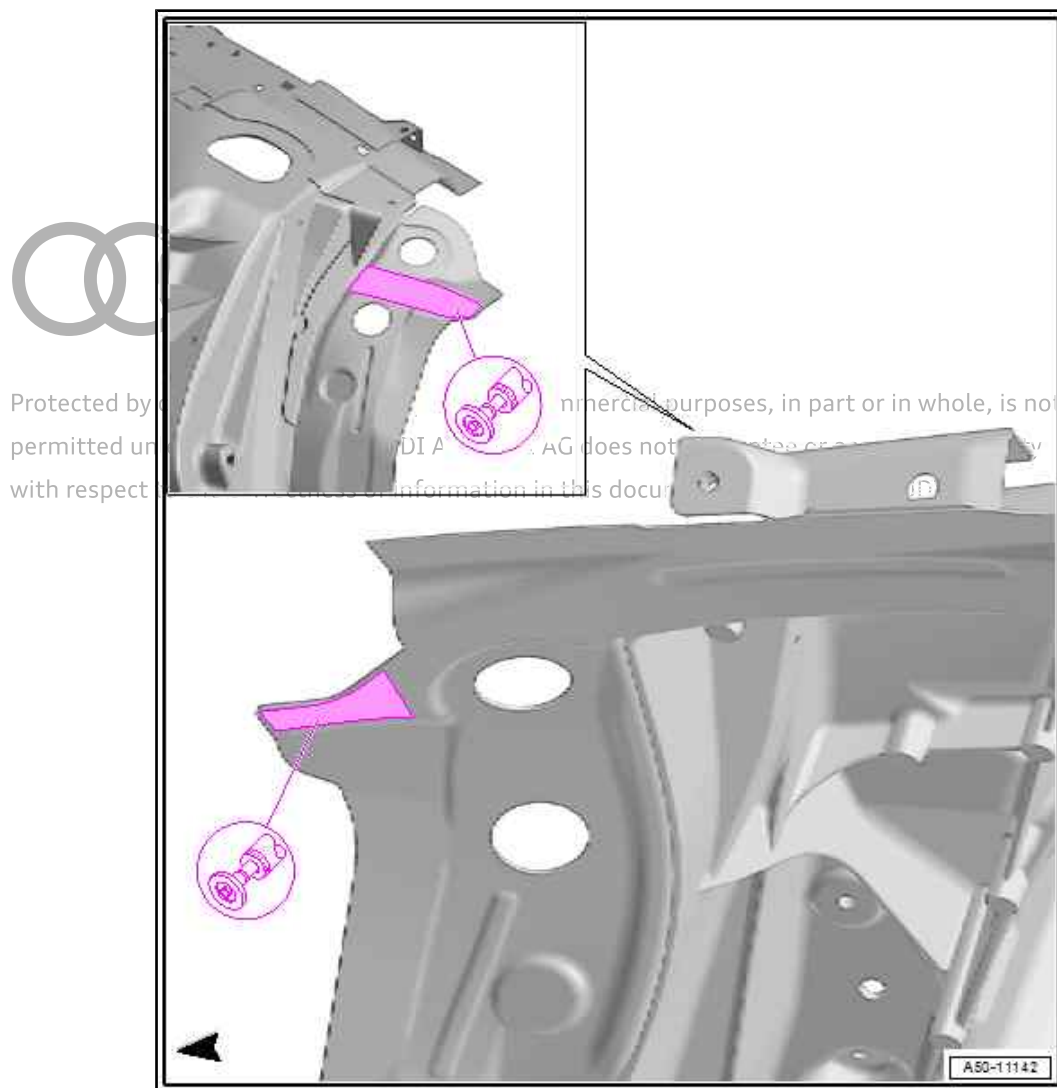
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- The separating cuts at the top and bottom should be made as shown using the body saw so that they are offset; this will provide the necessary strength when welding in.
- Separate original joint using spot weld breaker .
- Detach upper part and lower part of longitudinal member for wheel housing -1- together.



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



Replacement part

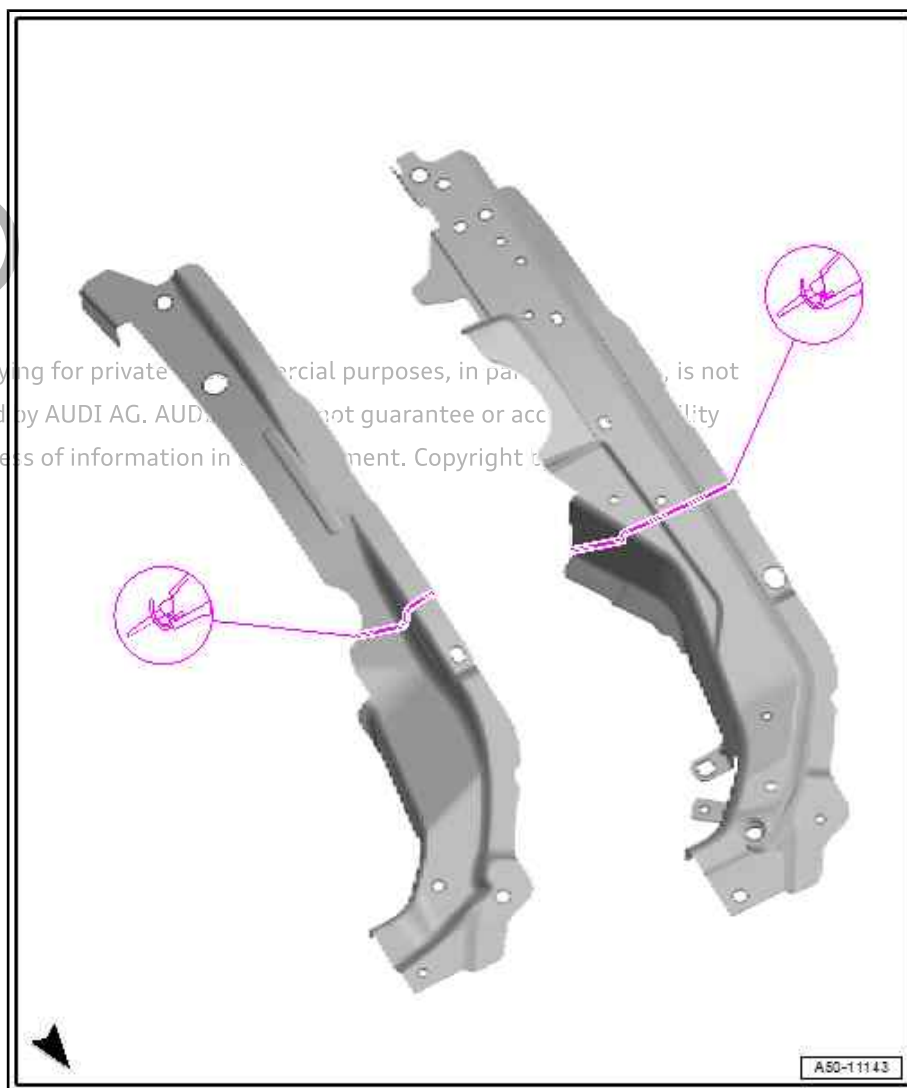
- ◆ Upper longitudinal member for wheel housing (upper part)
- ◆ Upper longitudinal member for wheel housing (lower part)

Preparing new part

- Transfer separating cuts to new parts.
- Cut new parts to size using body saw .
- Grind welding areas down to bare metal.



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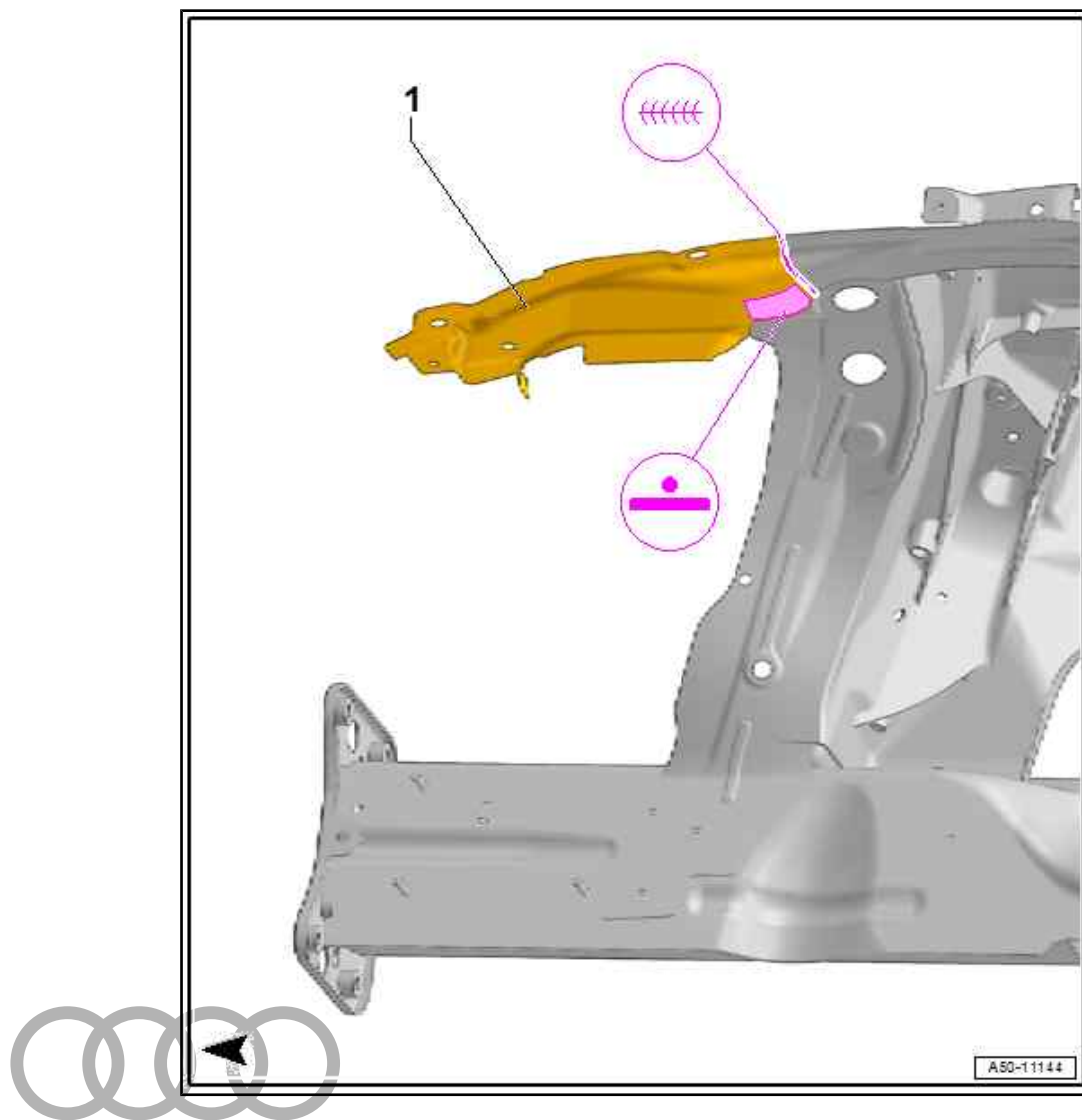


! NOTICE

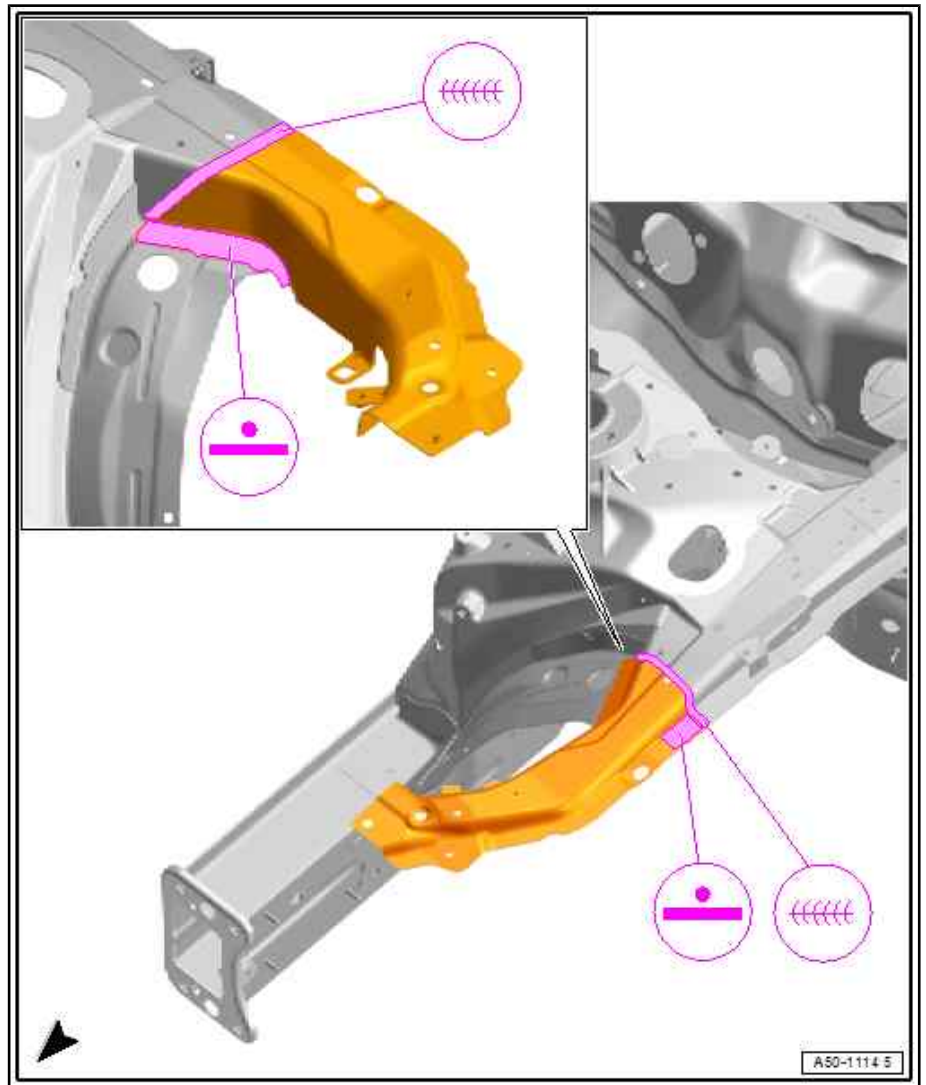
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" must be used to ensure correct results when spot welding.

Welding in

- Match up longitudinal member for wheel housing (lower part) -1- with vehicle positioned on alignment bracket set and fix in place.
- Butt weld at separating cut using shielded arc welding equipment : SG continuous seam.
- Weld in new part using resistance spot welder : RP spot weld seam.



- Match up longitudinal member for wheel housing (upper part) and fix in place.
- Butt weld at separating cut using shielded arc welding equipment : SG continuous seam.
- Weld in new part using resistance spot welder : RP spot weld seam.



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RO: 50 72 55 00

3 Upper wheel housing longitudinal member - Renewal

1 - Upper wheel housing longitudinal member

□ Upper part

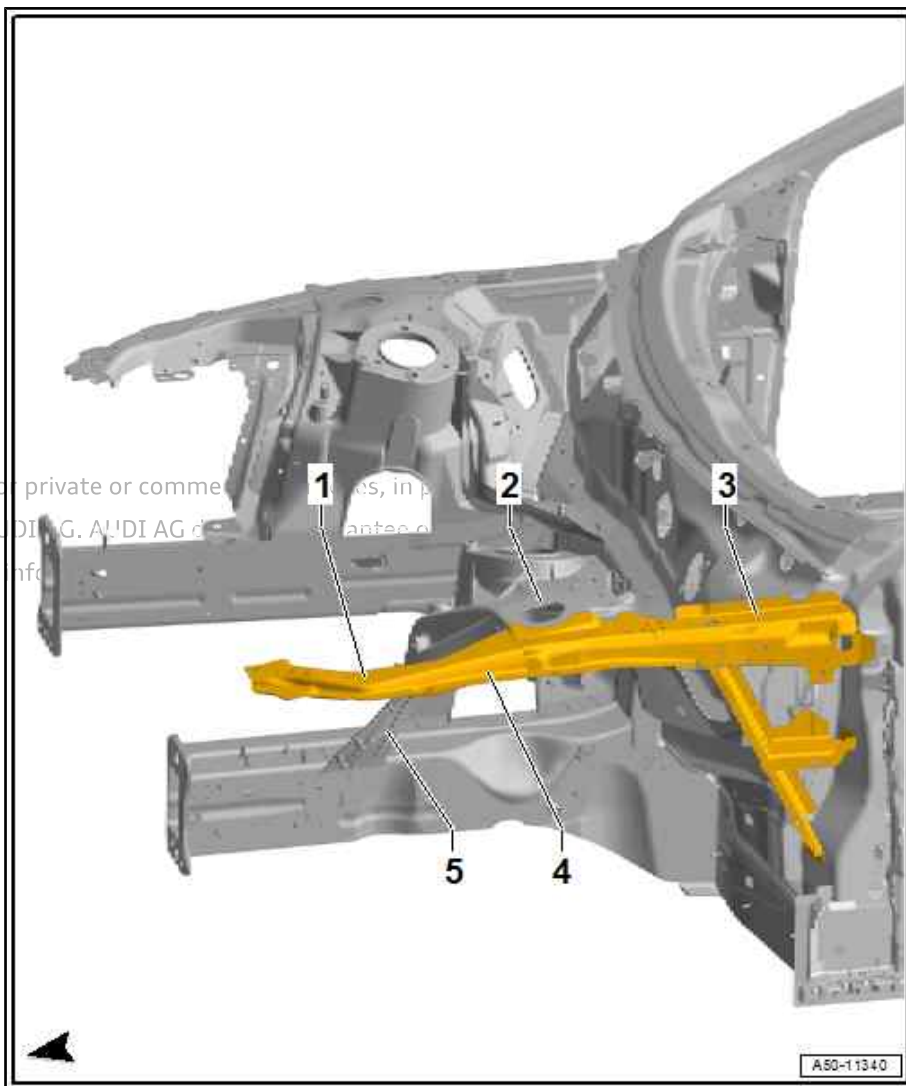
2 - Suspension turret

3 - A-pillar joint

4 - Upper wheel housing longitudinal member

□ Lower part

5 - Front wheel housing



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3.1 Tools

Special tools and workshop equipment required

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

Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 38](#) .



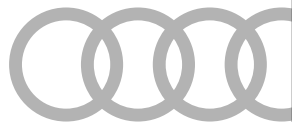
3.2 Procedure

CAUTION

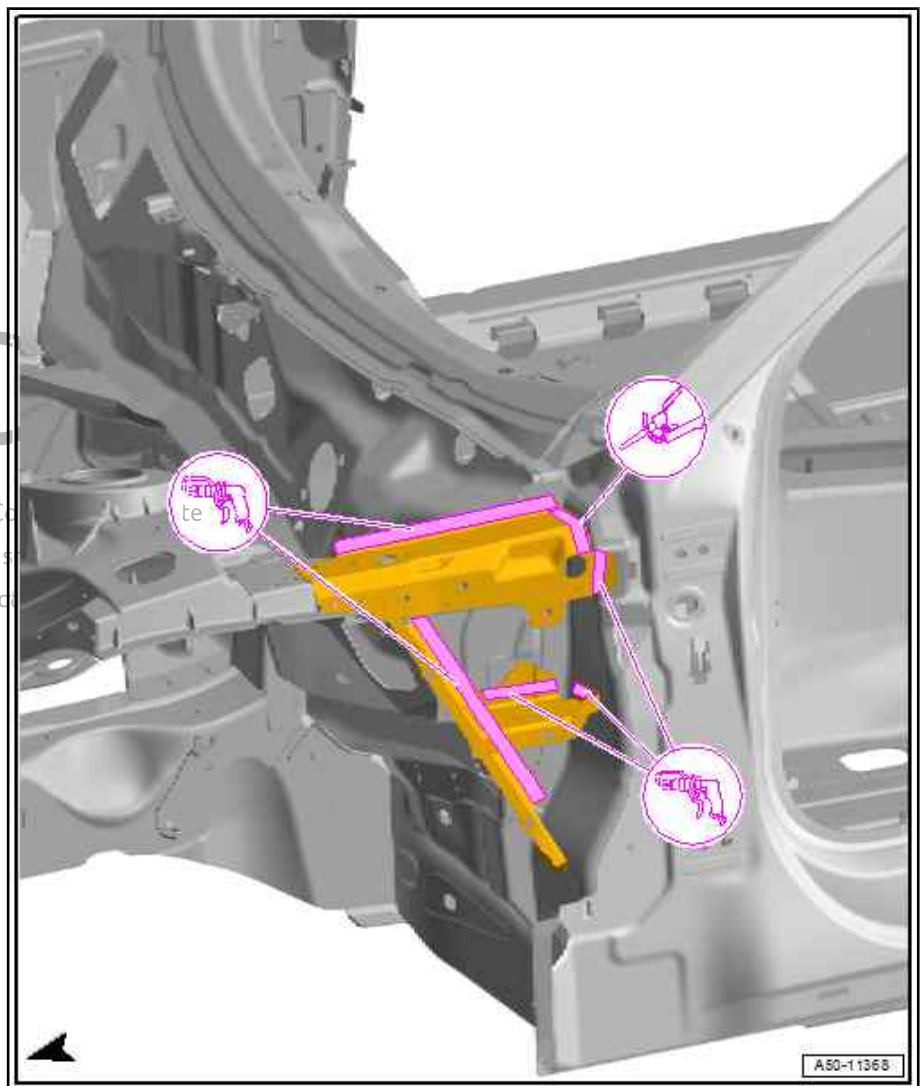
Straightening and re-alignment work must not be carried out on the front section of the Audi A5 body, because this could cause cracking in the aluminium castings that may not be externally visible.

Cutting locations

- Separate original joint using body saw .
- Separate original joint using spot weld breaker .



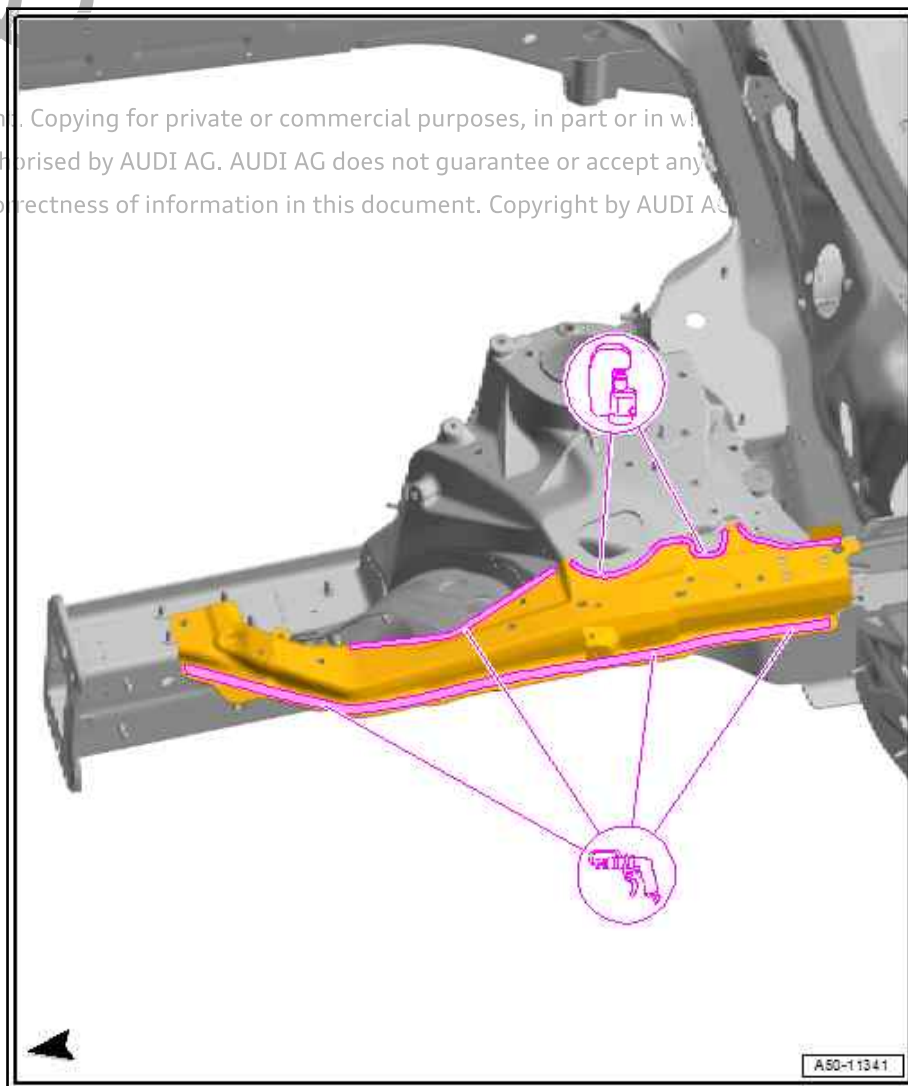
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- Separate original joint using rechargeable riveter - VAS 843 001- or compact booster - VAS 6790/20- . Use attachment to do so.
- Separate original joint using spot weld breaker .



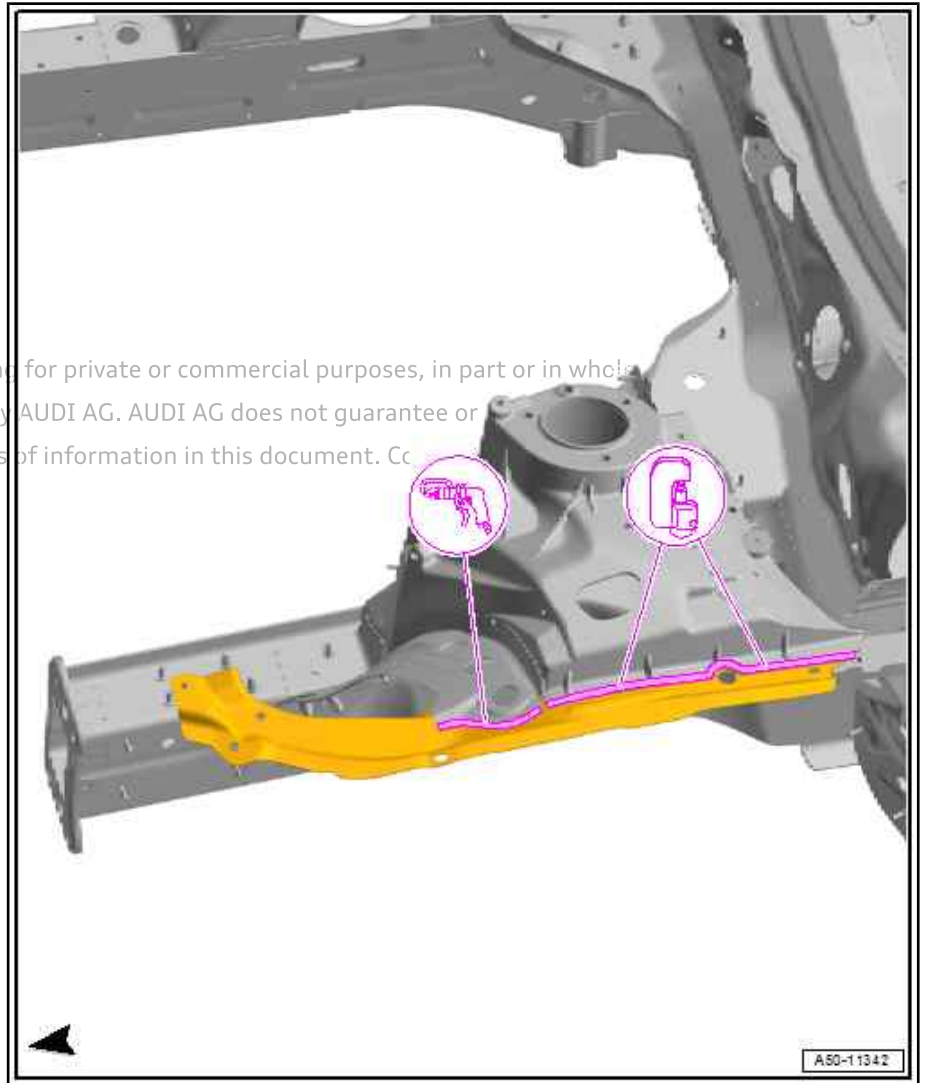
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- Separate original joint using rechargeable riveter - VAS 843 001- or compact booster - VAS 6790/20- . Use attachment to do so.
- Separate original joint using spot weld breaker .



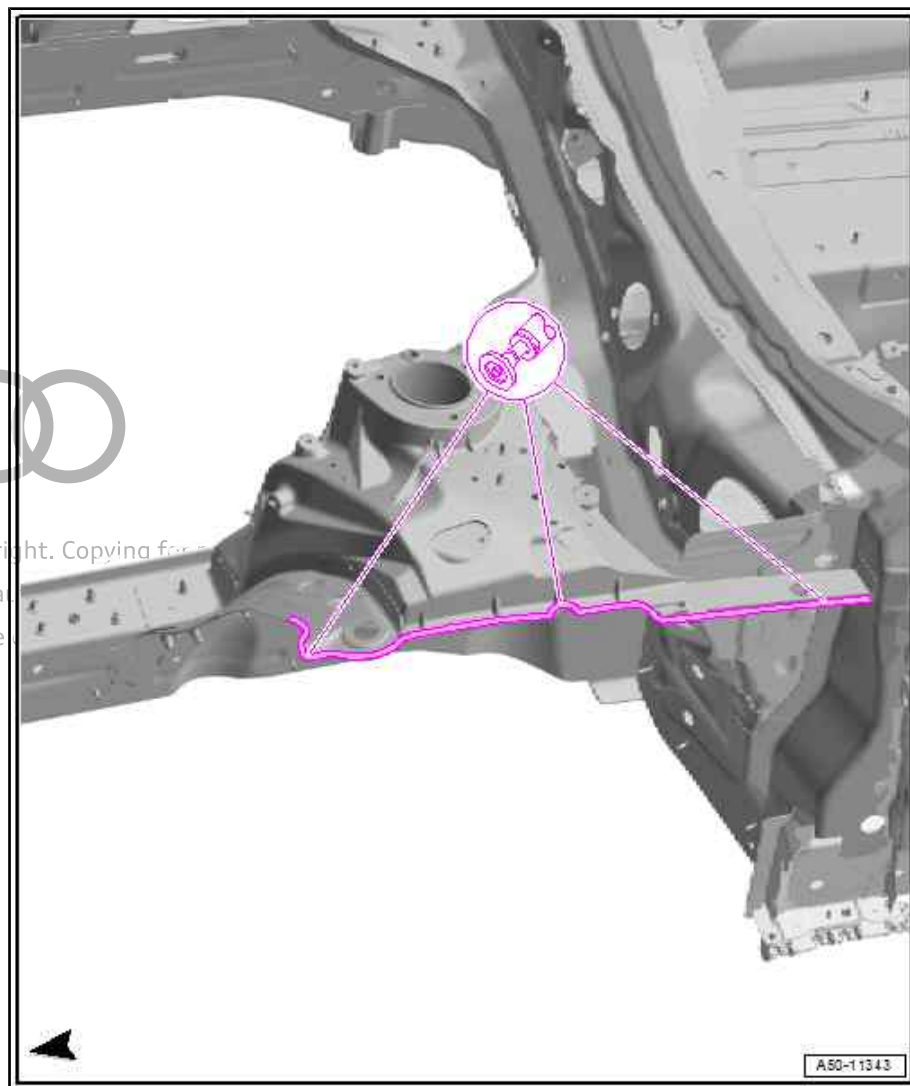
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NOTICE

Take care not to damage the Bowden cable for bonnet lock when making the separating cut in the longitudinal member.

- Remove remaining material using compact angle grinder .

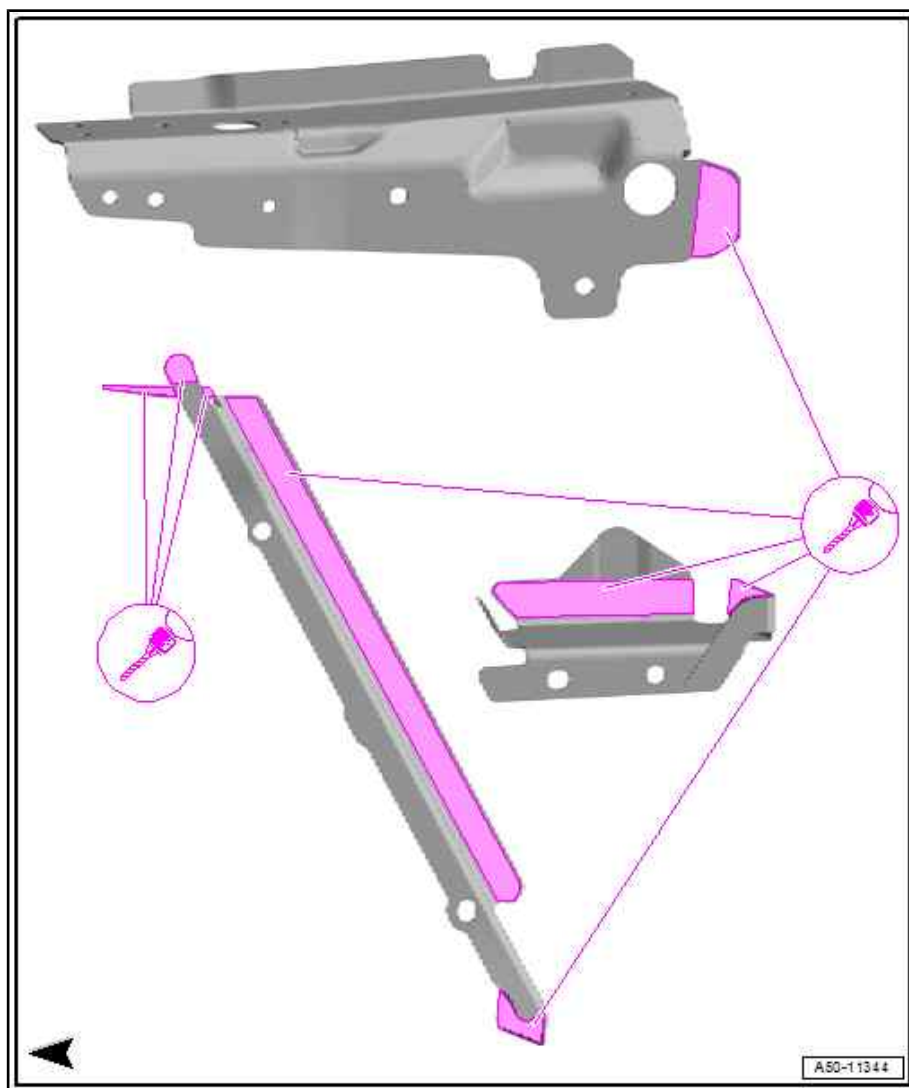


Replacement parts

- ◆ Upper longitudinal member for wheel housing (upper part)
- ◆ Upper longitudinal member for wheel housing (lower part)
- ◆ Closure plate
- ◆ Cleaning solution - D 009 401 04-
- ◆ Silicate stone - D 009 800-
- ◆ Aluminium primer - DA 009 801-
- ◆ Applicator - D 009 500 25-
- ◆ 2-component epoxy adhesive - DA 001 730 A2- , 1 set of cartridges

Preparing new parts

- Drill holes for SG plug weld seam, 8.0 mm Ø using drill .



! NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" must be used to ensure correct results when spot welding.

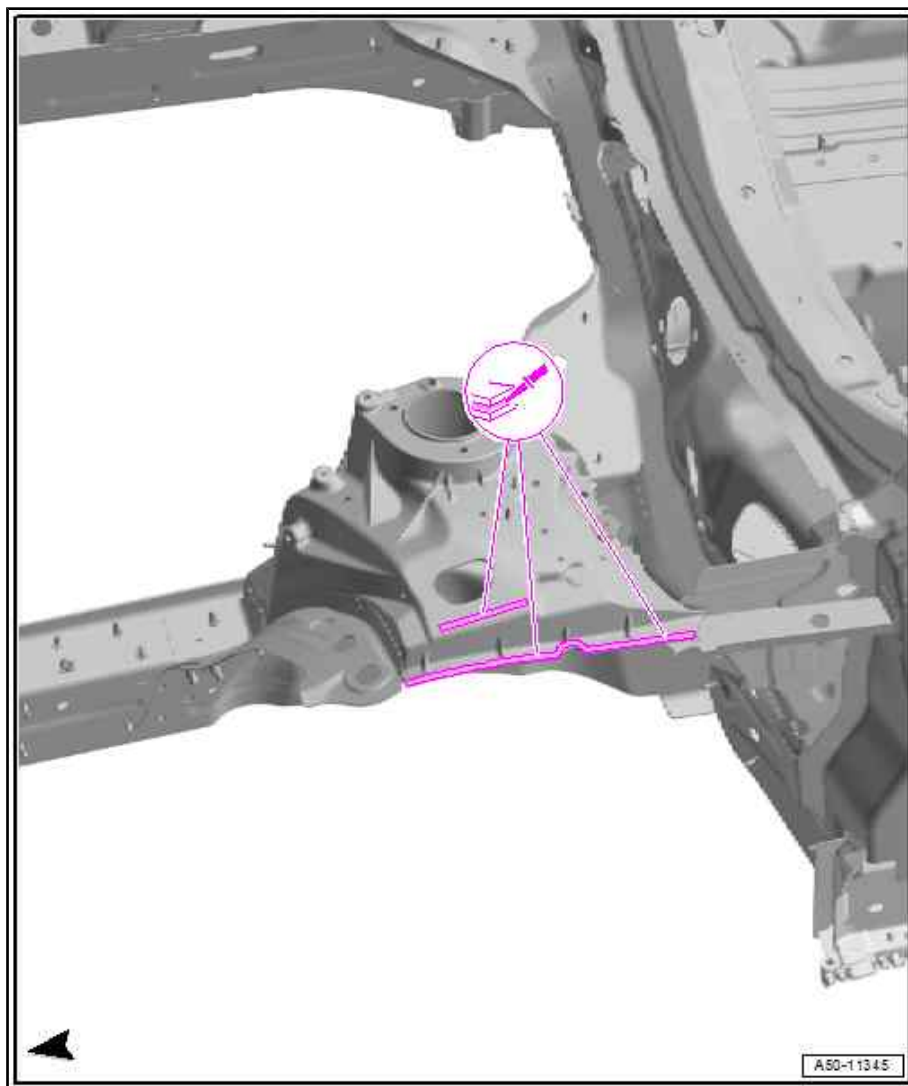
Welding in

- Clean bonding surfaces with cleaning solution - D 009 401 04- .
- Treat flanges with silicate stone - D 009 800- and holder - V.A.G 1931- .

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A silicate adhesive layer is formed which ensures long-term durability of the bonded joint. The surface becomes matt.

- Apply 2-component epoxy adhesive - DA 001 730 A2- to entire riveting area using pneumatic glue gun - V.A.G 2005 B- .

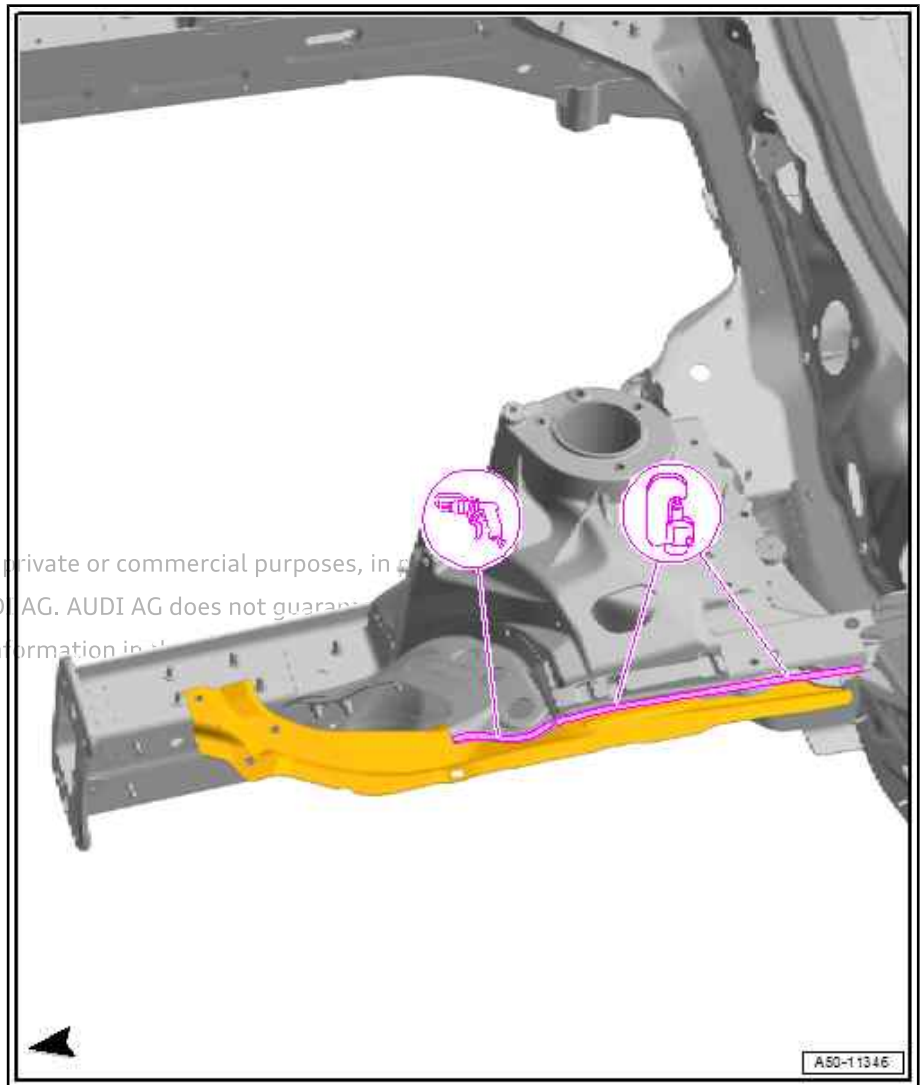


- Match up new part with vehicle positioned on alignment bracket set and fix in place.
- Weld in new part using shielded arc welding equipment : SG plug weld seam.
- Drill 7.0 mm $\varnothing$ holes for pop rivets - (6.5 mm)- in positions of punch rivets using drill .
- Rivet in new part using pop rivets - (6.5 mm)- . To do so, use rechargeable riveter - VAS 843 001- or compact booster - VAS 6790/20-

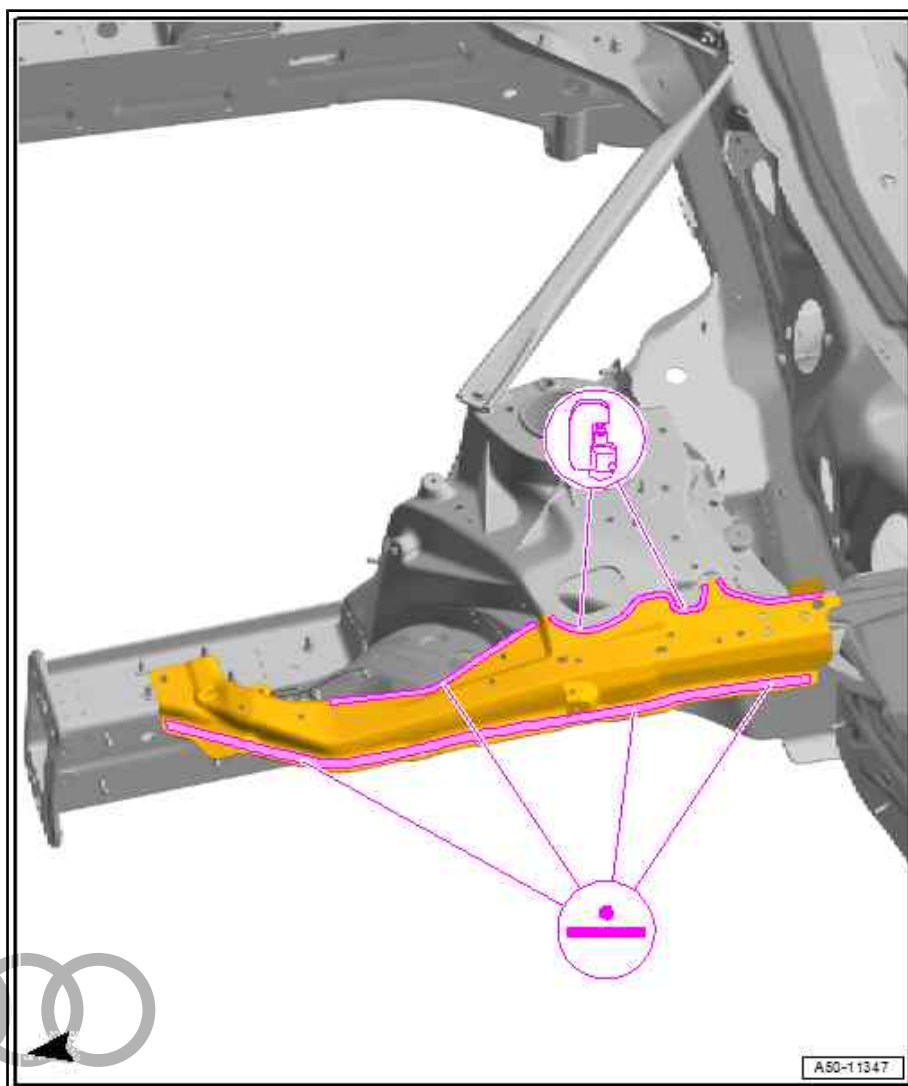
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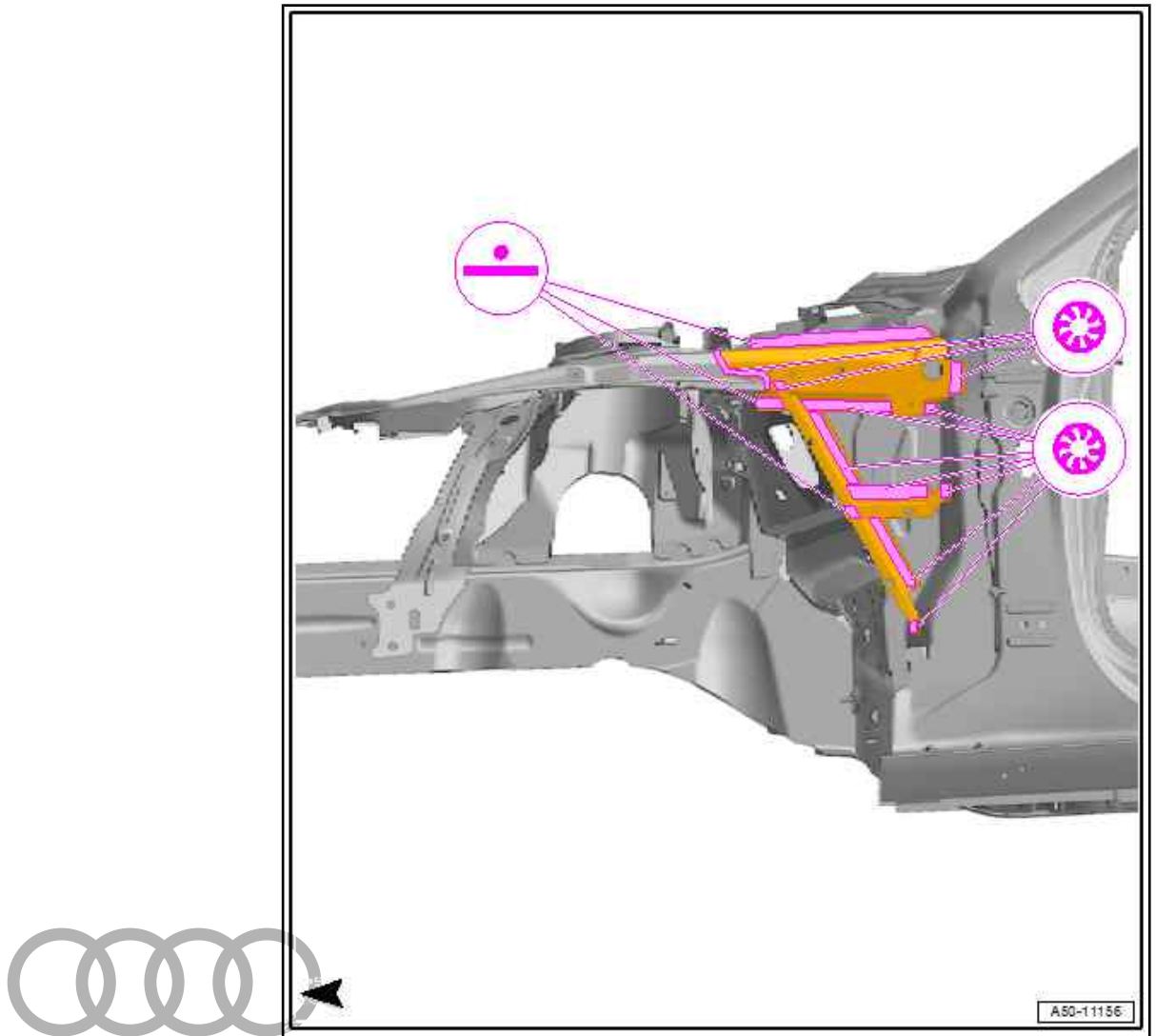


- Weld in new parts using resistance spot welder : RP spot weld seam.
- Drill 7.0 mm $\varnothing$ holes for pop rivets - (6.5 mm)- in positions of punch rivets using drill .
- Rivet in new part using pop rivets - (6.5 mm)- . To do so, use rechargeable riveter - VAS 843 001- or compact booster - VAS 6790/20- .



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- Match up new parts and fix in position.
- Check fit relative to bolt-on parts.
- Weld in new parts using resistance spot welder : RP spot weld seam.
- Weld in new parts using shielded arc welding equipment : SG plug weld seam.



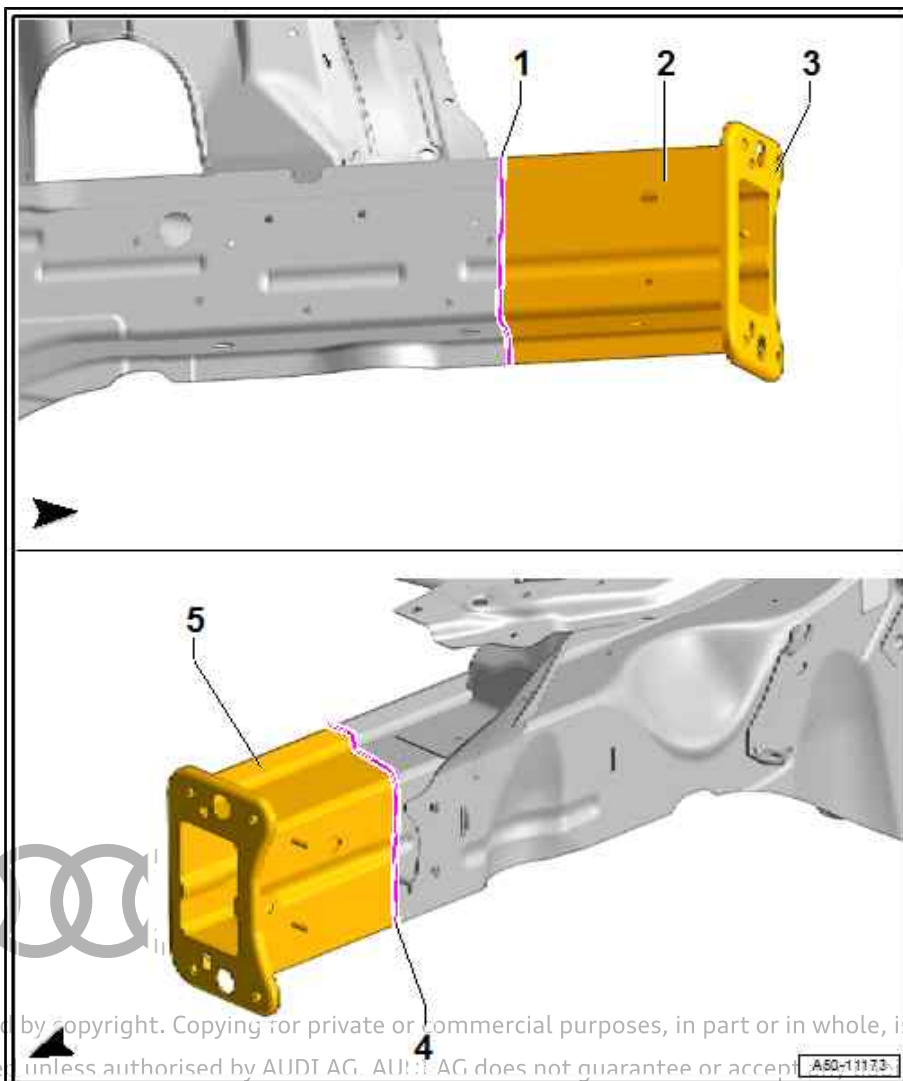
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RO: 50 79 55 02

4 Front longitudinal member - Partial renewal

- 1 - Inner separating cut
- 2 - Front longitudinal member
 - Inner section
- 3 - Impact damper mounting
- 4 - Outer separating cut
- 5 - Closure plate for longitudinal member
 - Outer part



4.1 Tools

Special tools and workshop equipment required

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

Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 38](#).



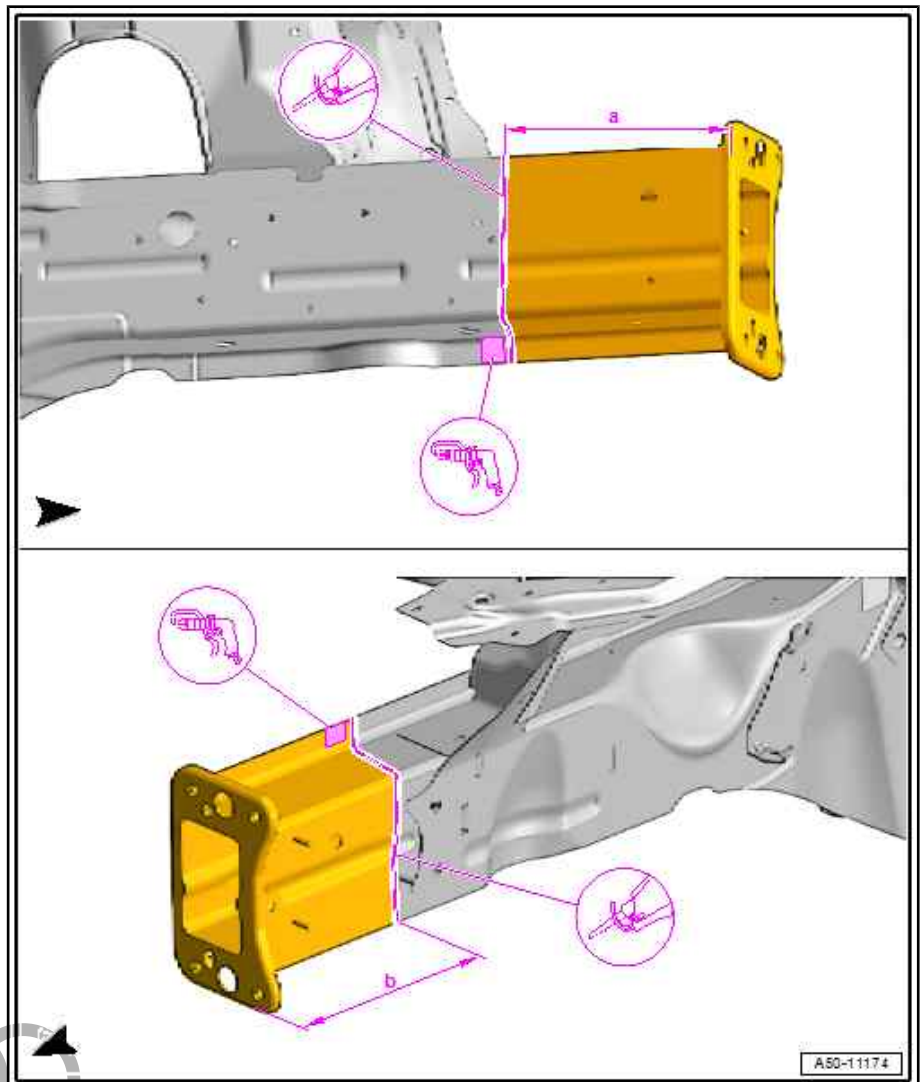
4.2 Procedure

⚠ CAUTION

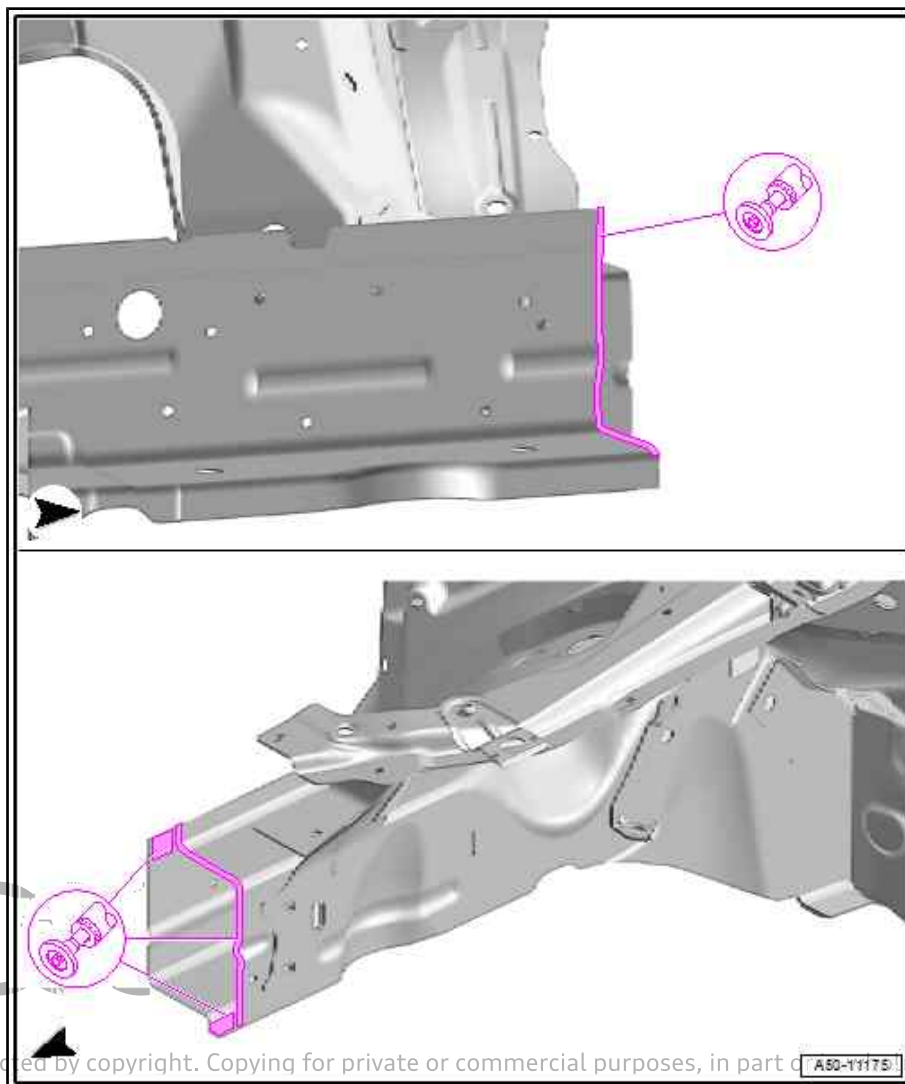
Straightening and re-alignment work must not be carried out on the front section of the Audi A5 body, because this could cause cracking in the aluminium castings that may not be externally visible.

Cutting locations

- Measure and mark separating cuts.
- Make separating cuts with body saw , as shown.
- Separate original joint using spot weld breaker .
- ◆ Dimension -a- = 170 mm
- ◆ Dimension -b- = 200 mm



- Remove remaining material using compact angle grinder .
 - Grind welding areas down to bare metal.
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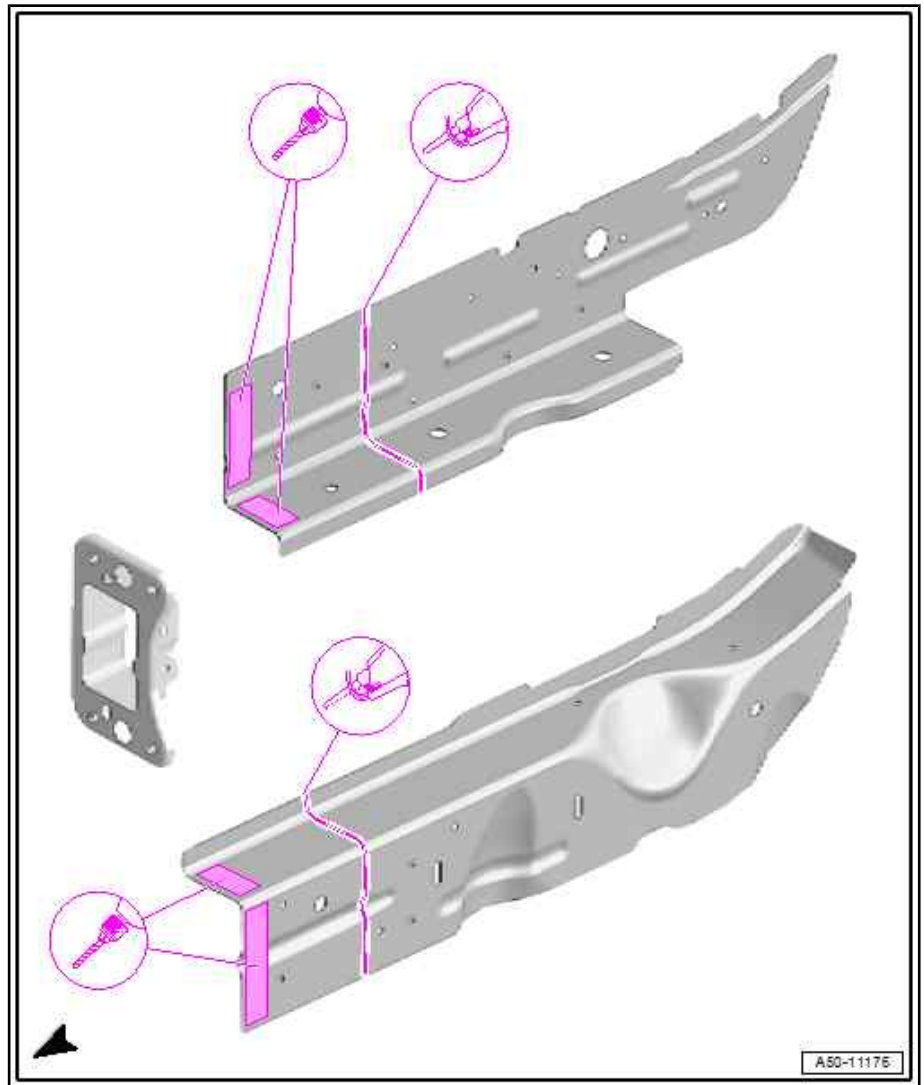
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Replacement part

- ◆ Sub-part - front longitudinal member
- ◆ Sub-part - closure plate for front longitudinal member
- ◆ Impact damper mounting

Preparing new part

- Transfer separating cuts to new parts.
- Cut new parts to size using body saw .
- Drill holes for SG plug weld seam, 8.0 mm Ø using drill .



! NOTICE

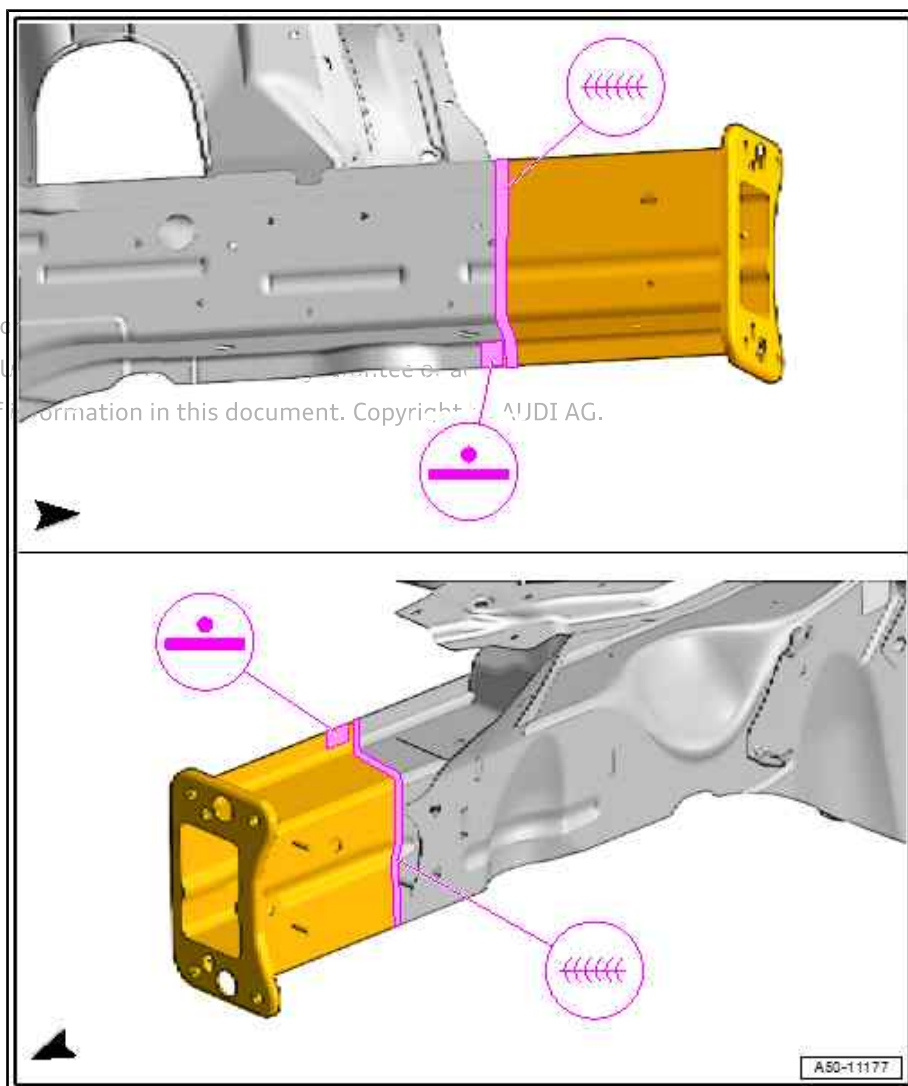
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" must be used to ensure correct results when spot welding.

Welding in

- Match up new parts with vehicle positioned on alignment bracket set and fix in place.
 - Check fit relative to bolt-on parts.
 - Butt weld all around at separating cuts using shielded arc welding equipment : SG continuous seam.
 - Weld in new part using resistance spot welder : RP spot weld seam.
- new part by any means, copying or otherwise, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.



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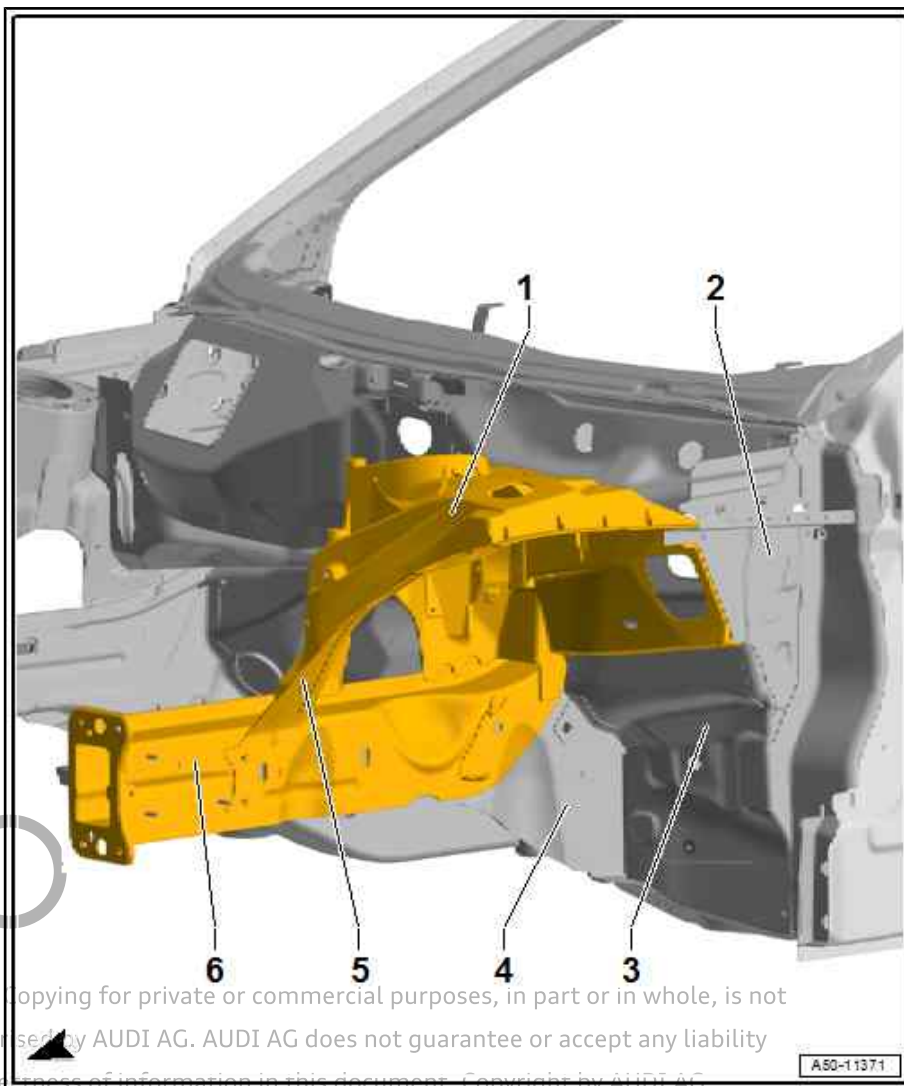




RO: 50 74 55 04

5 Front longitudinal member with suspension turret - Renewal

- 1 - Suspension turret
- 2 - Reinforcements at A-pillar
- 3 - Outer footwell cross member
- 4 - Front longitudinal member
 - ❑ Ultra-high strength steel (hot-formed)
 - ❑ Rear part
- 5 - Front wheel housing
- 6 - Front longitudinal member
 - ❑ Front part



5.1 Tools

Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker
- ◆ Drill
- ◆ Rechargeable riveter
- ◆ Compact booster
- ◆ Attachment
- ◆ Supplementary kit for rechargeable riveter



Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 38](#) .

5.2 Procedure

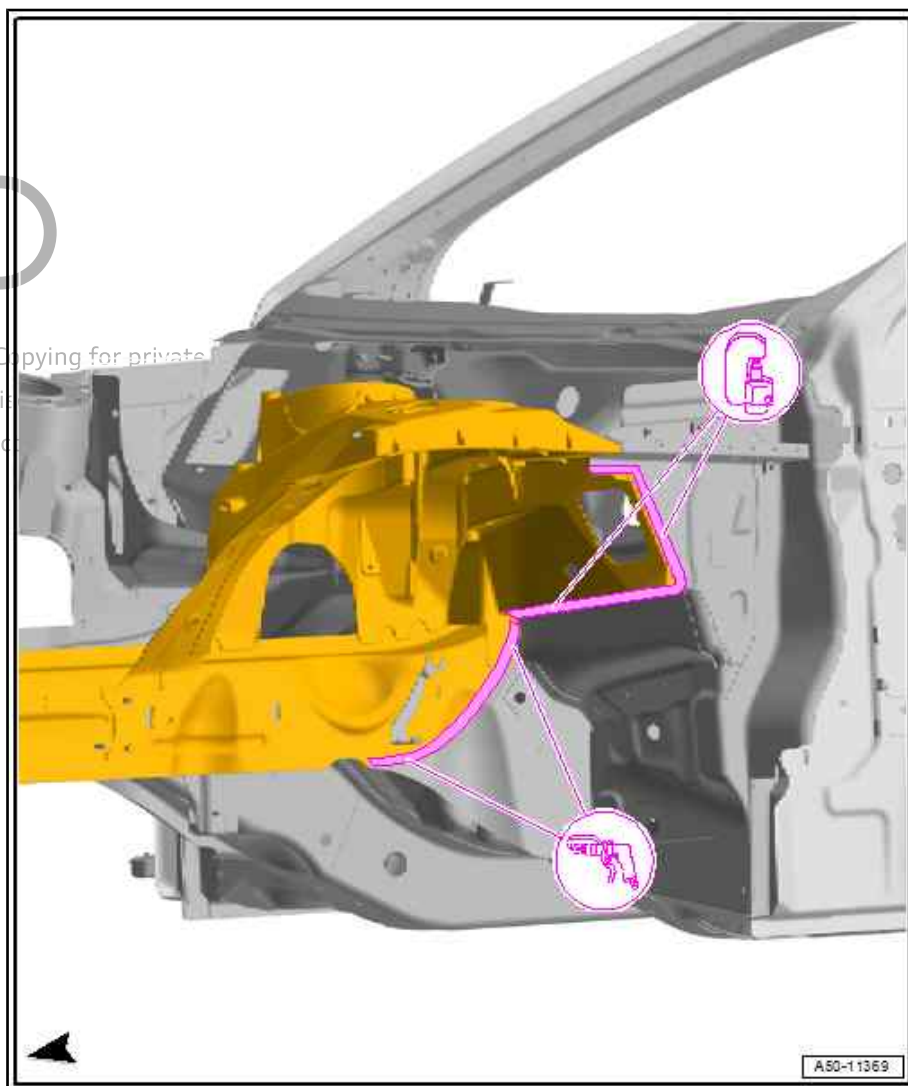
- Upper longitudinal member for wheel housing already removed ⇒ [page 56](#)

⚠ CAUTION

Straightening and re-alignment work must not be carried out on the front section of the Audi A5 body, because this could cause cracking in the aluminium castings that may not be externally visible.

Cutting locations

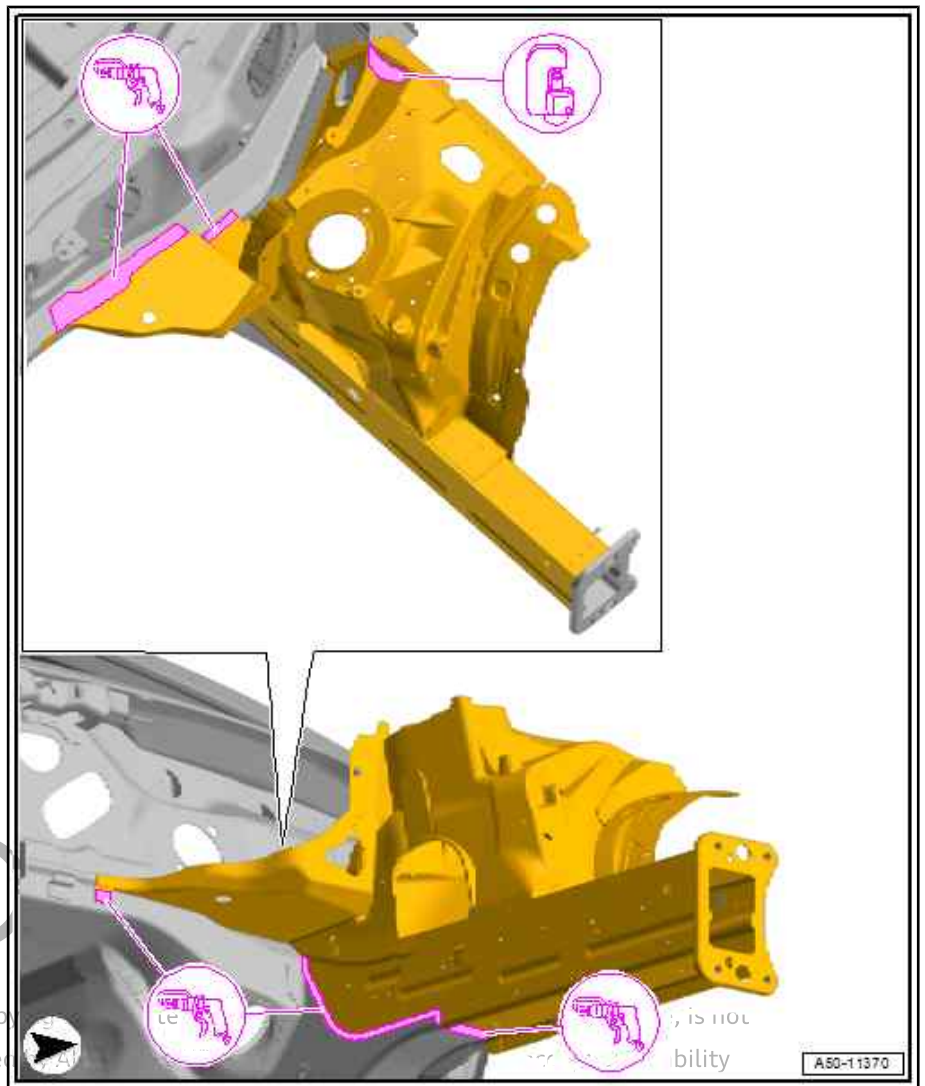
- Separate original joint using rechargeable riveter - VAS 843 001- or compact booster - VAS 6790/20- . Use attachment to do so.
- Separate original joint using spot weld breaker .



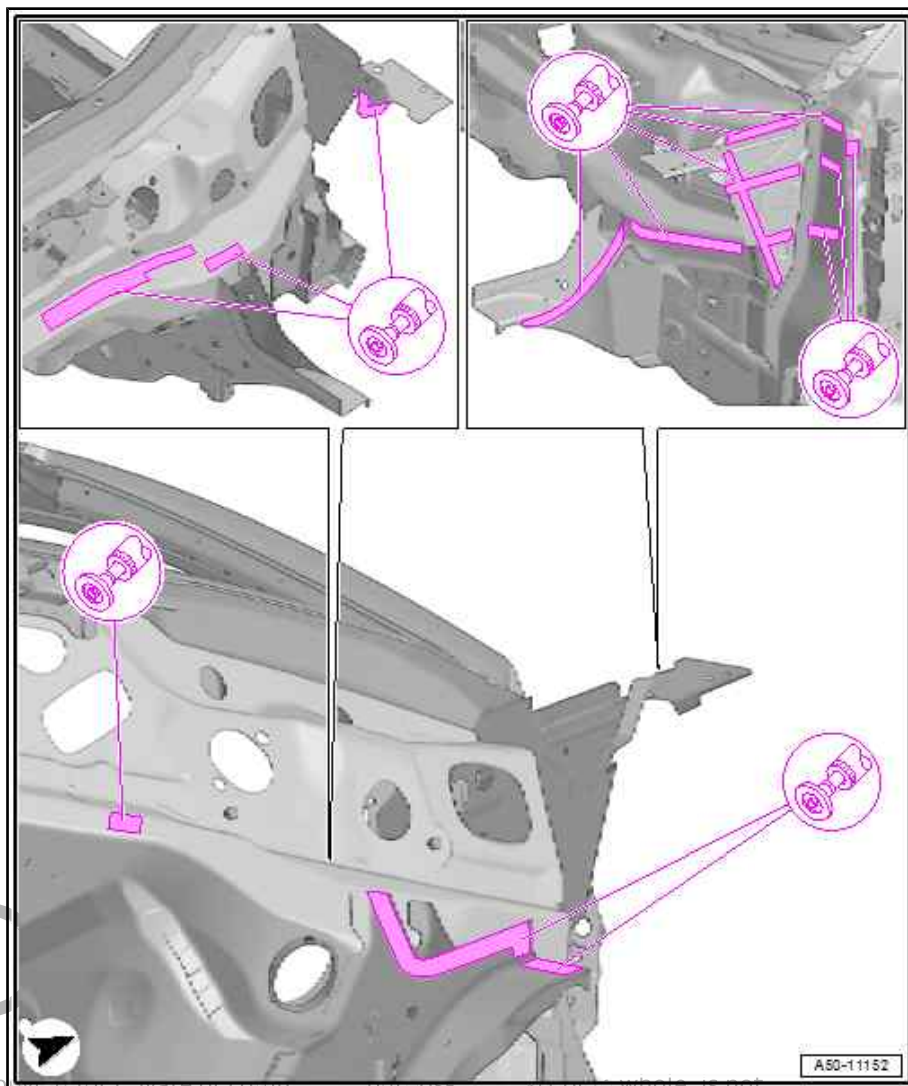
- Separate original joint using rechargeable riveter - VAS 843 001- or compact booster - VAS 6790/20- . Use attachment to do so.



- Separate original joint using spot weld breaker .



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



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Replacement parts

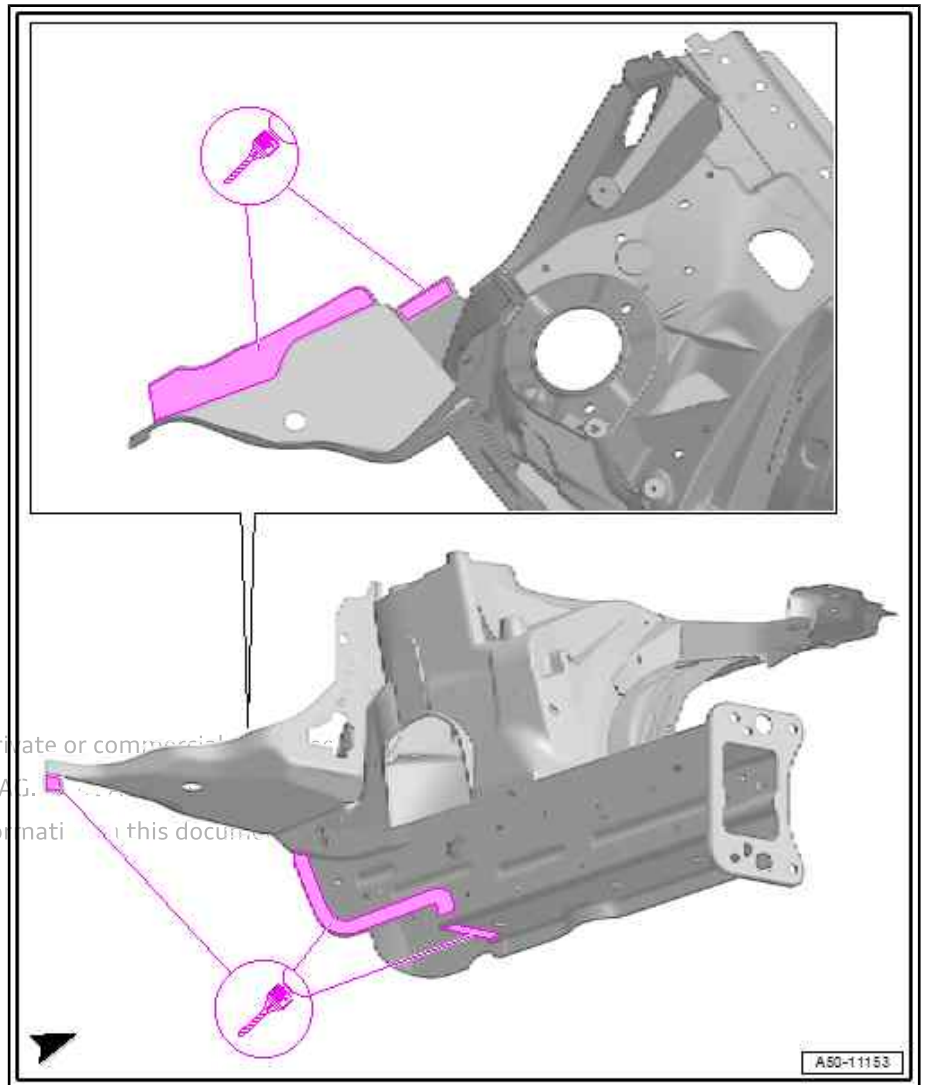
- ◆ Longitudinal member with suspension turret
- ◆ Cleaning solution - D 009 401 04-
- ◆ Silicate stone - D 009 800-
- ◆ Aluminium primer - DA 009 801-
- ◆ Applicator - D 009 500 25-
- ◆ 2-component epoxy adhesive - DA 001 730 A2- , 1 set of cartridges

Preparing new parts

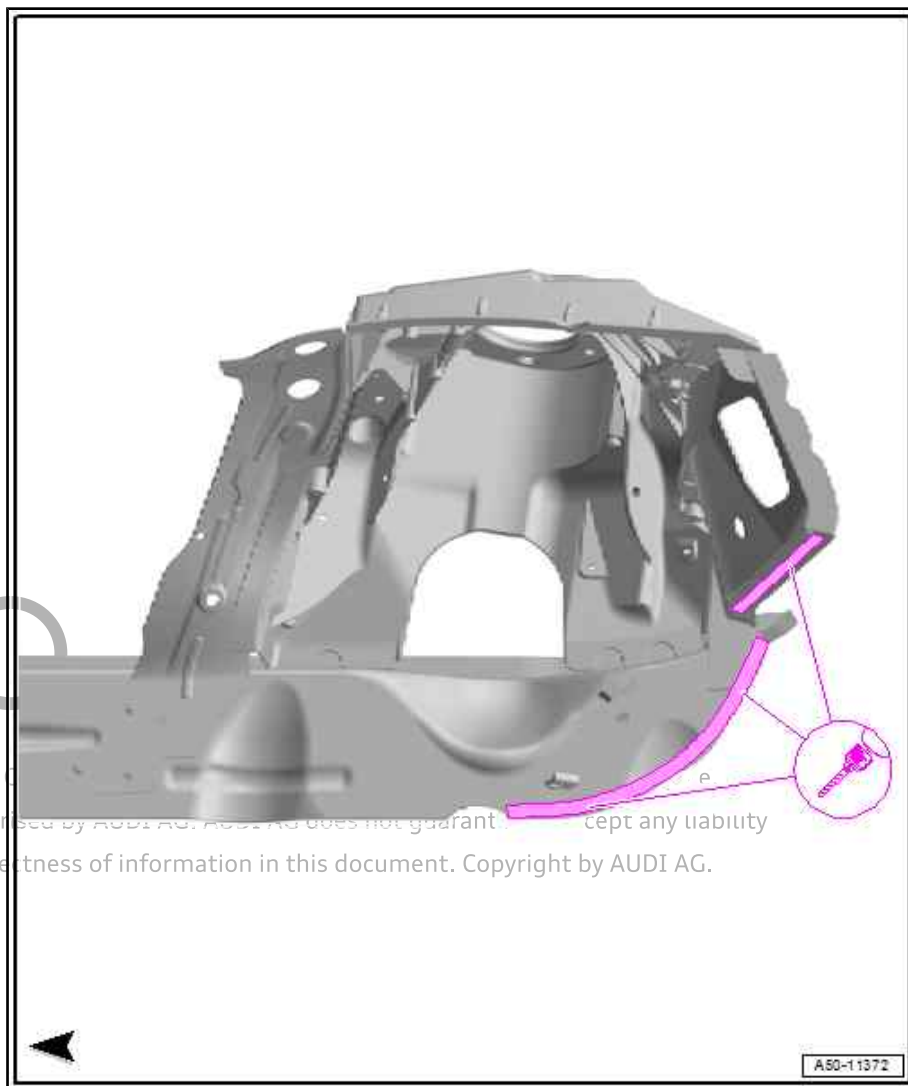
- Drill holes for SG plug weld seam, 8.0 mm Ø using drill .



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- Drill holes for SG plug weld seam, 8.0 mm Ø using drill .



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NOTICE

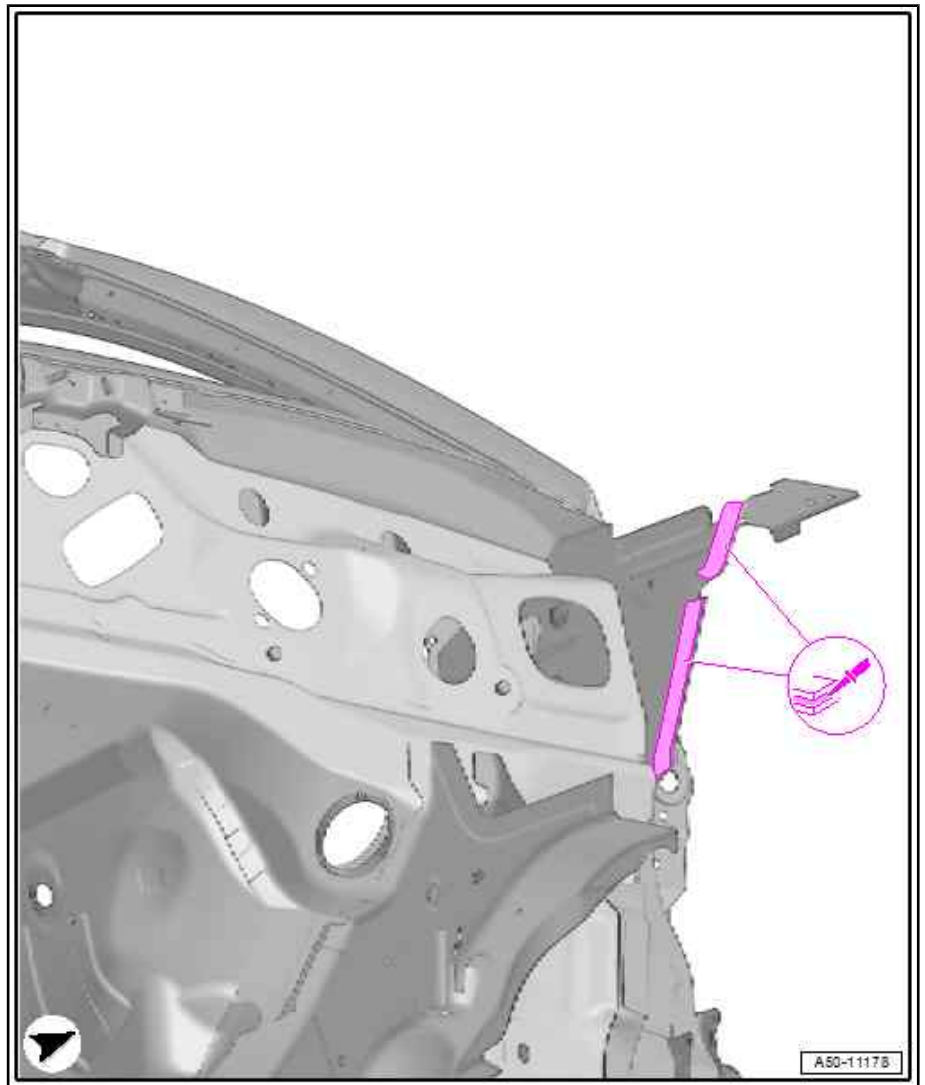
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" must be used to ensure correct results when spot welding.

Welding in

- Clean bonding surfaces with cleaning solution - D 009 401 04- .
- Treat flanges with silicate stone - D 009 800- and holder - V.A.G 1931- .
- Apply a thin coat of aluminium primer - DA 009 801- using applicator - D 009 500 25- and allow to flash off.

A silicate adhesive layer is formed which ensures long-term durability of the bonded joint. The surface becomes matt.

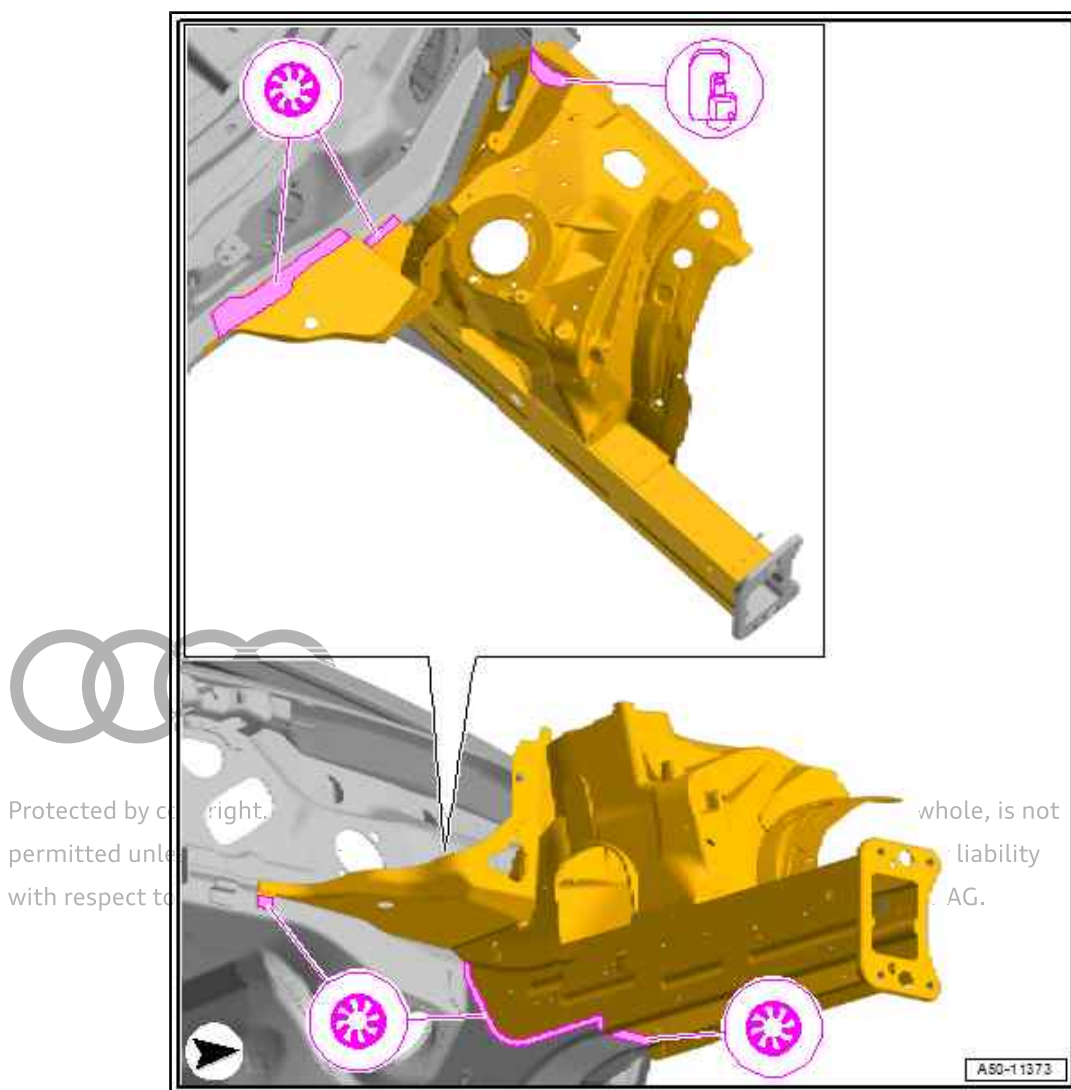
- Apply 2-component epoxy adhesive - DA 001 730 A2- to entire riveting area using pneumatic glue gun - V.A.G 2005 B- .



- Match up new part with vehicle positioned on alignment bracket set and fix in place.
- Weld in new part using shielded arc welding equipment : SG plug weld seam.
- Drill 7.0 mm Ø holes for pop rivets - WHT 005 413 A- in positions of punch rivets using drill .
- Rivet in new part using compact booster - VAS 6790/20 - and pop rivets - WHT 005 413 A- .



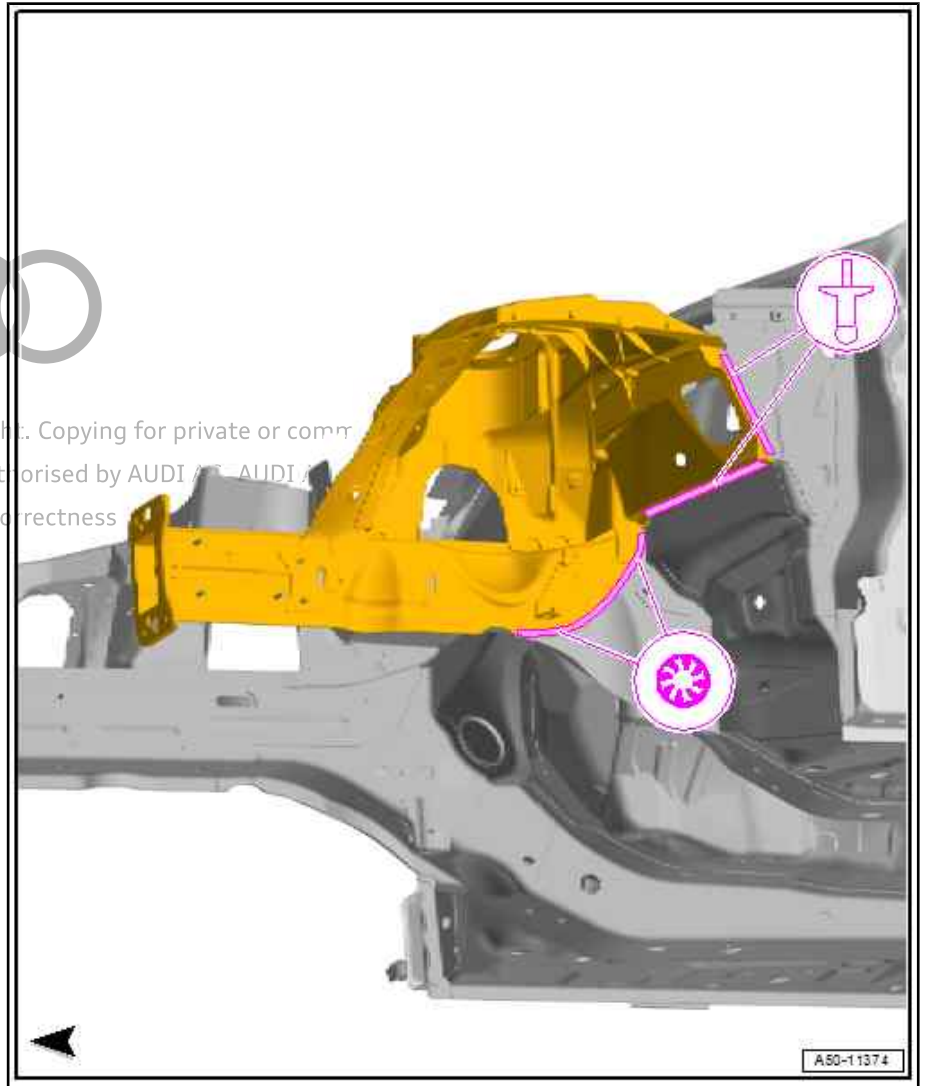
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- Weld in new part using shielded arc welding equipment : SG plug weld seam.
- Drill 7.0 mm Ø holes for pop rivets - WHT 005 413 A- in positions of punch rivets using drill .
- Rivet in new part using compact booster - VAS 6790/20- and pop rivets - WHT 005 413 A- .



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- Upper longitudinal member for wheel housing already removed ⇒ [page 56](#)



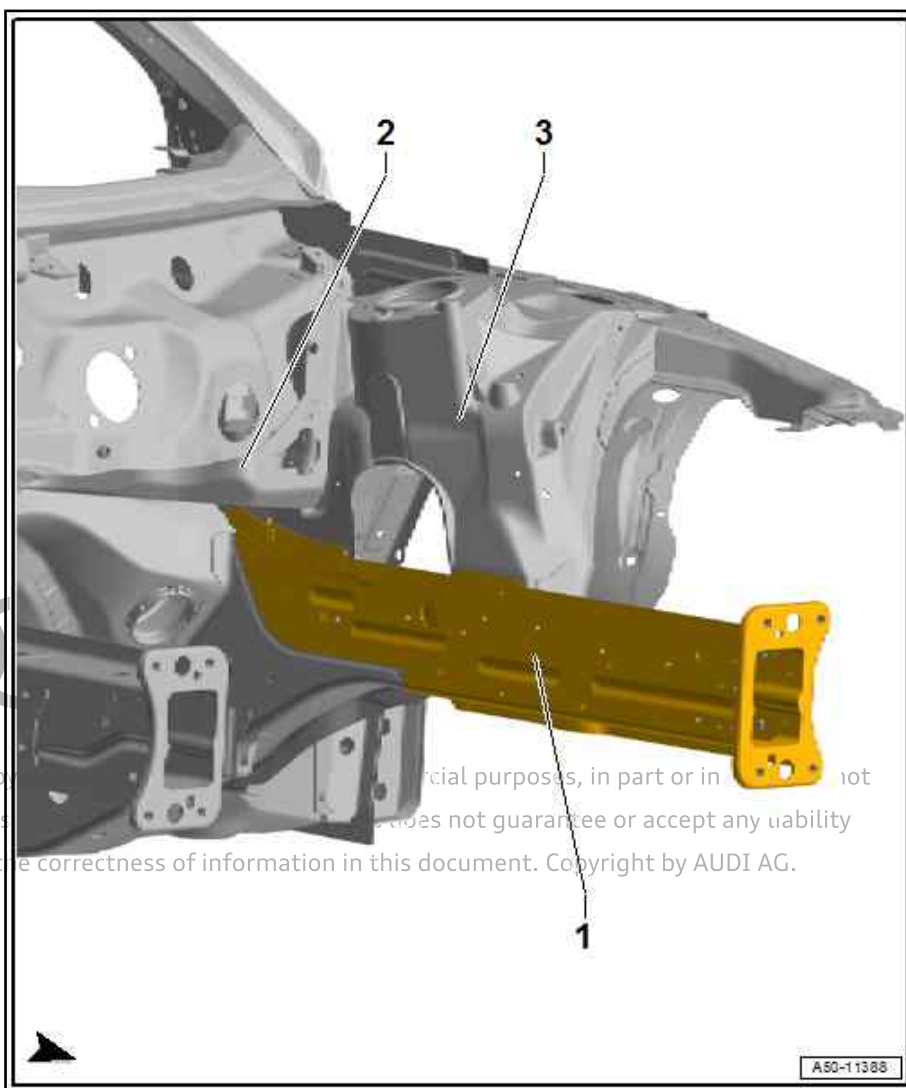
RO: 50 74 55 04

6 Front longitudinal member - Renewal

⚠ CAUTION

Before renewing the longitudinal member, use crack detection kit V.A.G 2014 to check whether the suspension turret is damaged; if so, the suspension turret must also be renewed.

- 1 - Front longitudinal member
- 2 - Plenum chamber
- 3 - Suspension turret



6.1 Tools

Special tools and workshop equipment required

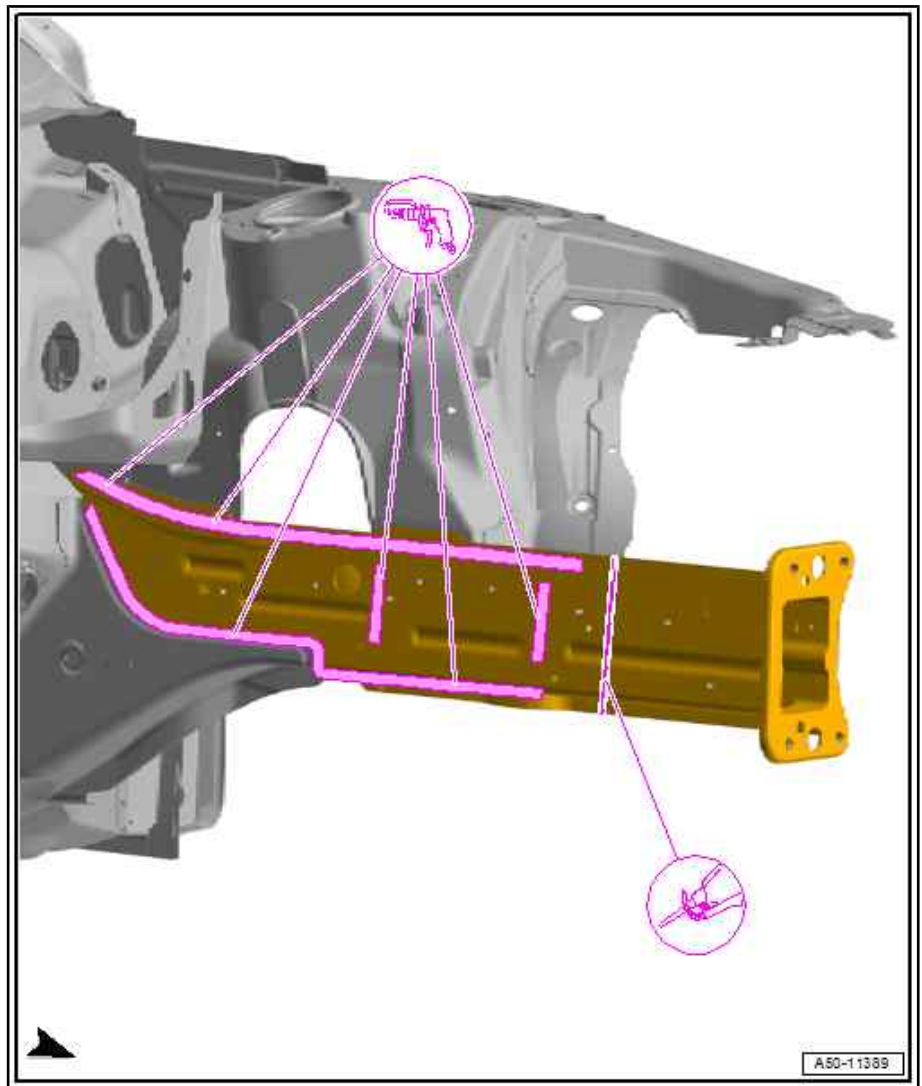
- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker
- ◆ Drill



Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work [⇒ page 38](#) .

6.2 Procedure

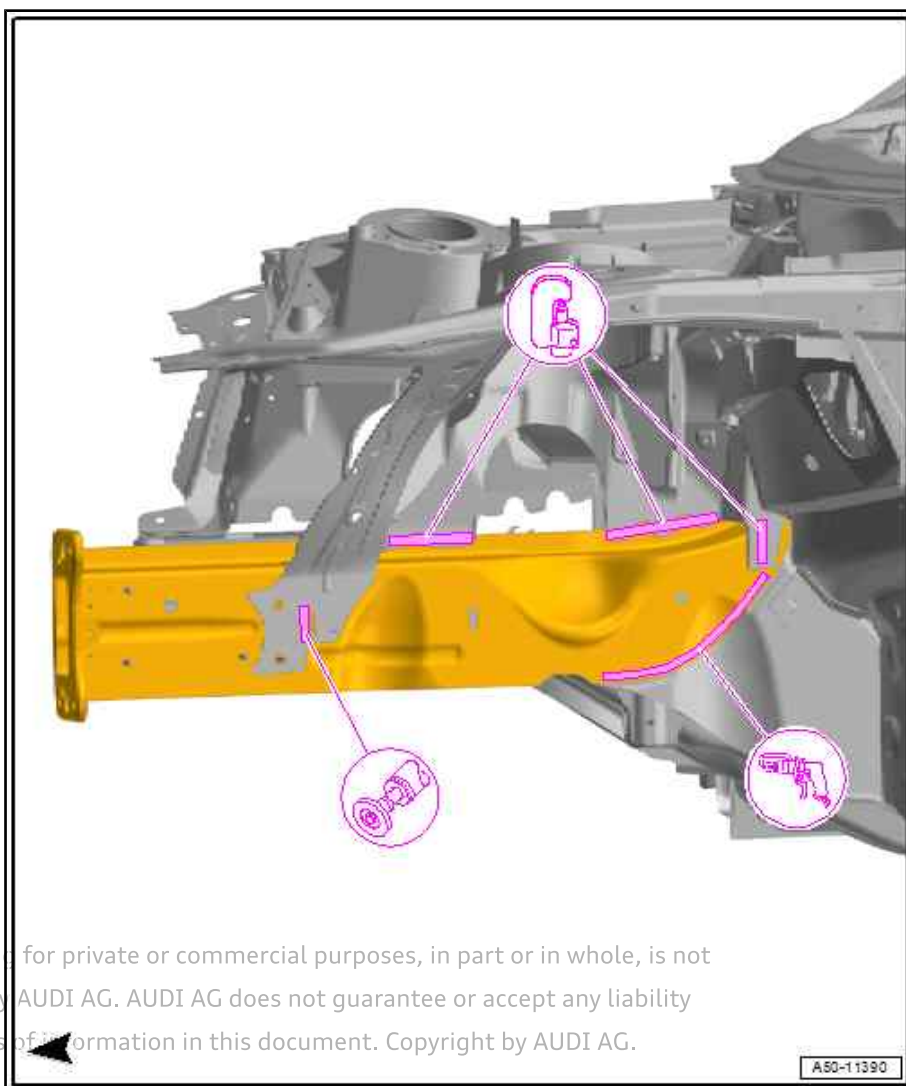
- Roughly cut out longitudinal member using body saw .
- Separate original joint using spot weld breaker .
- Detach inner longitudinal member.



- Separate original joint using rechargeable riveter - VAS 843 001- or compact booster - VAS 6790- .
 - ~~Separate original joint using spot weld breaker .~~
 - ~~Separate longitudinal member using compact angle grinder .~~
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Replacement parts

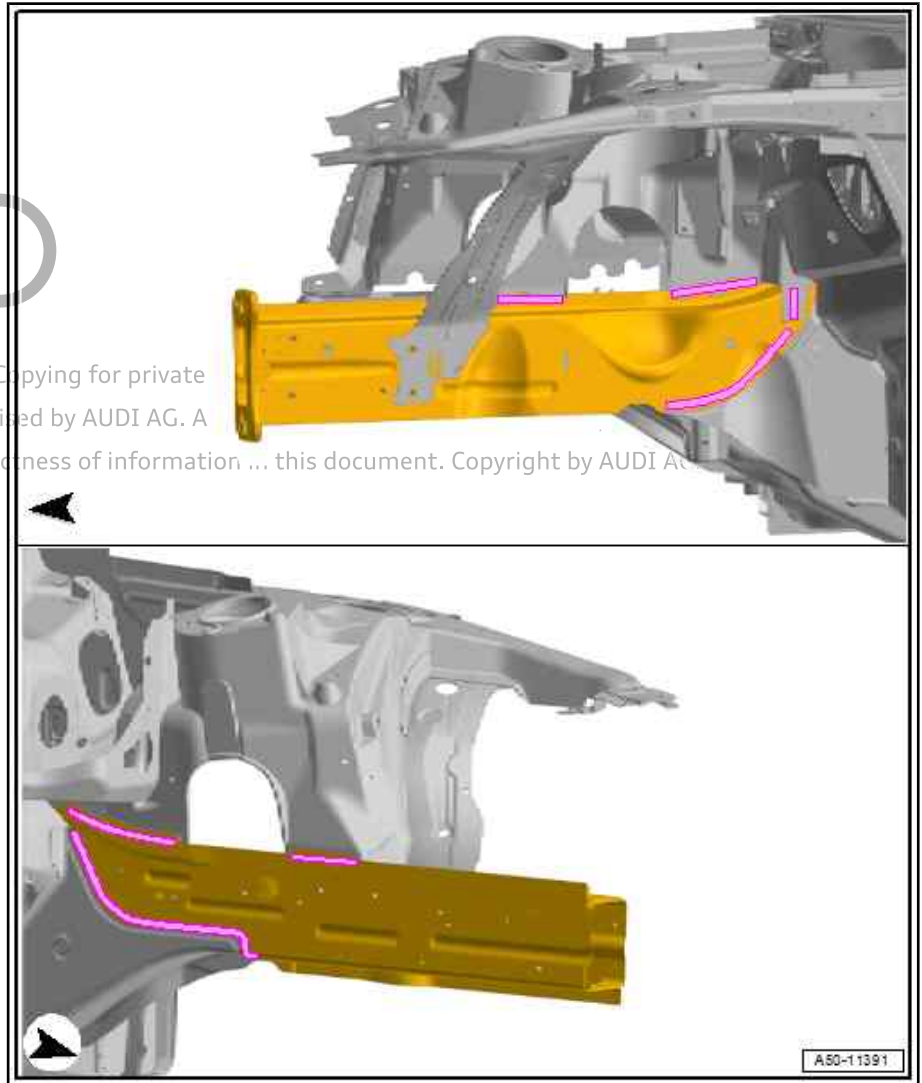
- ◆ Longitudinal member with reinforcement sections
- ◆ Closure plate
- ◆ Impact damper mounting
- ◆ Moulded foam insert
- ◆ Pop rivet - WHT 005 413 A-
- ◆ 2-component epoxy adhesive - DA 001 730 A2-
- ◆ Cleaning solution - D.009.401.04-
- ◆ Silicate stone - DA.009.800-
- ◆ Aluminium primer - DA.009.801 -
- ◆ Applicator - D.009.500.25-

Preparing new part

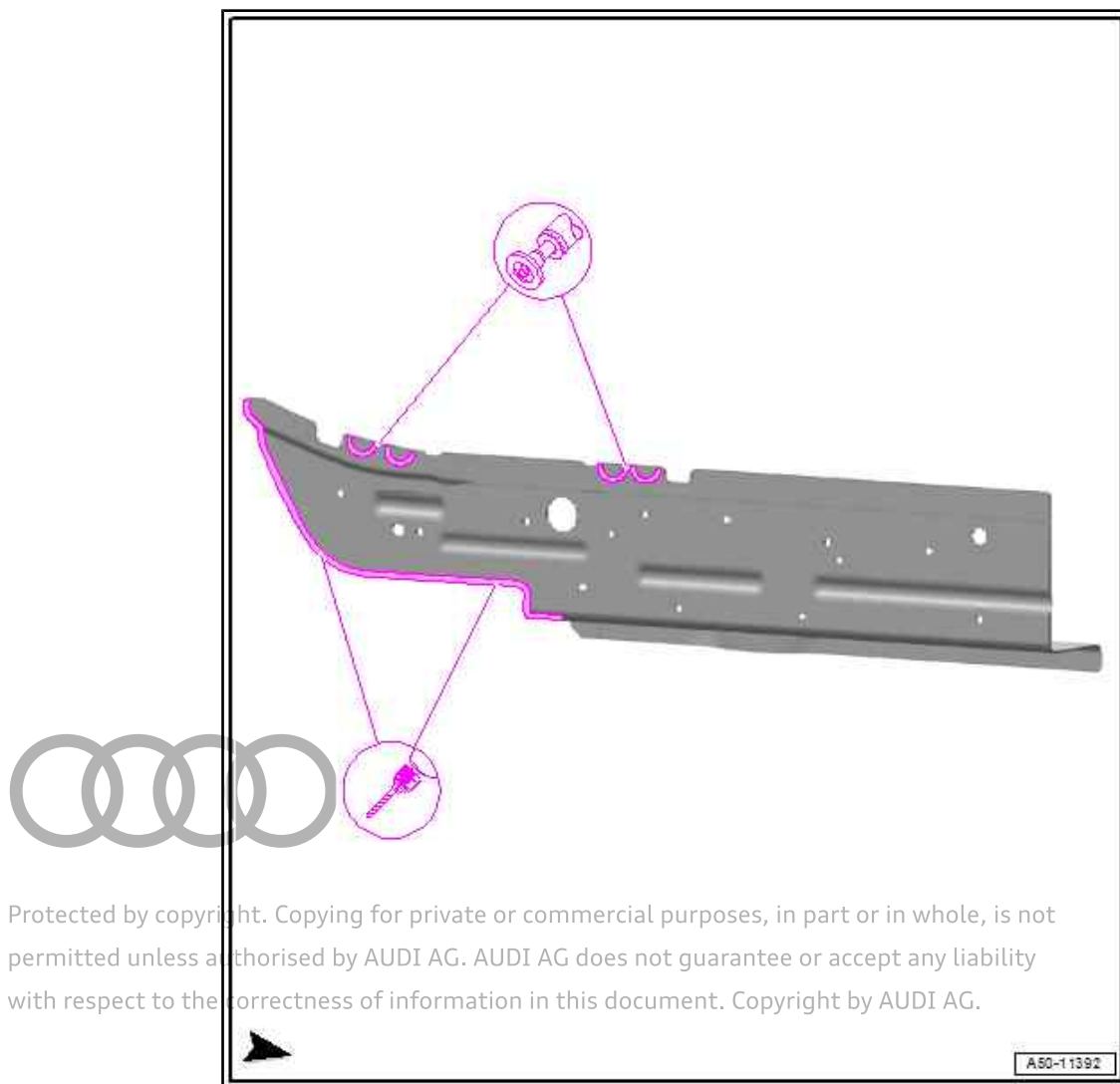
- Fit longitudinal member using alignment set, Audi A5 2016 - VAS 801 025- and mark holes for SG plug weld seam and riveted joint.
- Detach part.



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- Drill holes for SG plug weld seam, 8.0 mm Ø using drill .
- Grind down contact surface for pop rivets - WHT 005 413 A- so that it is clear using compact angle grinder .

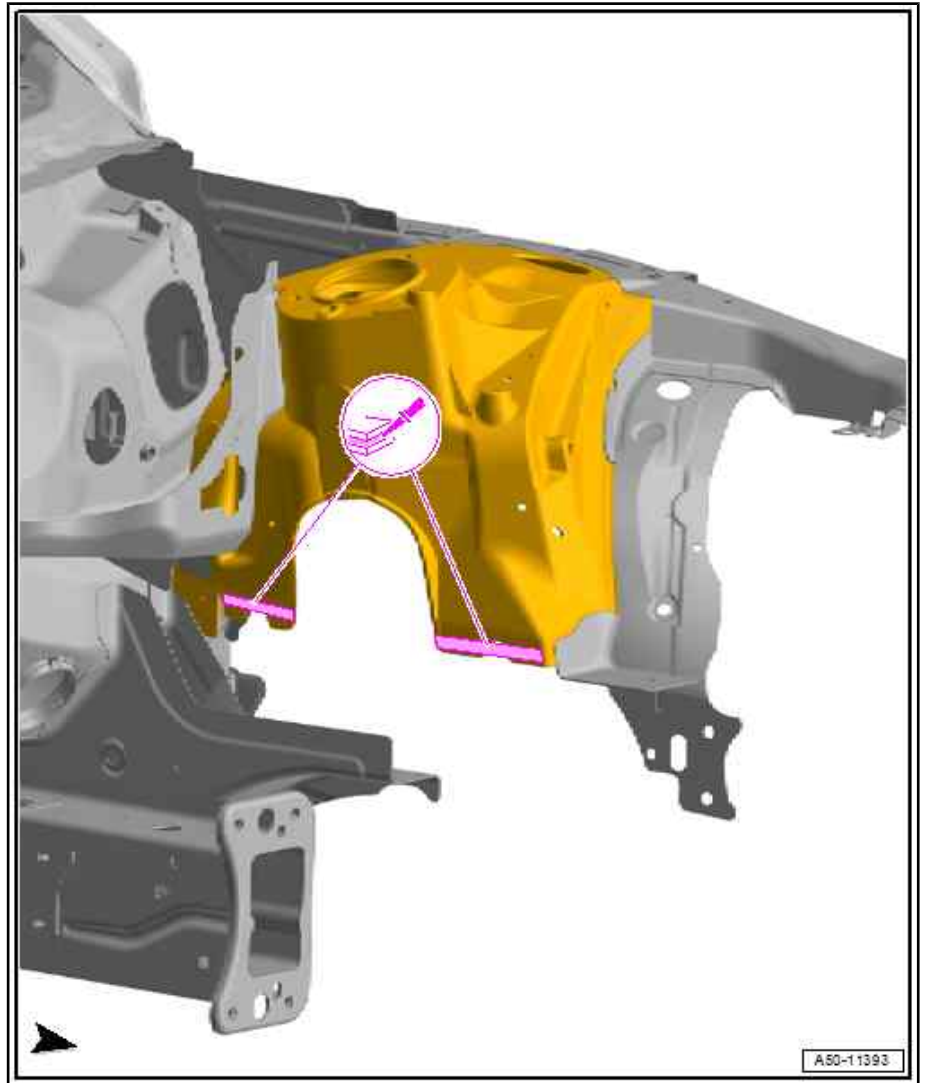


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- Clean bonding surfaces with cleaning solution - D. 009.401.04- .
- Treat flanges with silicate stone - DA.009.800- and holder - V.A.G 1931- .
- Apply a thin coat of aluminium primer - DA.009.801 - using applicator - D.009.500.25- and allow to flash off.

A silicate adhesive layer is formed which ensures long-term durability of the bonded joint. The surface becomes matt.

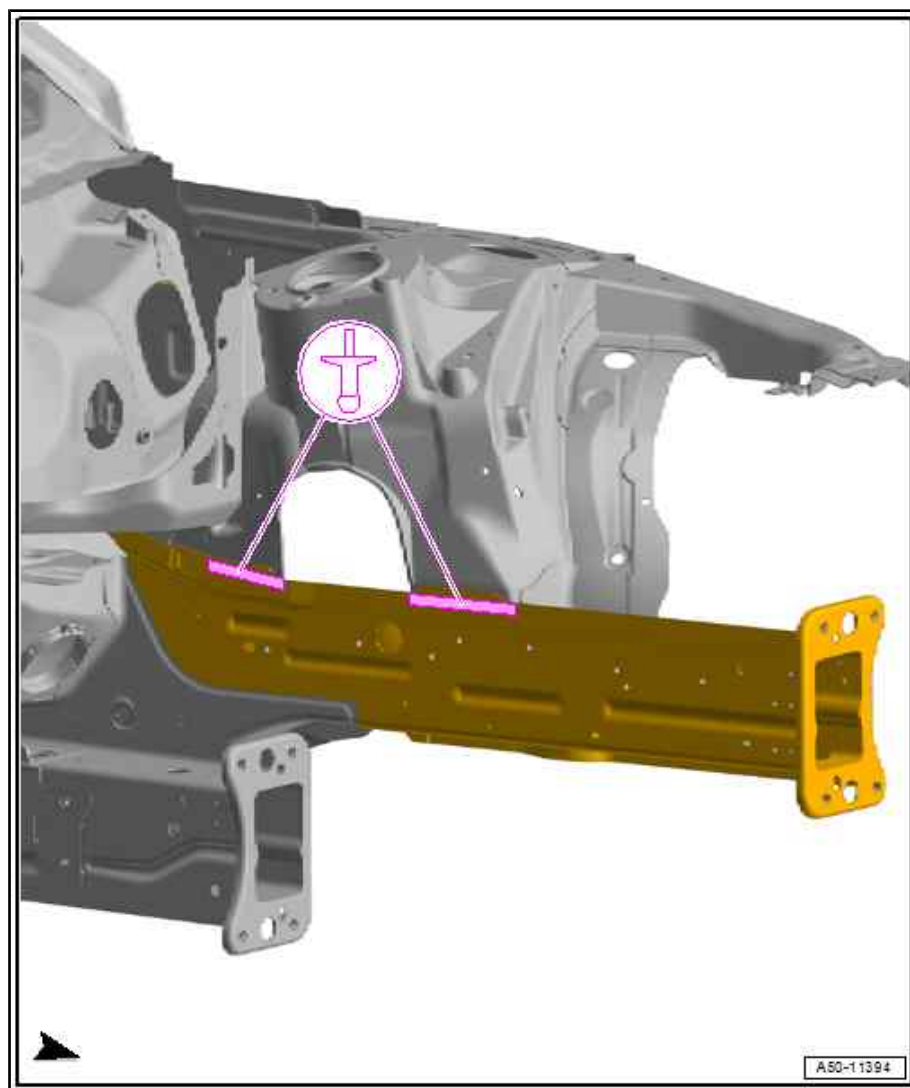
- Apply 2-component epoxy adhesive - DA 001 730 A2- to entire riveting area using pneumatic glue gun - V.A.G 2005 B- .



- Drill holes for pop rivets - WHT 005 413 A- (7.0 mm Ø) using drill .
- Rivet in new part with pop rivets - WHT 005 413 A- using compact booster - VAS 6790- .



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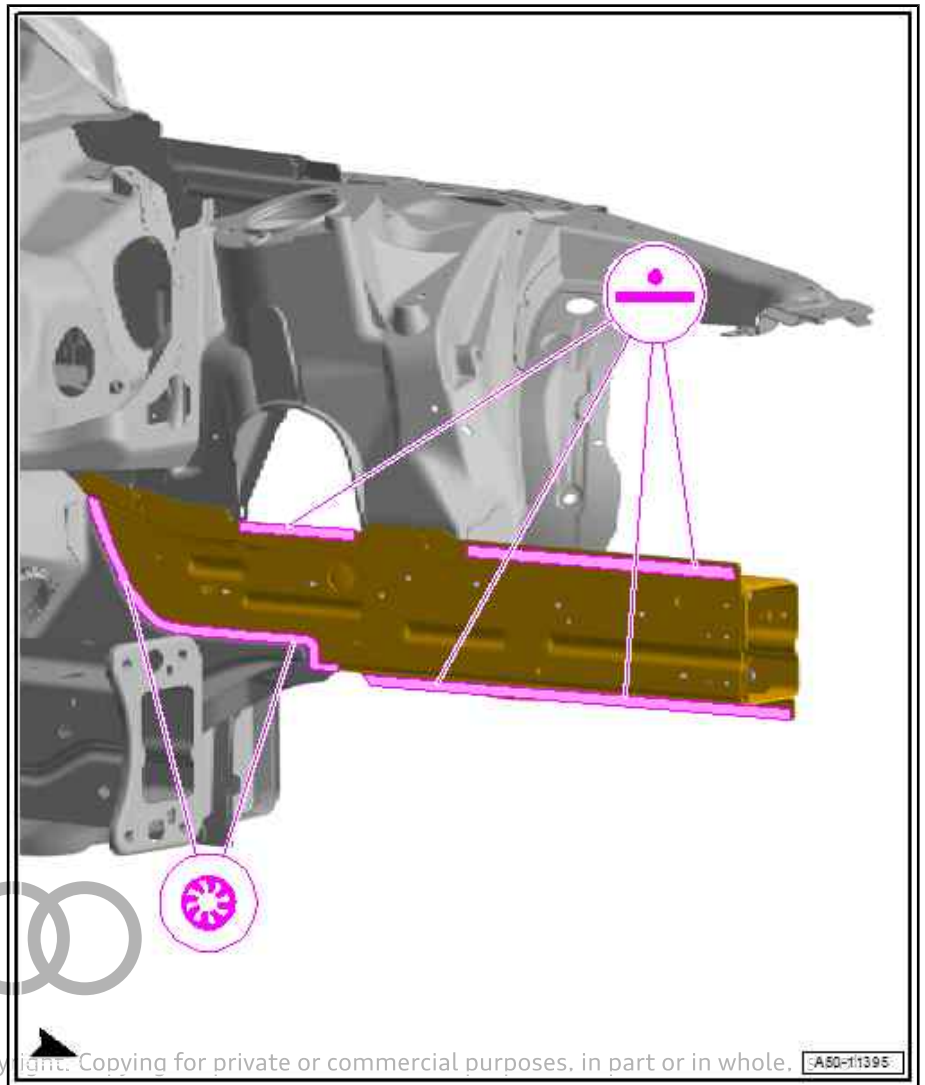
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" must be used to ensure correct results when spot welding.

Welding in

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



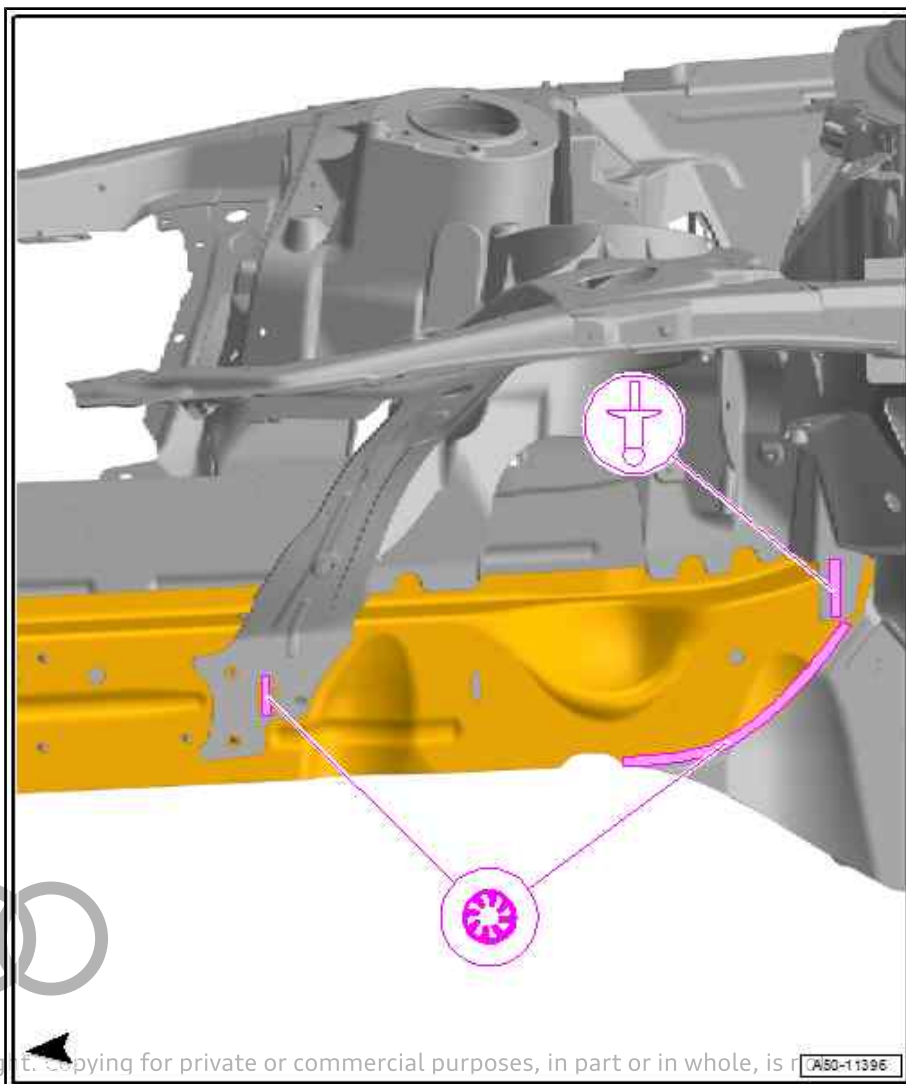
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- Weld in longitudinal member using shielded arc welding equipment : SG plug weld seam.
- Drill holes for pop rivets - WHT 005 413 A- (7.0 mm Ø) using drill .



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7

Upper footwell cross member - Renewal

1 - Upper footwell cross member

2 - Bulkhead

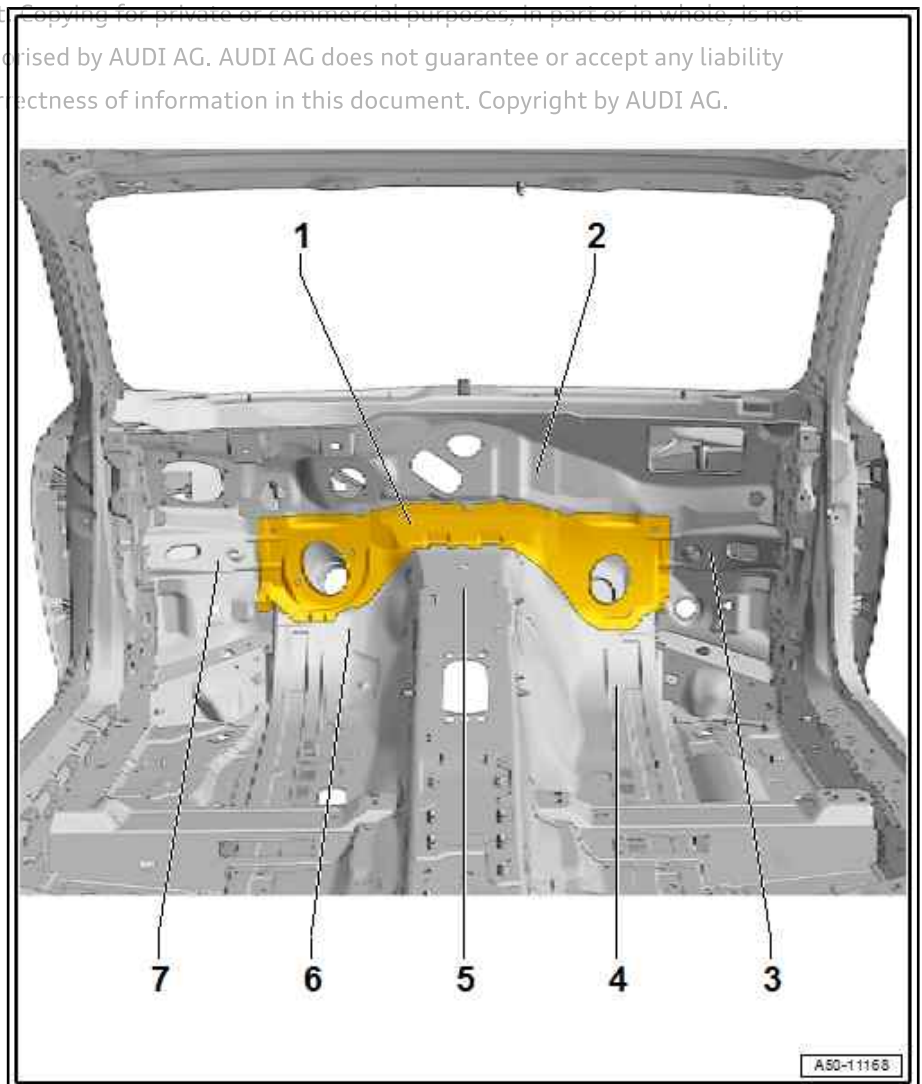
3 - A-pillar reinforcement

4 - Floor panel

5 - Tunnel

6 - Floor panel

7 - A-pillar reinforcement



7.1 Tools

Special tools and workshop equipment required

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

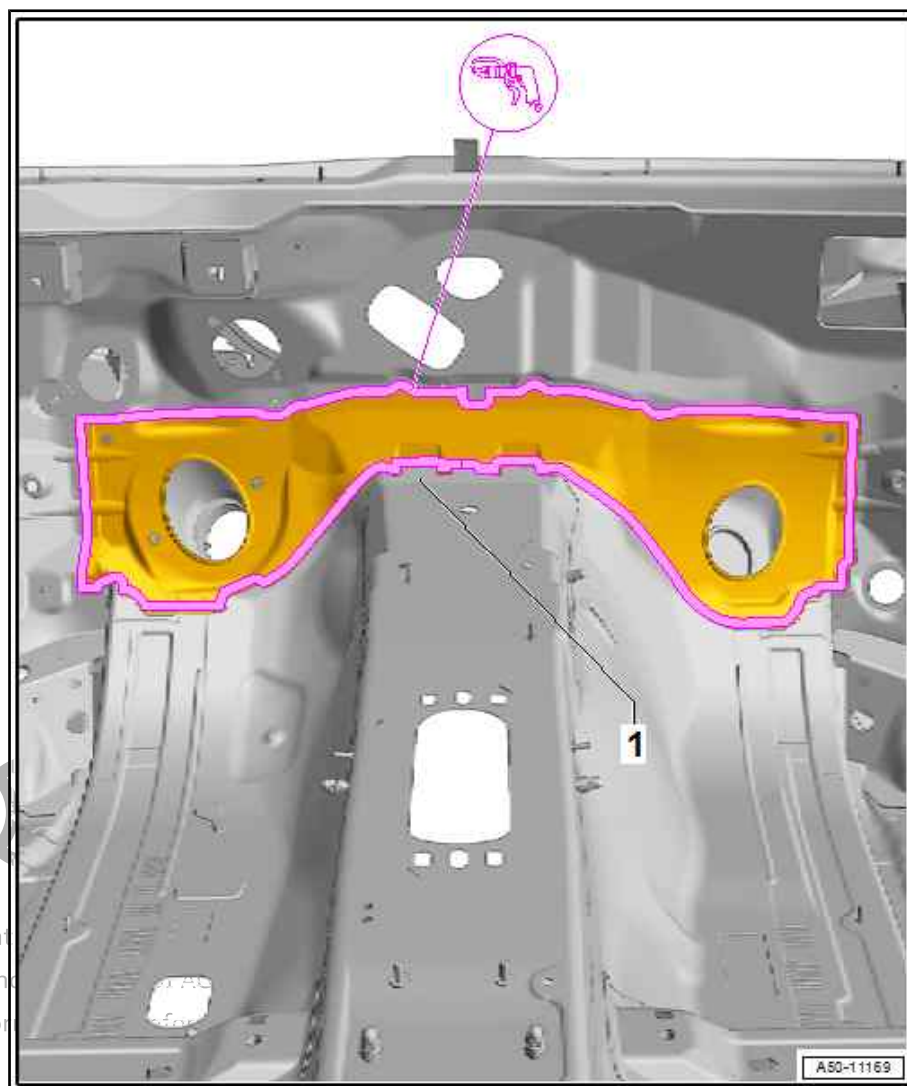
Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 38](#) .



7.2 Procedure

Cutting locations

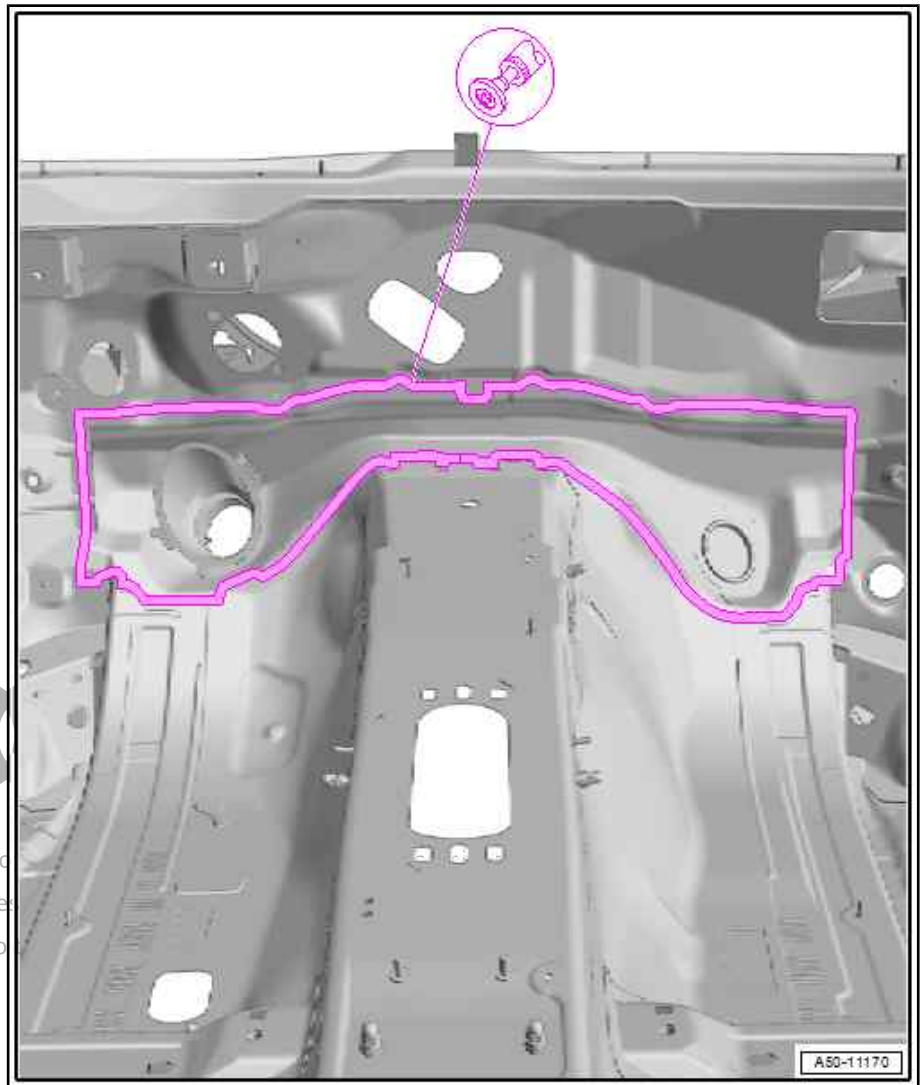
- Separate original joint using spot weld breaker .
- Separate centre tunnel in area -1-.
- Lift out footwell cross member.



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



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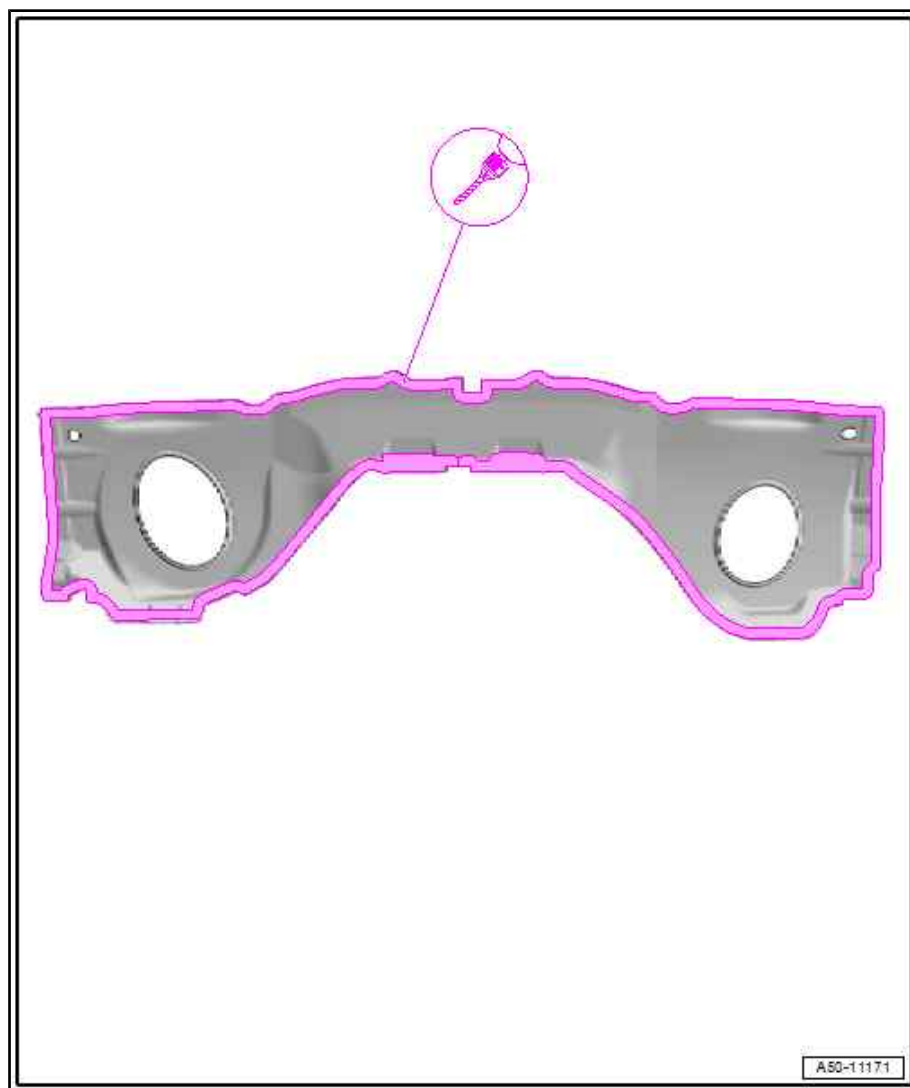


Replacement parts

- ◆ Upper footwell cross member

Preparing new part

- Drill holes for SG plug weld seam, 8.0 mm Ø using drill .
- Grind welding areas down to bare metal.



NOTICE

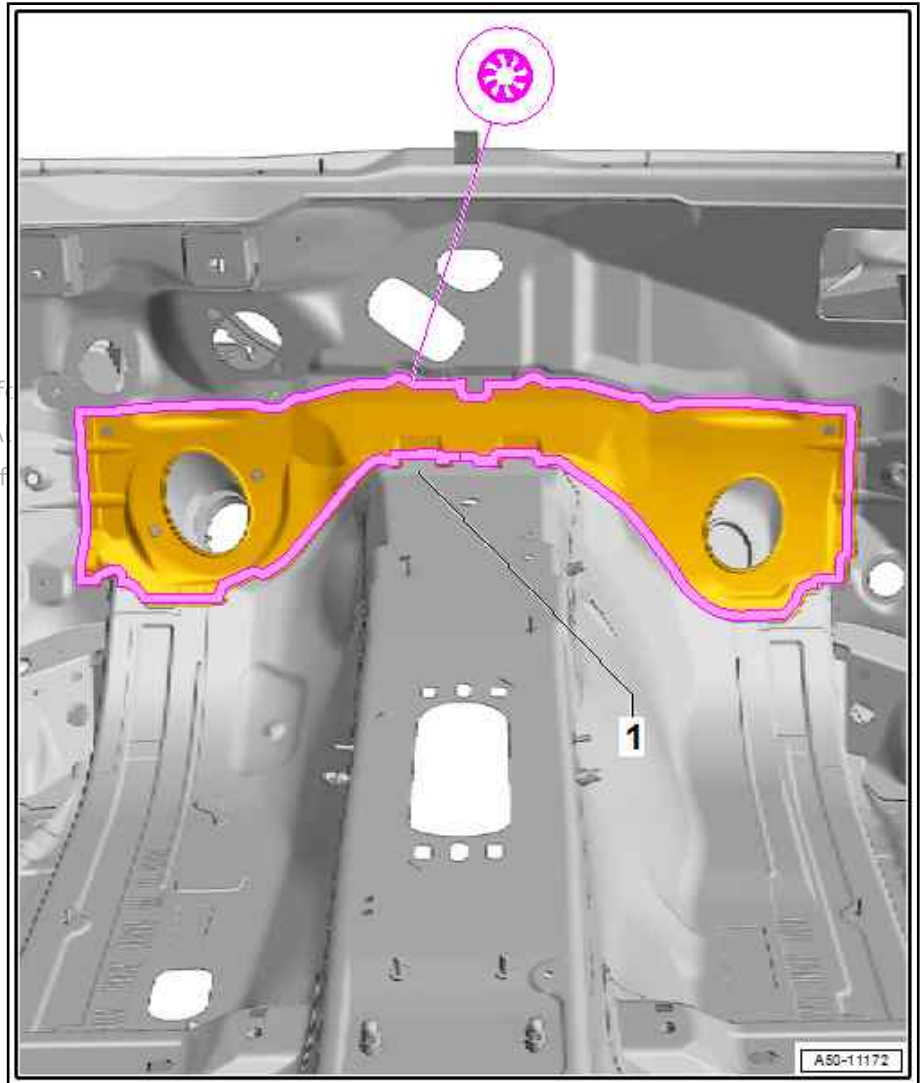
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" must be used to ensure correct results when spot welding.

Welding in

- Match up and fix new part in position.
- Align centre tunnel in area -1-.
- Weld in new part using shielded arc welding equipment : SG plug weld seam.



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RO: 50 79 49 50

8 Repairing threads for attachment of subframe

- 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.

8.1 Tools

Special tools and workshop equipment required

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

Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 38](#) .



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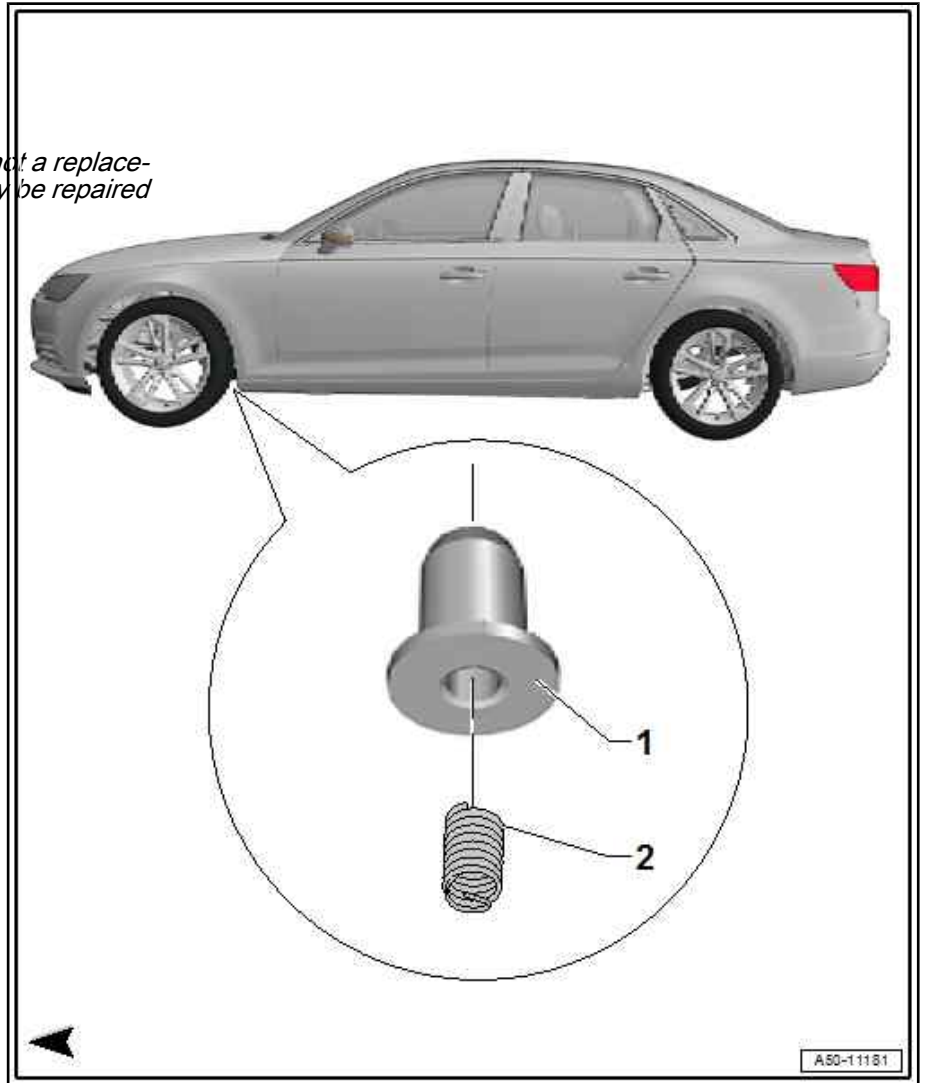
1 - Threaded plate (welded into subframe)



Note

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

2 - Helicoil thread insert

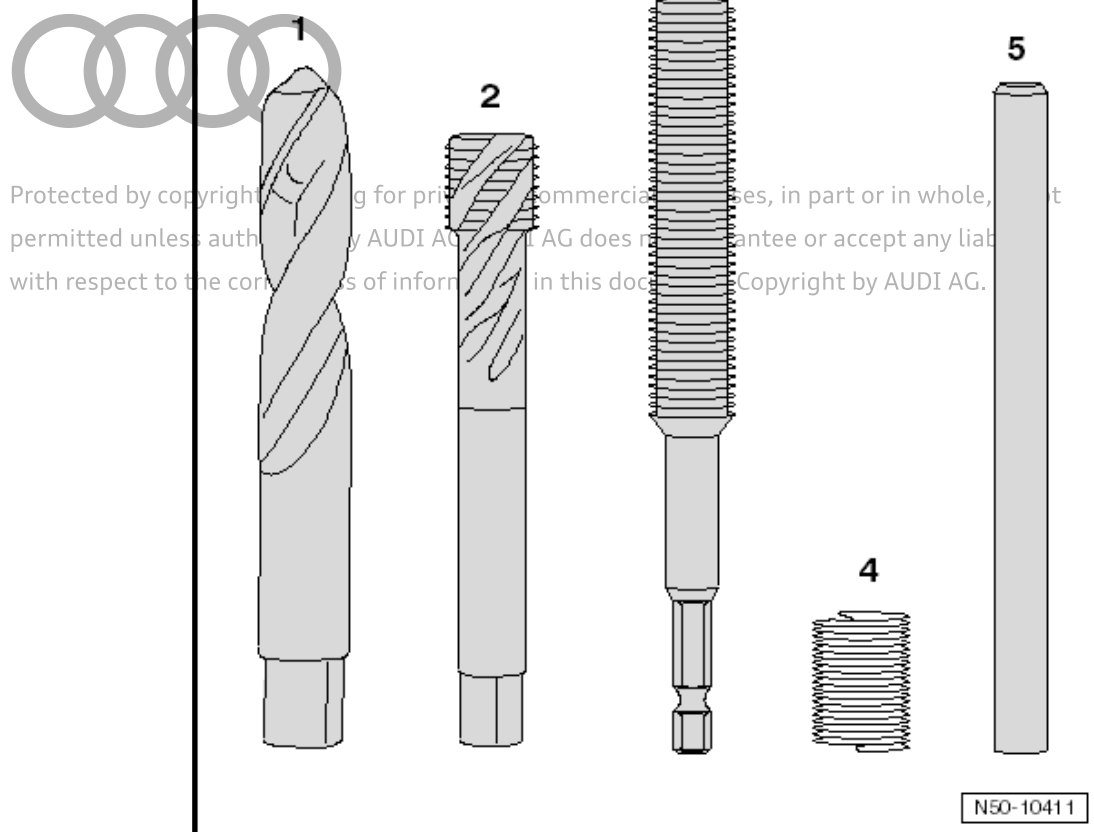


Contents of thread repair kit

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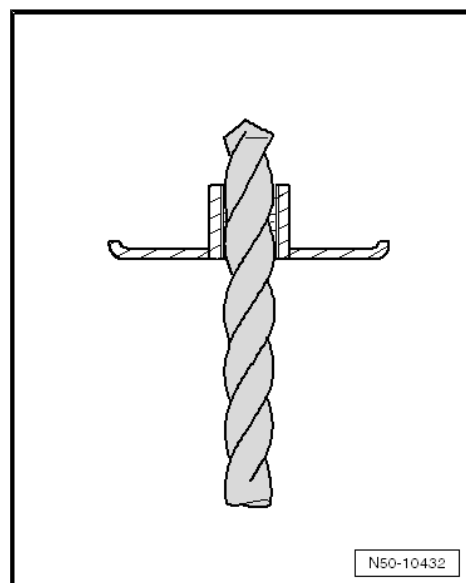
- 1 - Drill bit Ø 12.5 mm
- 2 - Thread tap M 12 x 1.5
- 3 - Fitting spindle
- 4 - Thread insert M 12 x 1.5 x 24 (-VAS 6058/1-)
- 5 - Pin breaker with magnetic tip



Repairing thread

Making drilling for thread

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





CAUTION

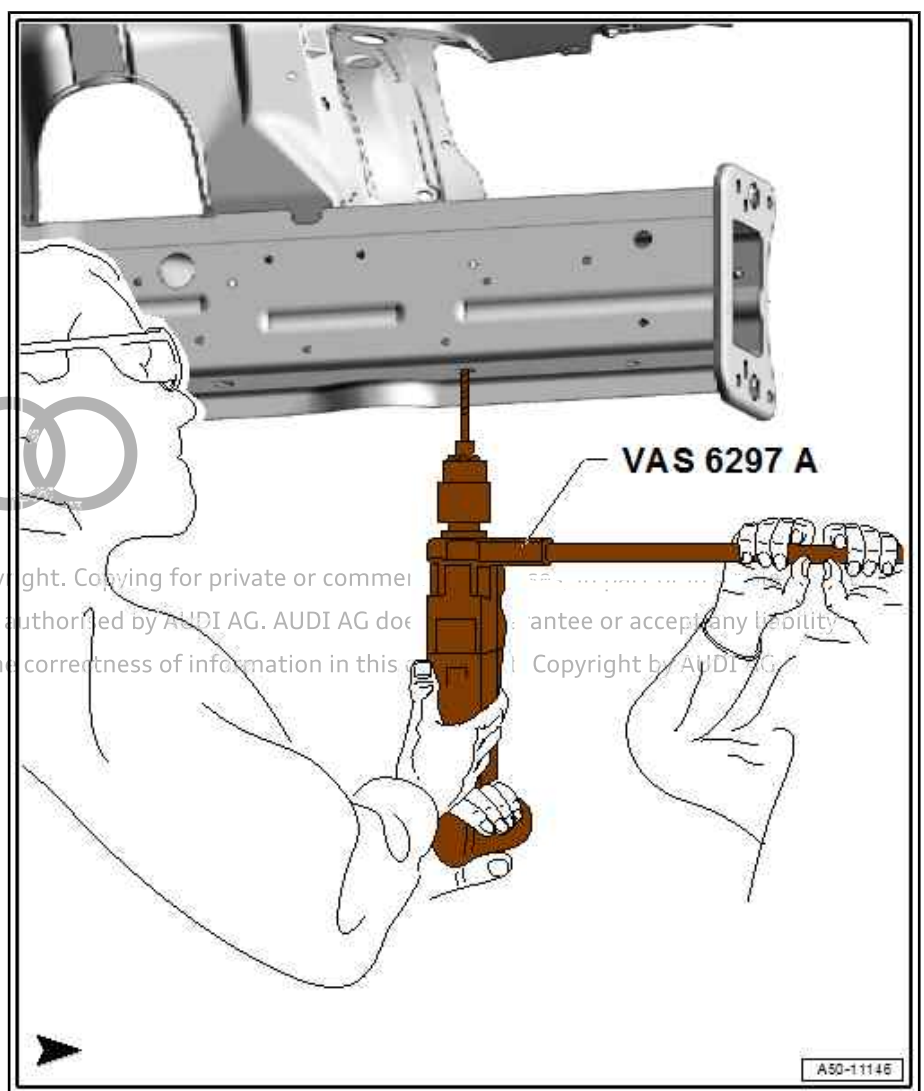
Risk of eye injuries due to metal swarf.

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



Note

- ◆ Use drill - VAS 6297 A- for drilling and cutting.
- ◆ The drill must be supported by a second mechanic using the additional handle.
- ◆ Take care to keep the drill straight.



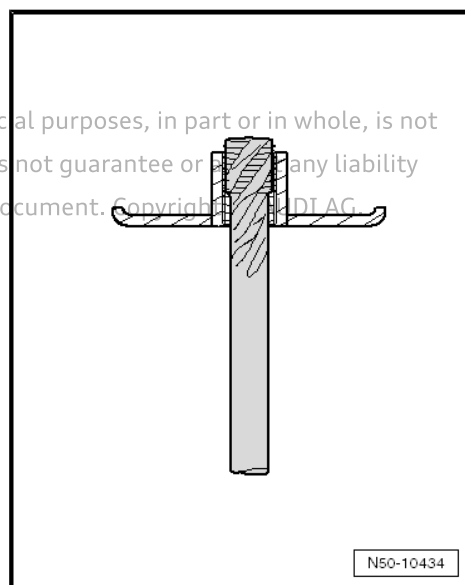


Cutting thread

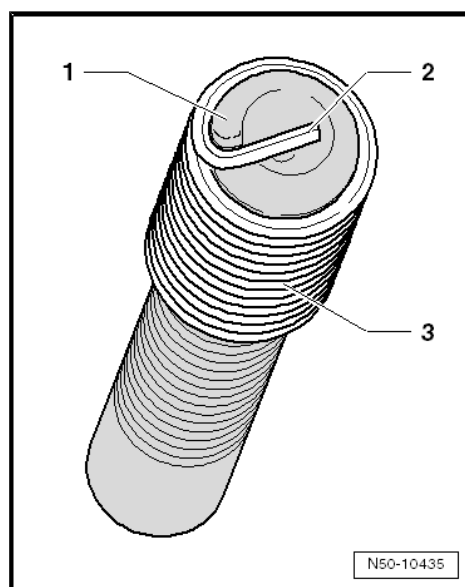
- Cut thread using thread tap.

Fitting thread insert

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



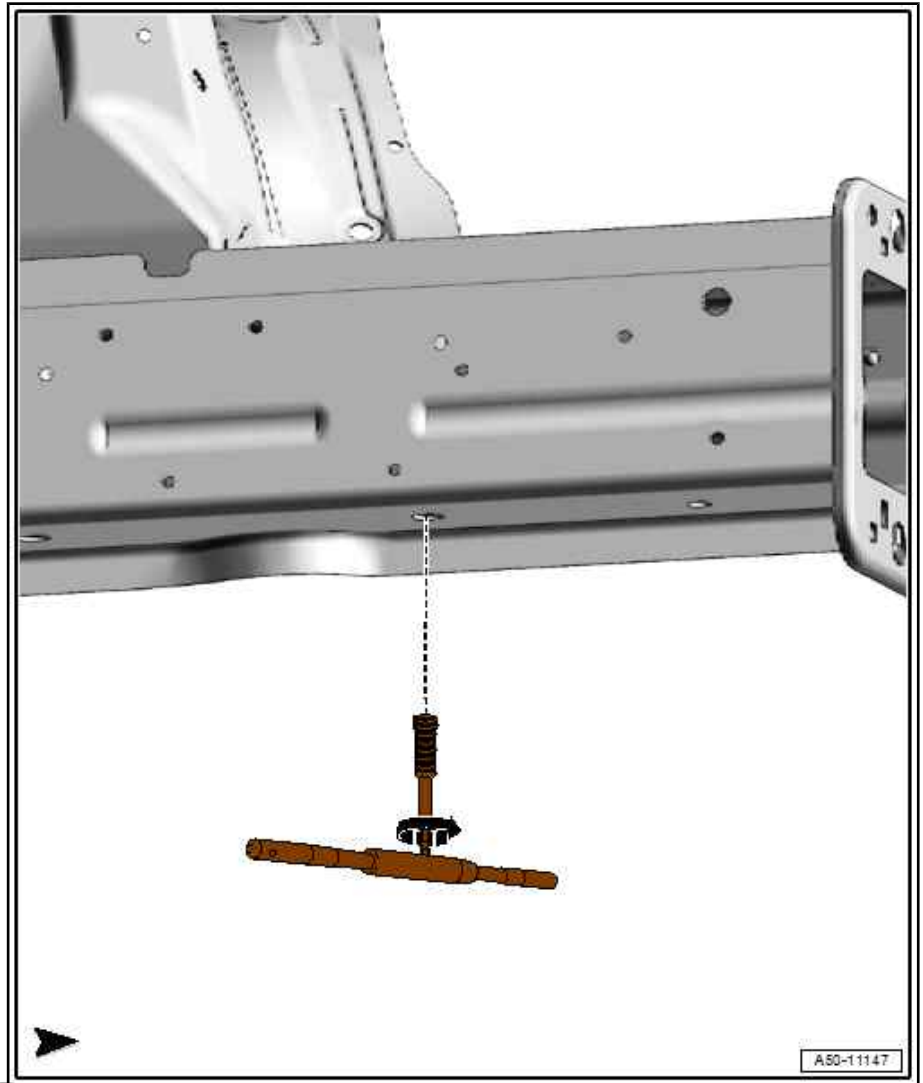
- Blow out threaded drilling with compressed air.



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 .

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51 – Body - centre

1 Permitted separating cuts on complete side panel

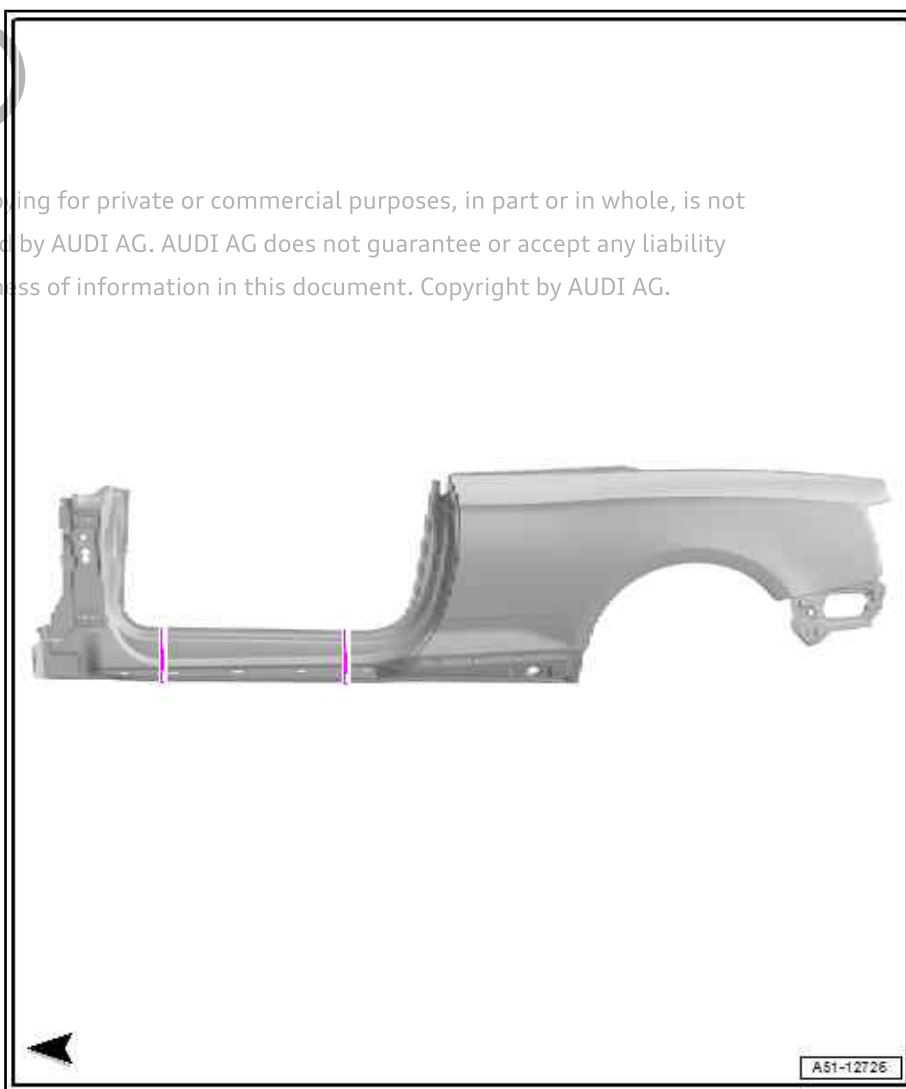


Note

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



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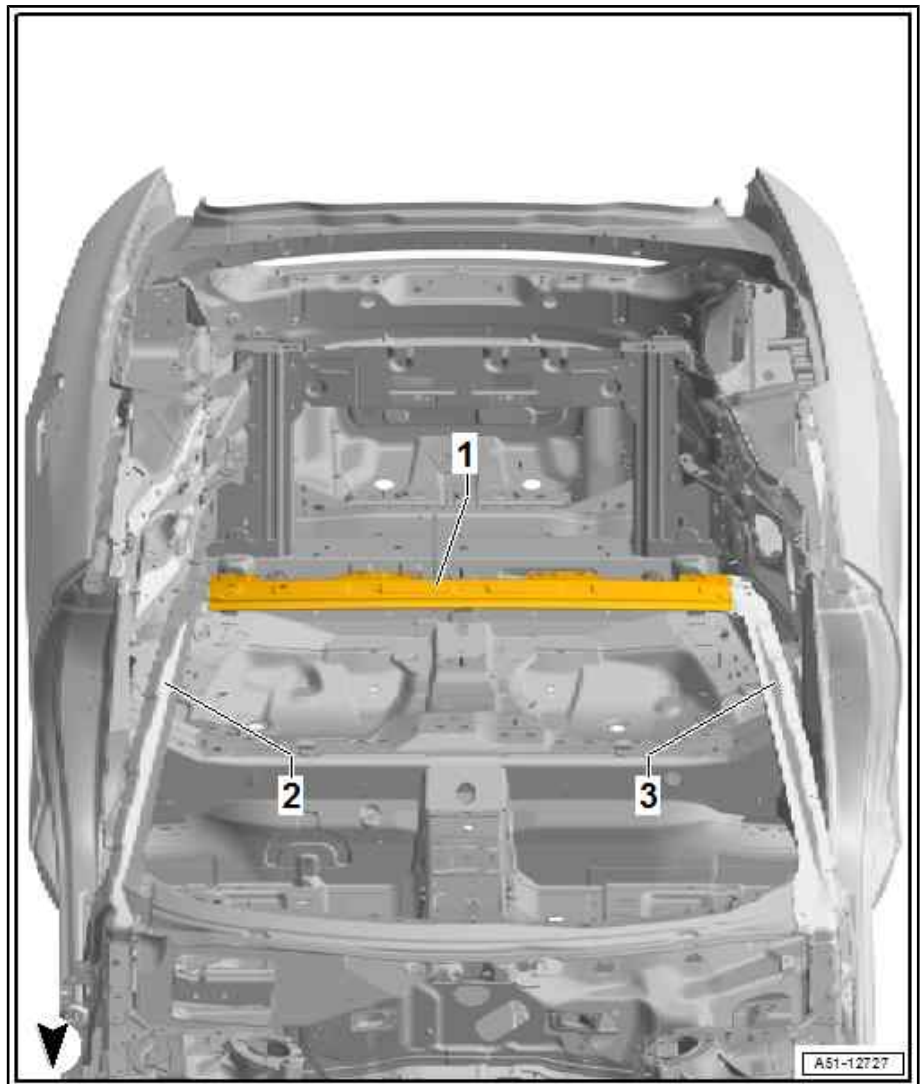




RO: 51 11 55 00

2 Windscreen frame - Renewal

- 1 - Windscreen frame
- 2 - A-pillar (left-side)
- 3 - A-pillar (right-side)



2.1 Tools

Special tools and workshop equipment required

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

Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 38](#) .

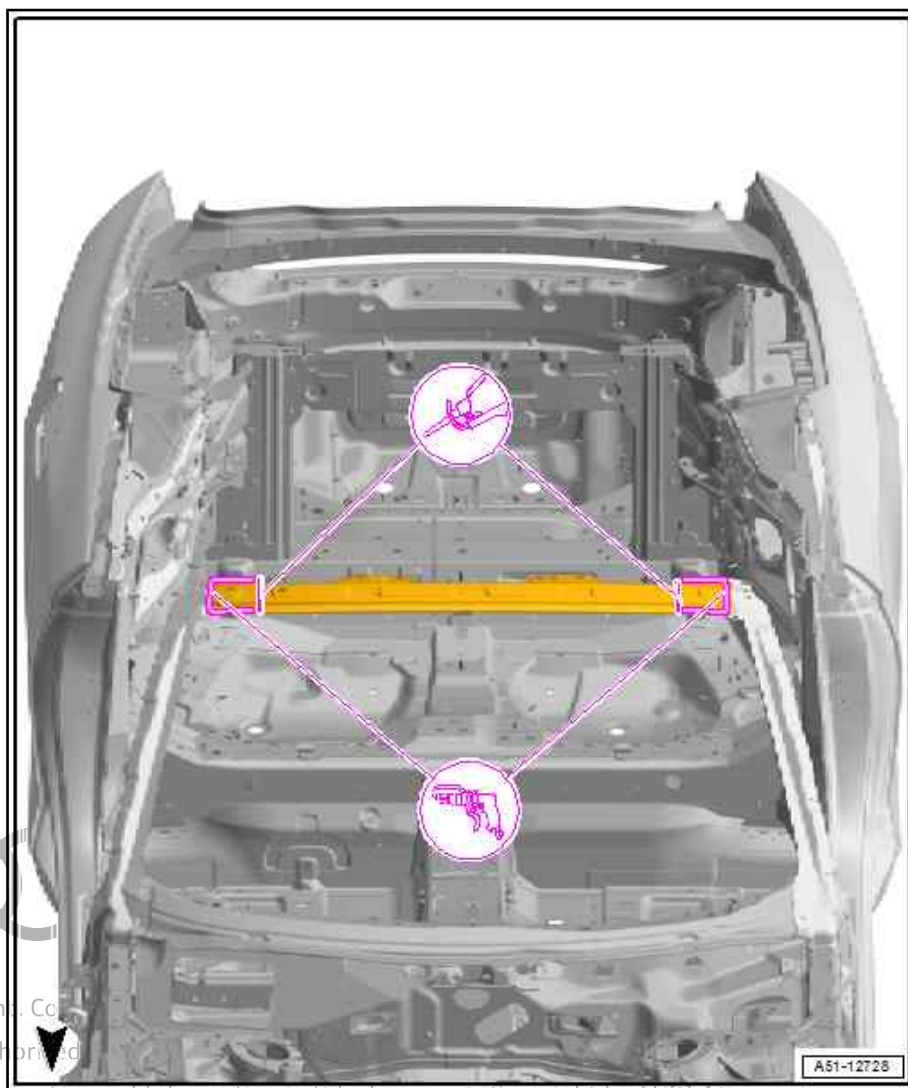
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2.2 Procedure

Cutting locations

- Working from above, separate original joint between wind-screen frame and A-pillars using spot weld breaker .
- Make separating cut on both sides with body saw , as shown.

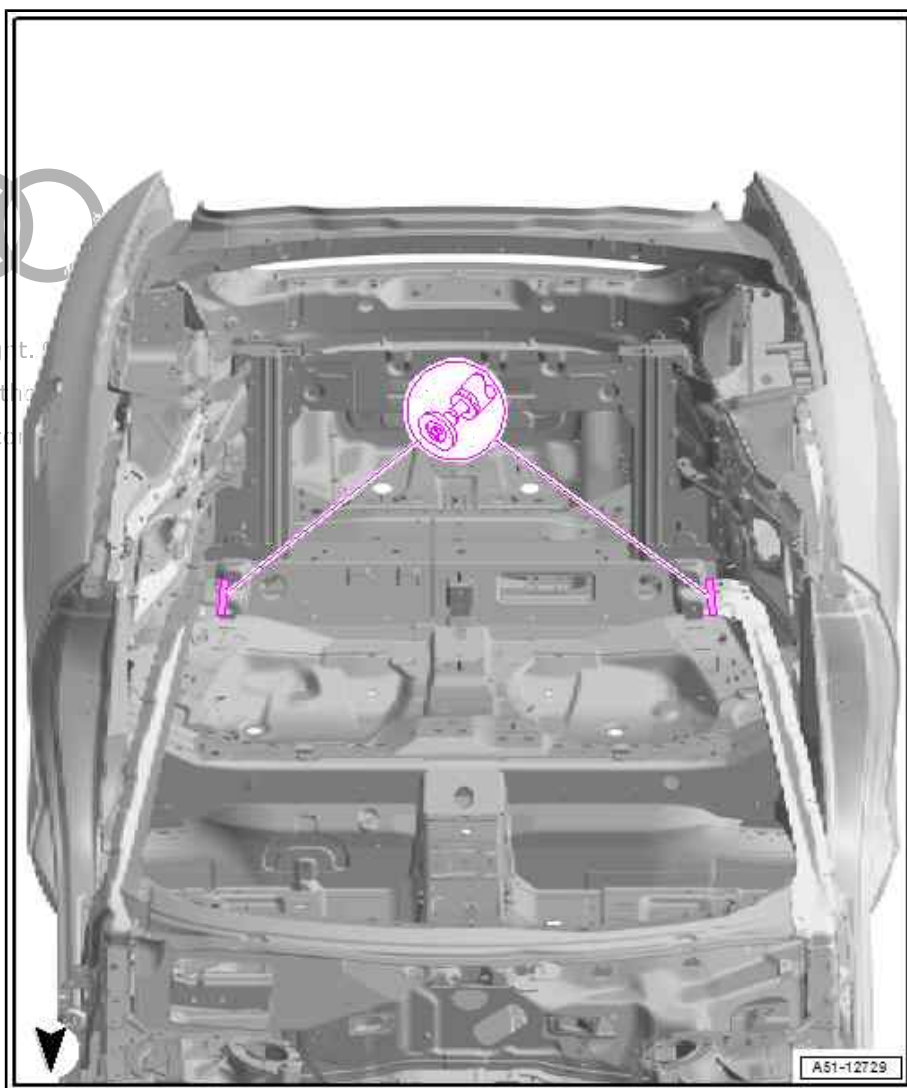


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- Remove remaining material on both sides using compact angle grinder .



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Replacement part

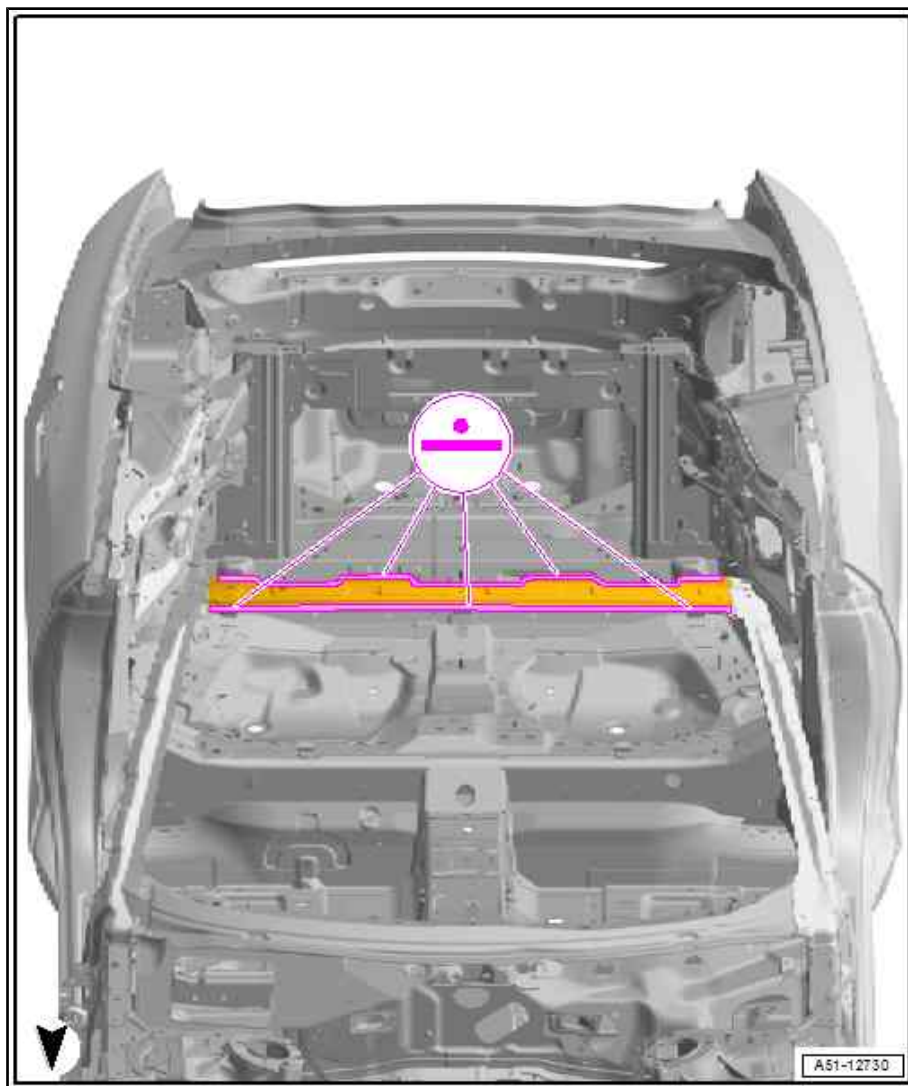
- ◆ Inner windscreen frame
- ◆ Outer windscreen frame

NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" must be used to ensure correct results when spot welding.

Welding in

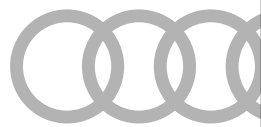
- With vehicle standing on alignment bracket set, match up new parts and fix in position.
- Check fit relative to adjacent parts.
- Weld in windscreen frame using resistance spot welder : RP spot weld seam.



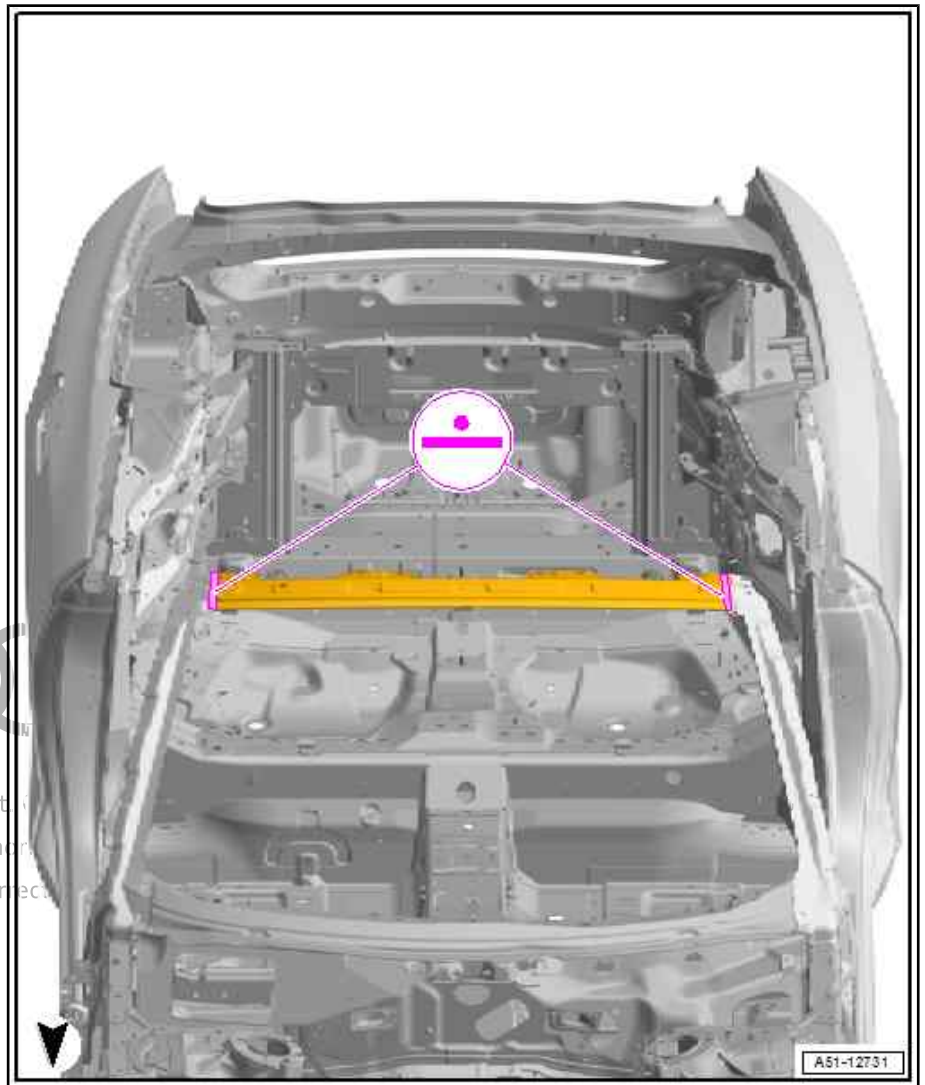
- Weld in windscreen frame using resistance spot welder : RP spot weld seam.



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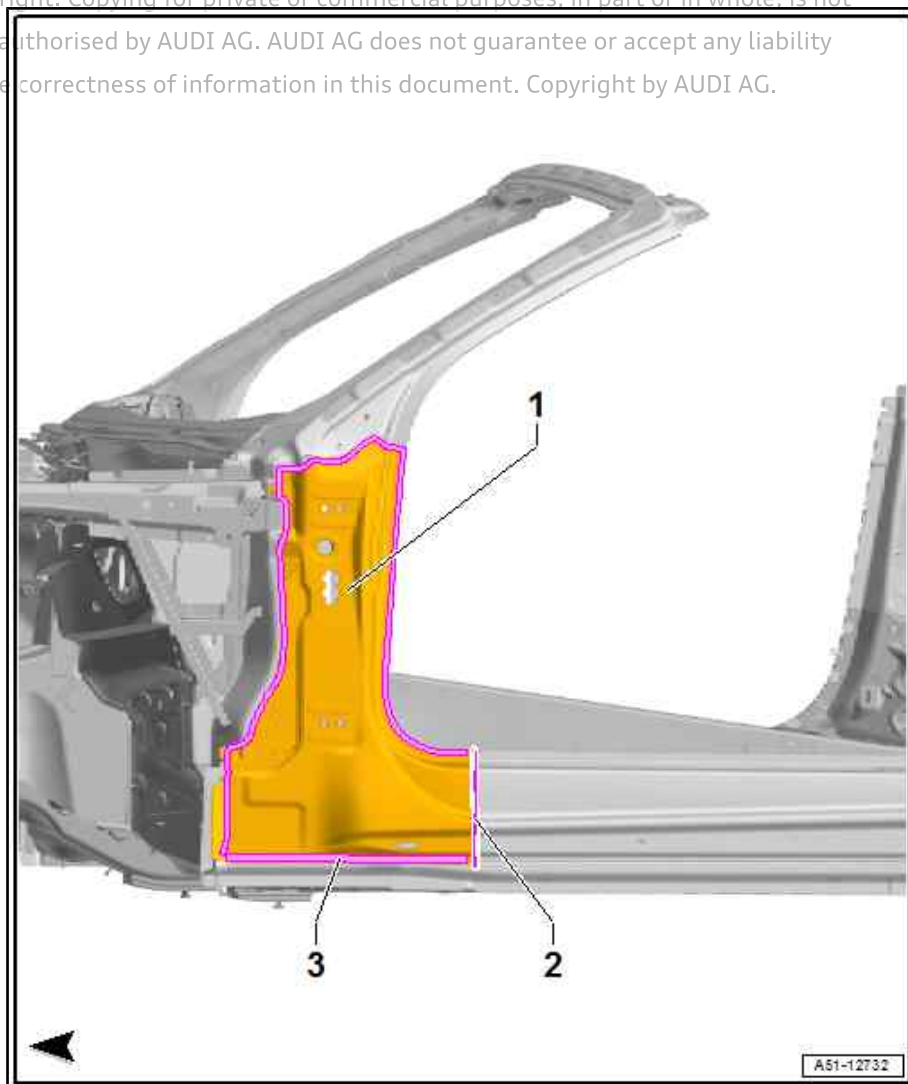
3 Lower A-pillar - Renewal

1 - A-pillar

2 - Separating cut in side member

3 - Laser weld seam

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3.1 Tools

Special tools and workshop equipment required

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

Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 38](#) .

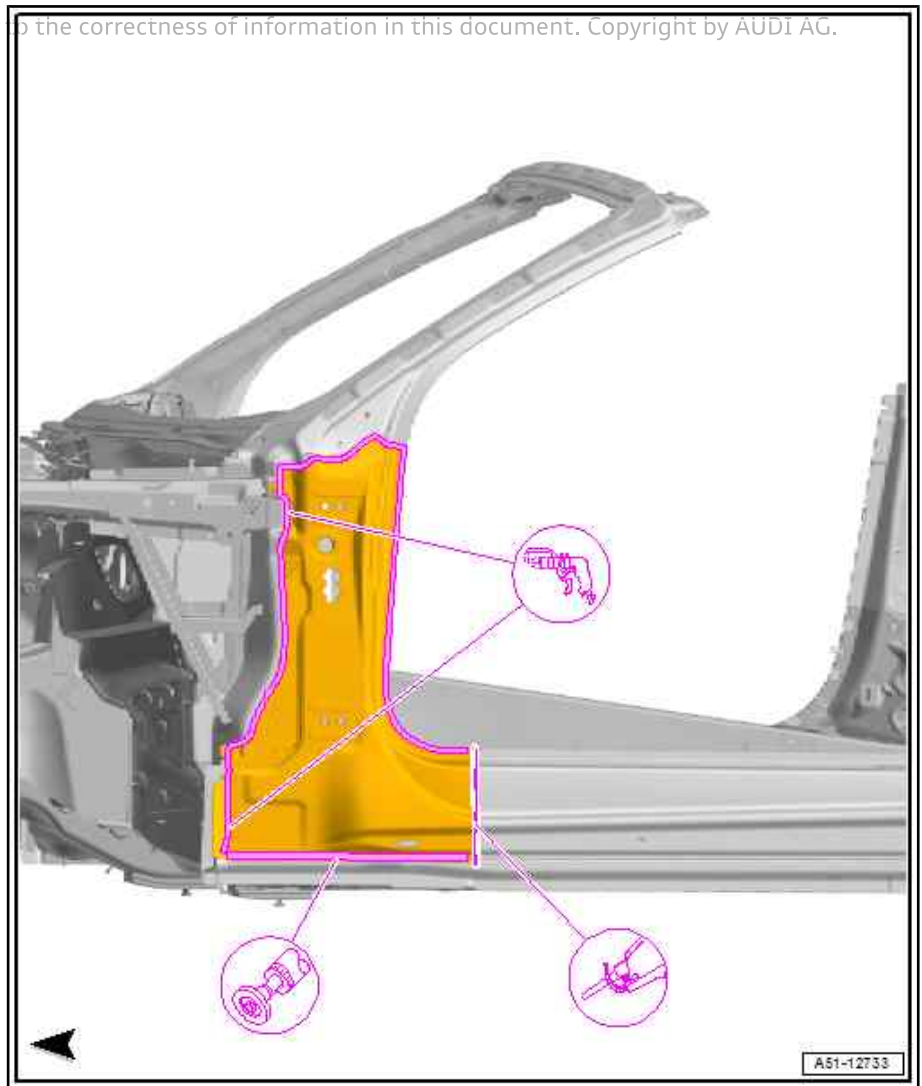


3.2 Procedure

Cutting locations

- Mark off separating cut according to degree of damage and make cuts using body saw .
- Drill out original joint using spot weld breaker .
- Separate laser weld seam using compact angle grinder .

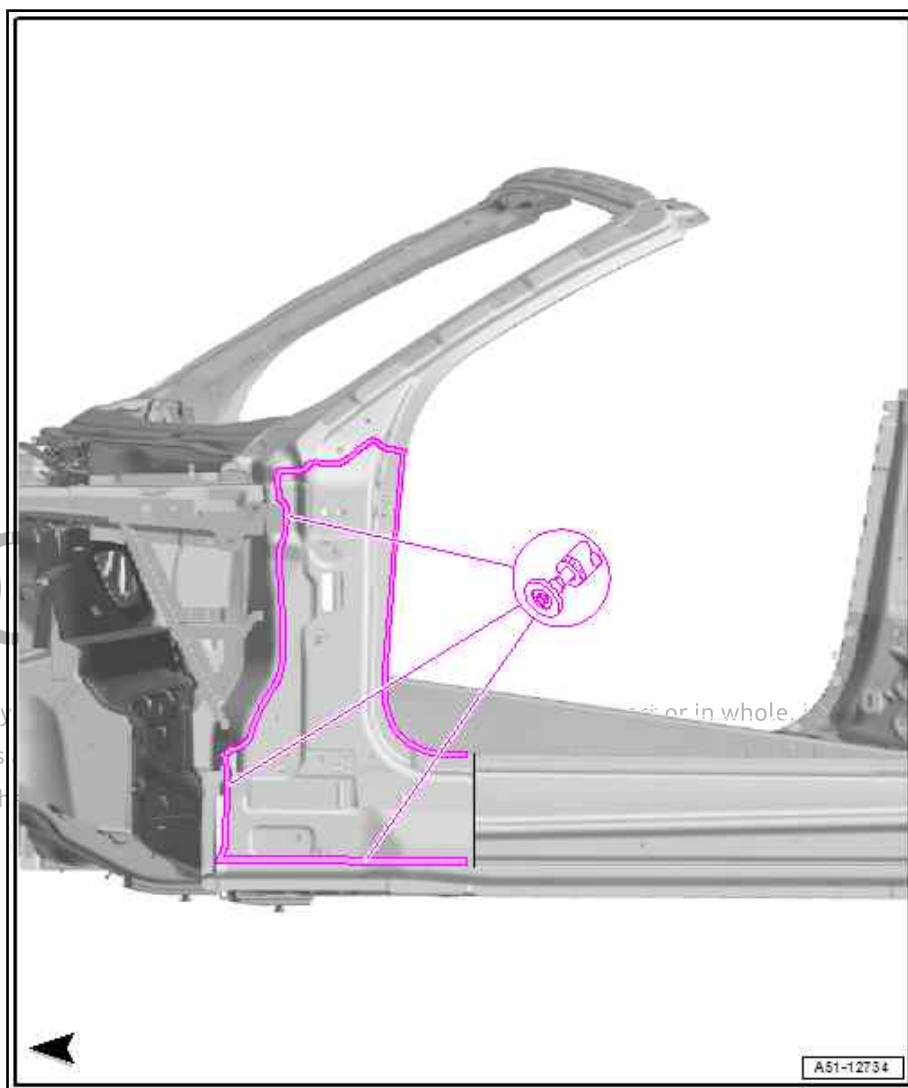
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- Remove remaining material using compact angle grinder .



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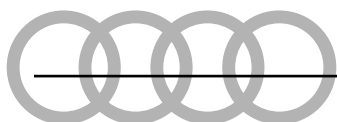


Replacement part

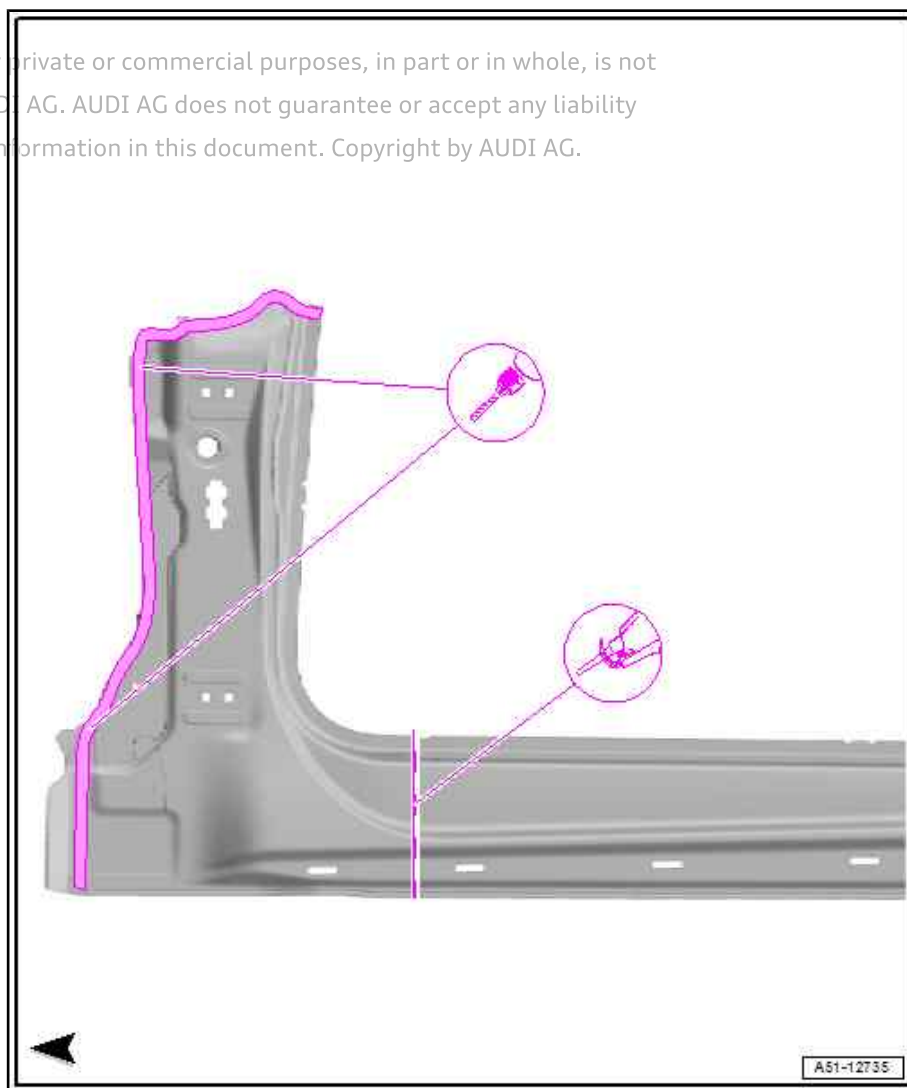
- ◆ A-pillar

Preparing new part

- Transfer separating cut to new part and cut to size using body saw .
- Drill holes for SG plug weld seam (7 mm Ø) using drill .



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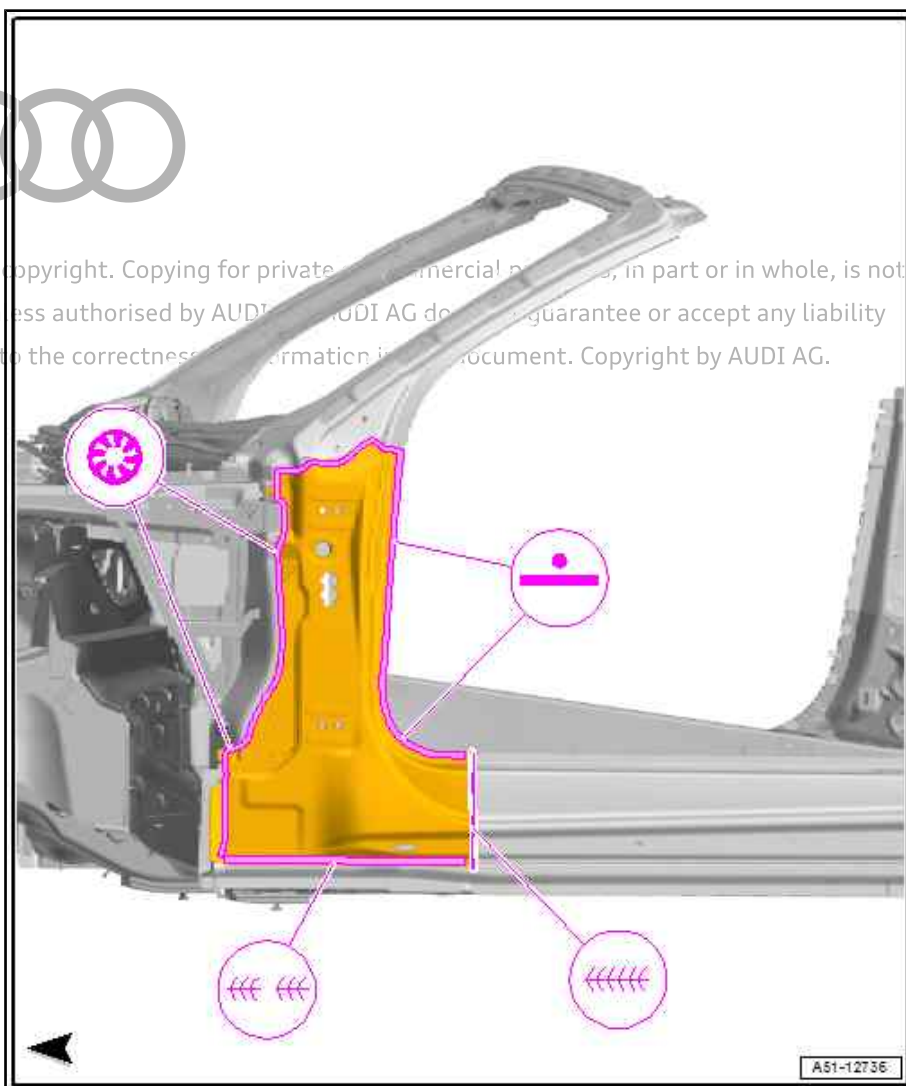
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" must be used to ensure correct results when spot welding.

Welding in

- Place a backing plate of the same material behind the separating cut.
- Match up and fix new part in position.
- Check fit relative to bolt-on parts.
- Weld in A-pillar using resistance spot welder : RP spot weld seam.
- Weld in new part using shielded arc welding equipment : SG continuous seam (staggered - with gaps) in place of laser weld.
- Butt weld separating cut using shielded arc welding equipment : SG continuous seam.
- Weld connection to A-pillar reinforcement (front) using shielded arc welding equipment : SG plug weld seam.



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RO: 51 37 55 02

4 Upper A-pillar - Renewal

1 - Upper A-pillar

2 - Lower A-pillar

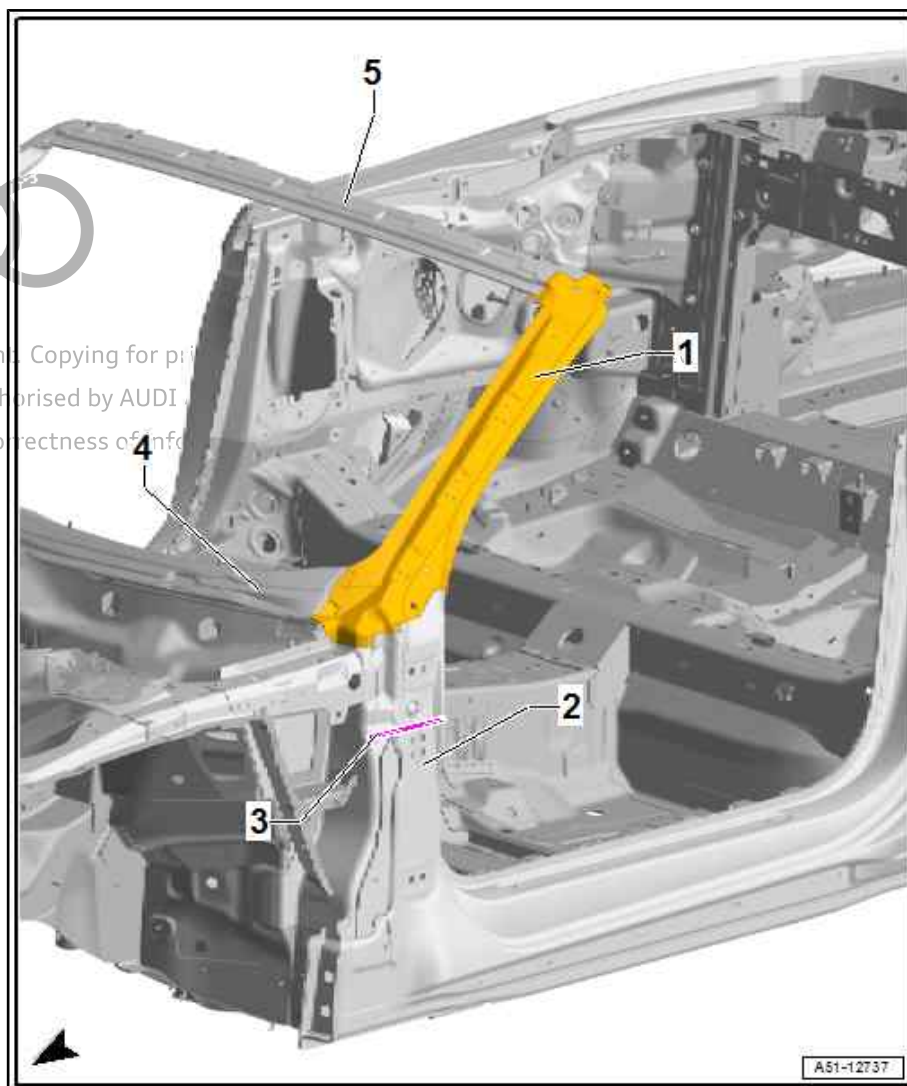
3 - Separating cut for partial renewal

Partial renewal

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

4 - Lower windscreen frame

5 - Upper windscreen frame



4.1 Tools

Special tools and workshop equipment required

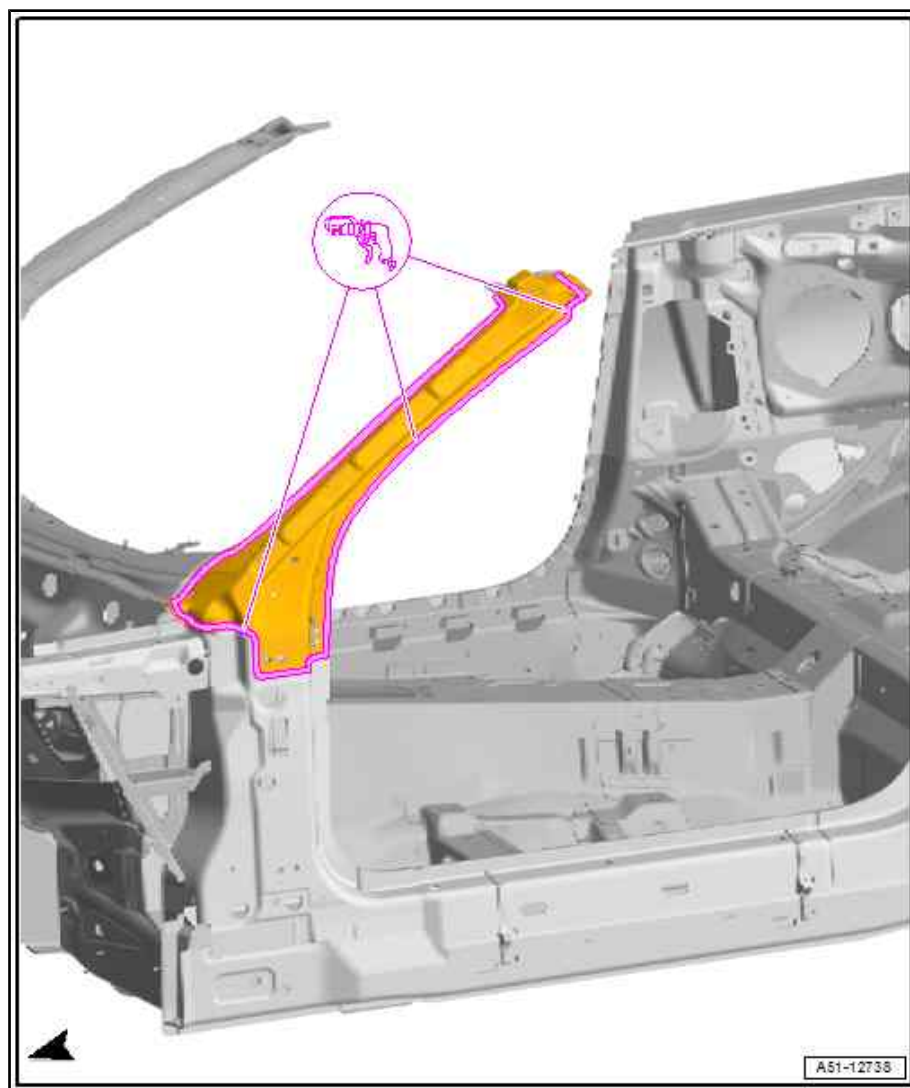
- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Compact angle grinder
- ◆ Drill
- ◆ Spot weld breaker

Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work [⇒ page 38](#).

4.2 Procedure

Cutting locations

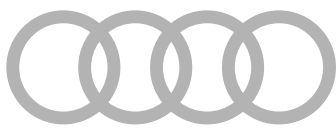
- Drill out original joint using spot weld breaker.



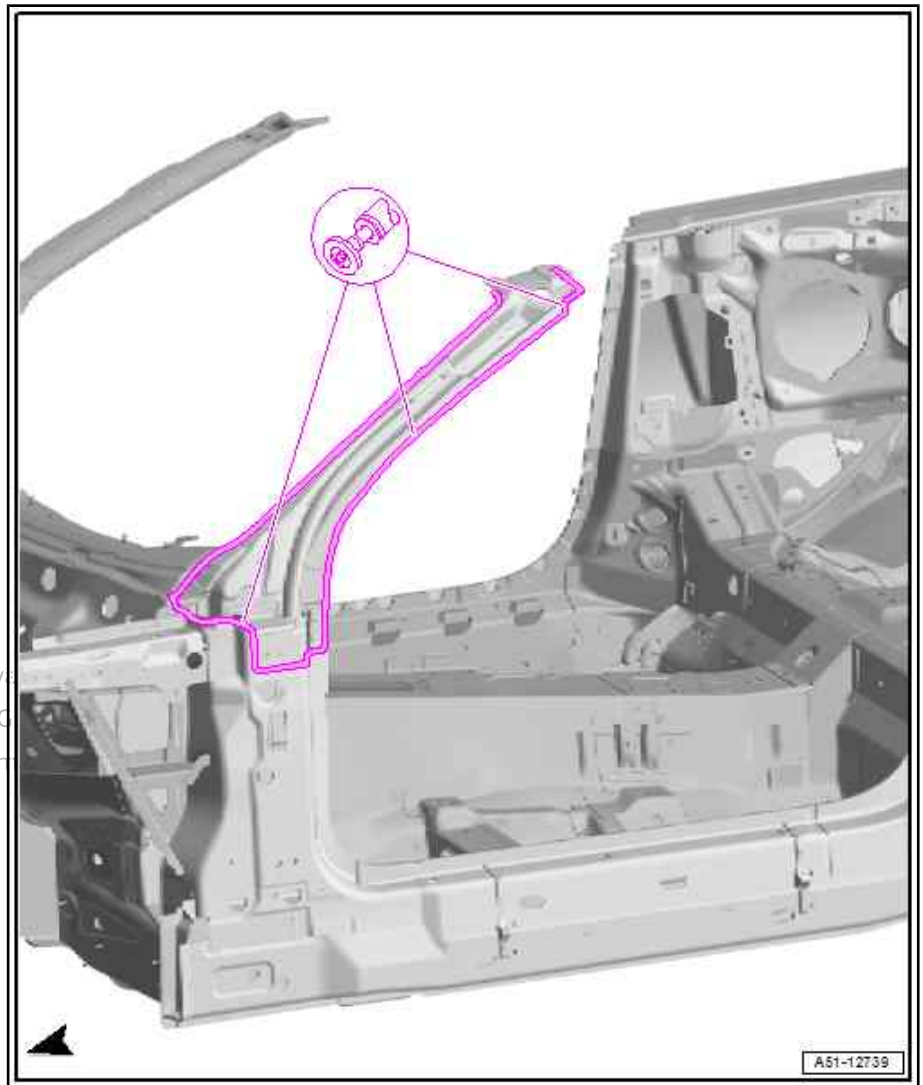
- Remove remaining material using compact angle grinder .



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Replacement part

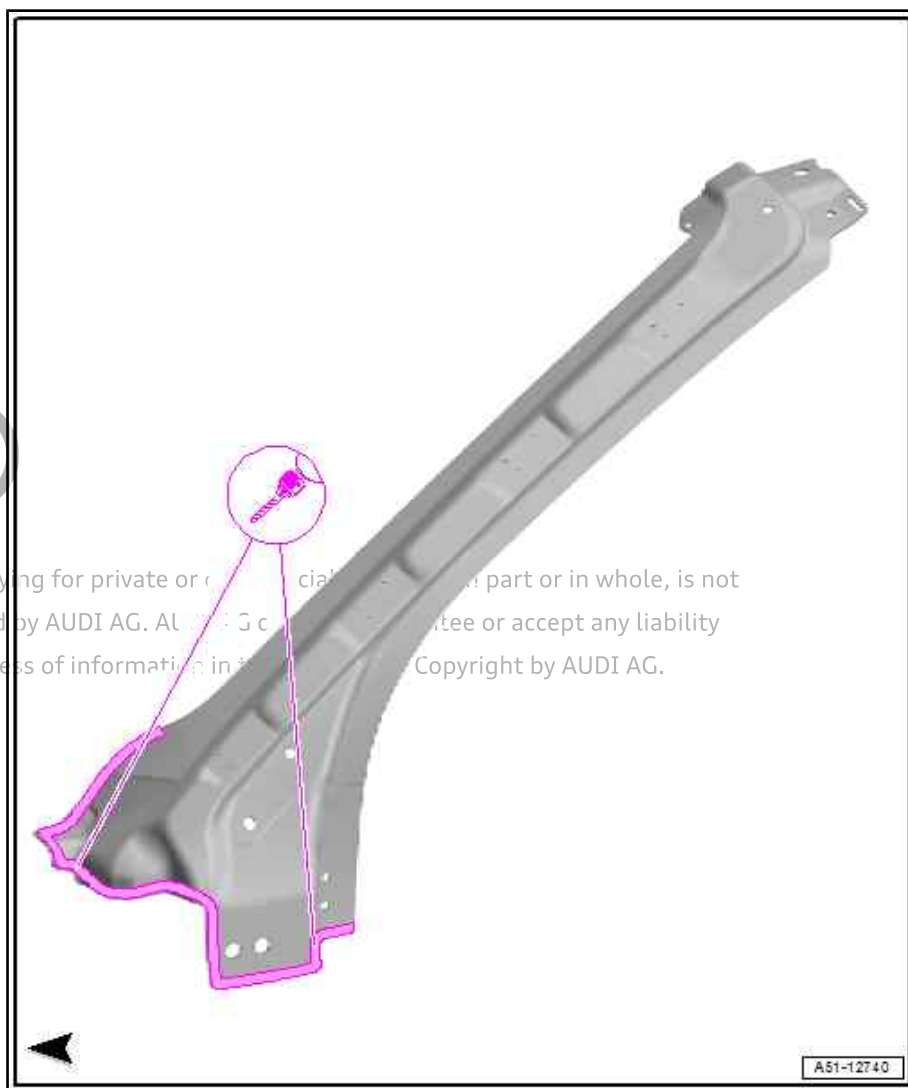
- ◆ Upper A-pillar

Preparing new part

- Drill holes for SG plug weld seam (7 mm Ø) using drill .



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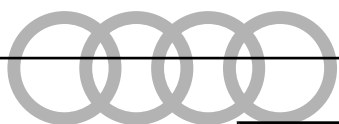


NOTICE

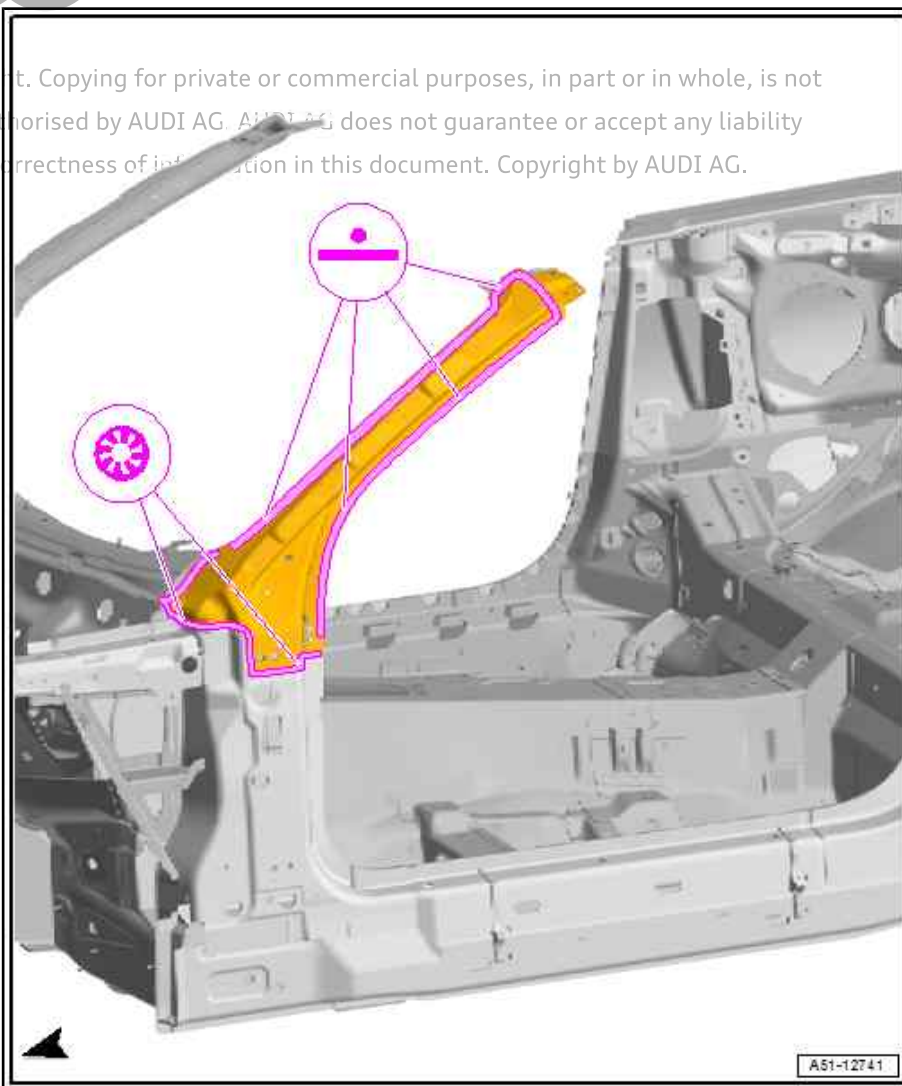
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" must be used to ensure correct results when spot welding.

Welding in

- Match up and fix new part in position.
- Check fit relative to bolt-on parts.
- Weld in upper A-pillar using resistance spot welder : RP spot weld seam.
- Weld upper A-pillar using shielded arc welding equipment : SG plug weld seam.



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RO: 51 38 55 50

5 Lower A-pillar reinforcement - Renewal

1 - Lower A-pillar reinforcement

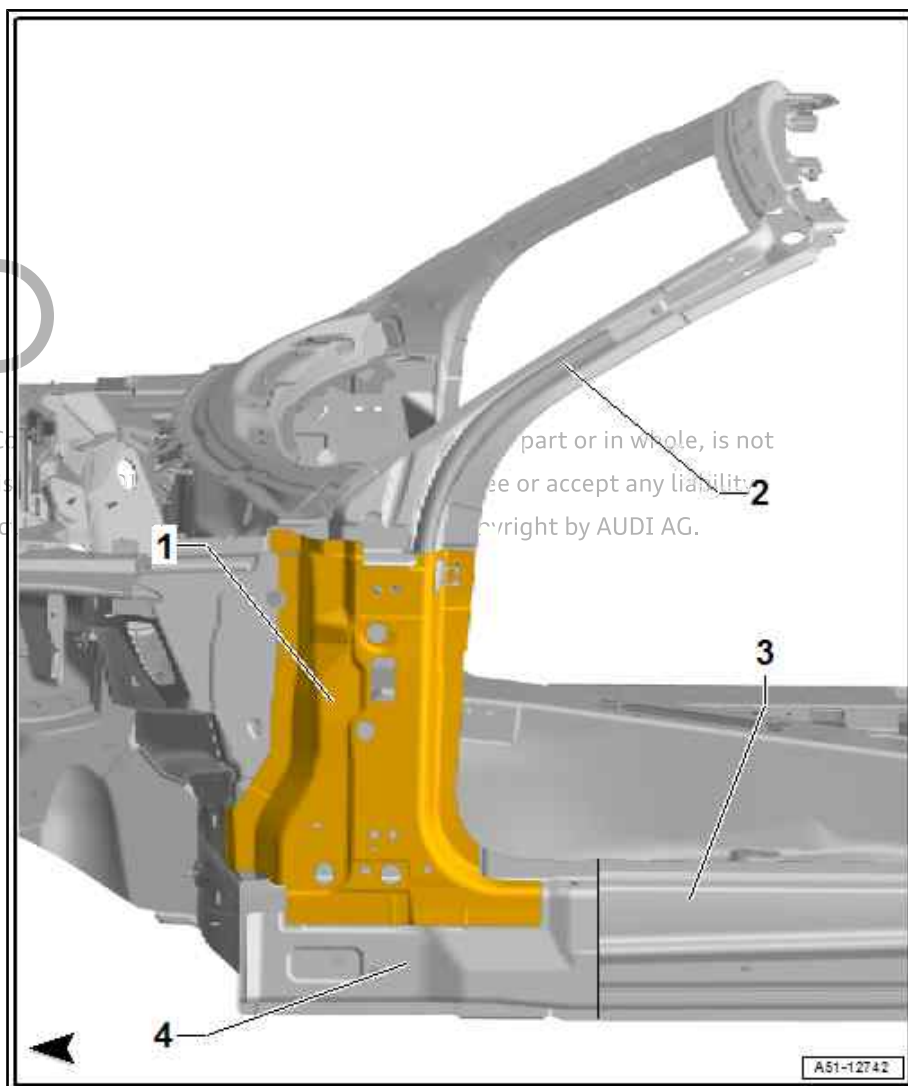
2 - Upper A-pillar

3 - Outer side member

4 - Side member reinforcement



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5.1 Tools

Special tools and workshop equipment required

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

Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 38](#) .

5.2 Procedure

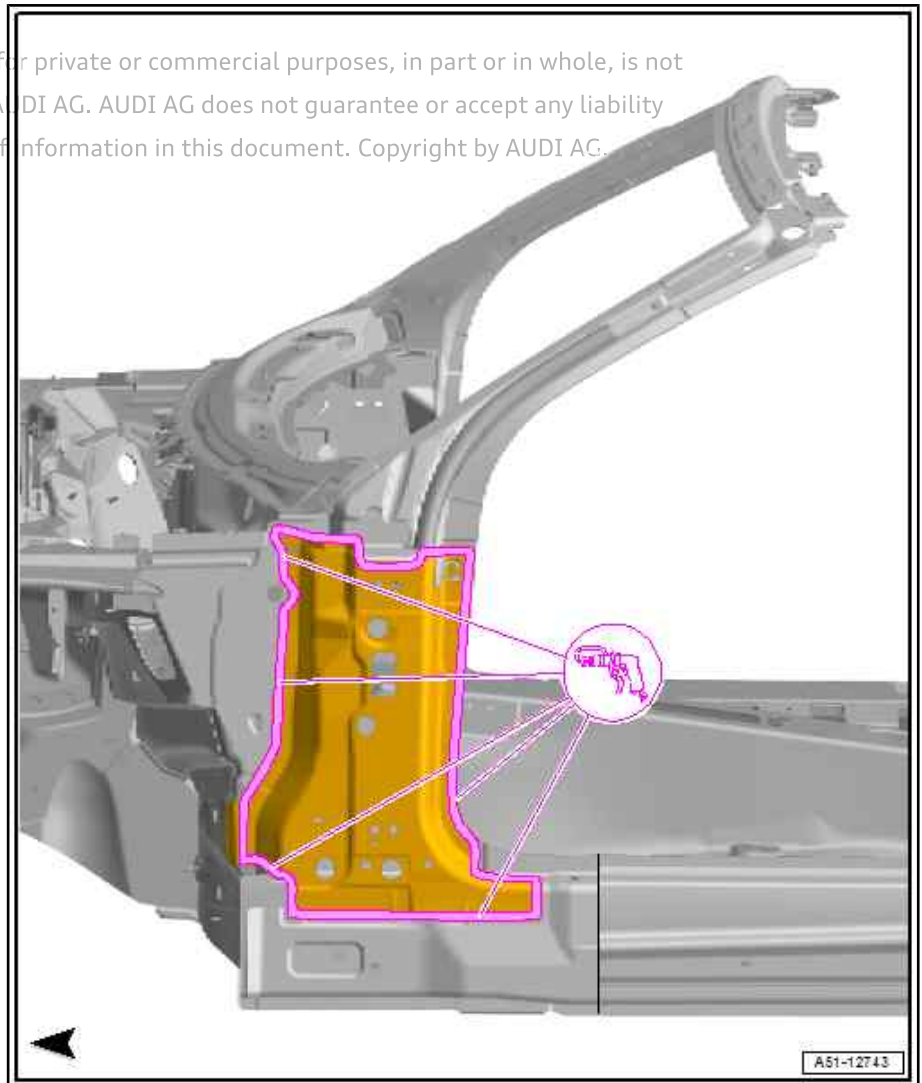
- Outer A-pillar already removed ⇒ [page 106](#) .



Cutting locations

- Drill out original joint using spot weld breaker .

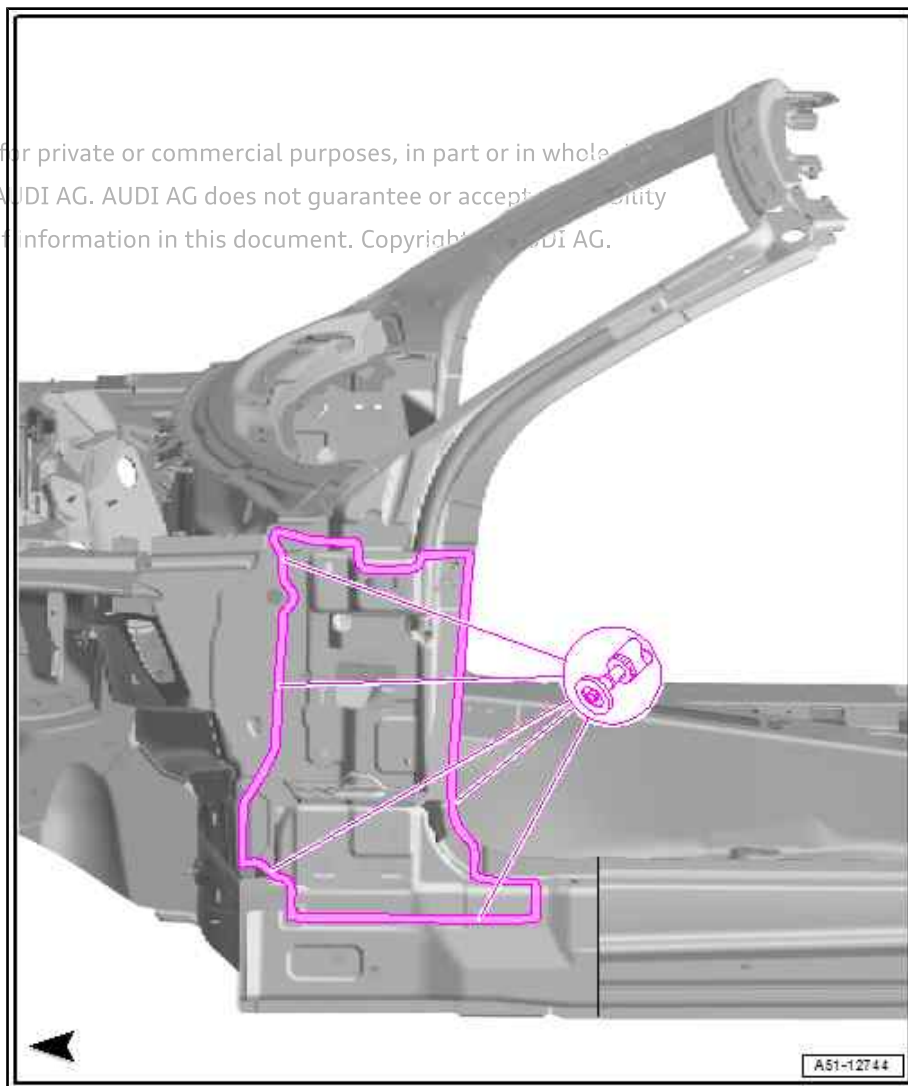
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- Remove remaining material using compact angle grinder .



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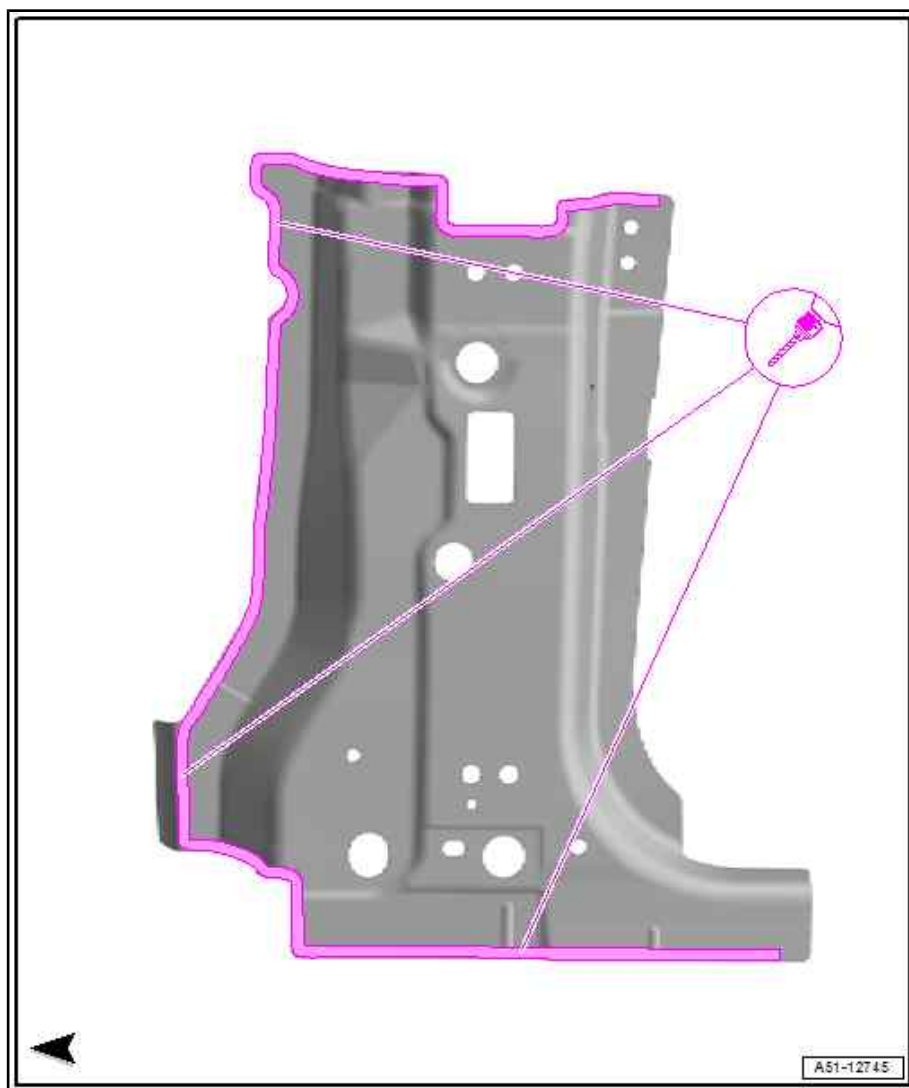


Replacement part

- ◆ A-pillar reinforcement

Preparing new part

- Drill holes for SG plug weld seam, 7 mm Ø using drill .



! NOTICE

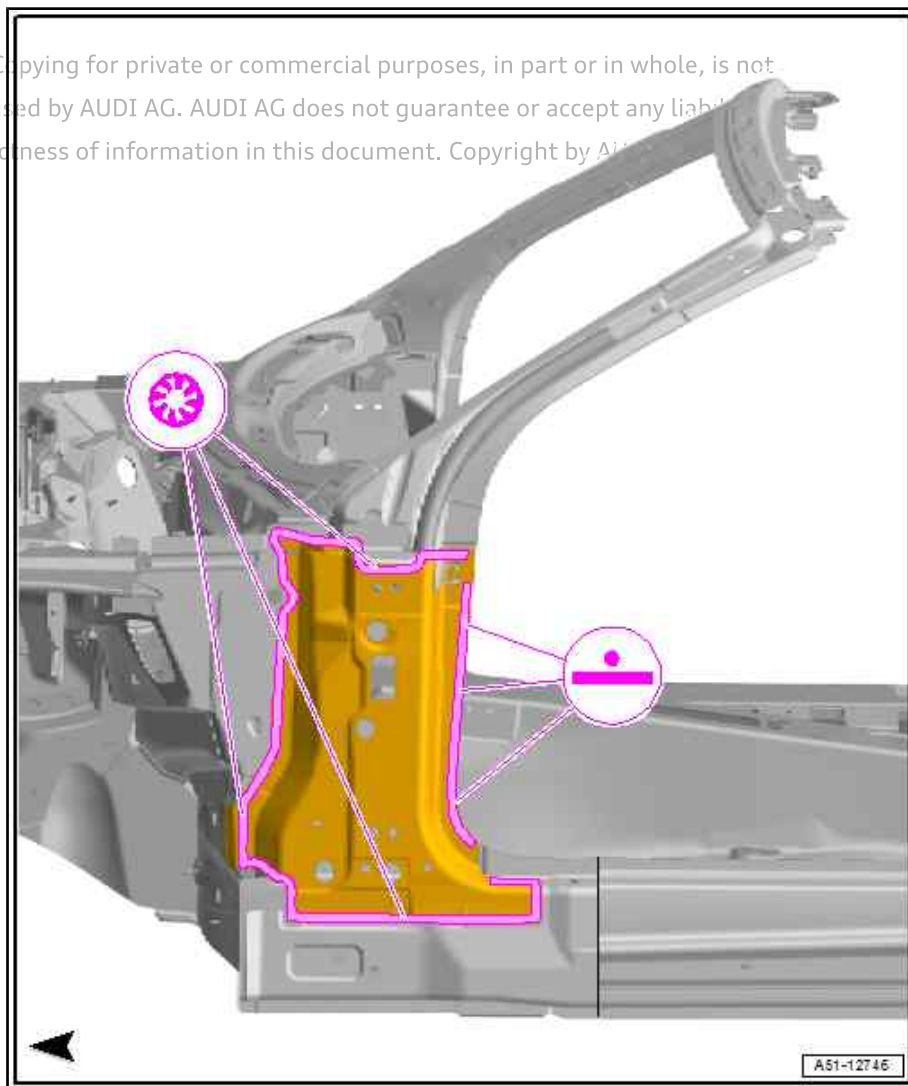
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" must be used to ensure correct results when spot welding.

Welding in

- With vehicle standing on alignment bracket set, match up new part and fix in position.
- Check fit relative to adjacent parts.
- Weld in A-pillar reinforcement using resistance spot welder : RP spot weld seam.
- Weld A-pillar reinforcement using shielded arc welding equipment : SG plug weld seam.



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- Welding in A-pillar ➔ [page 106](#)

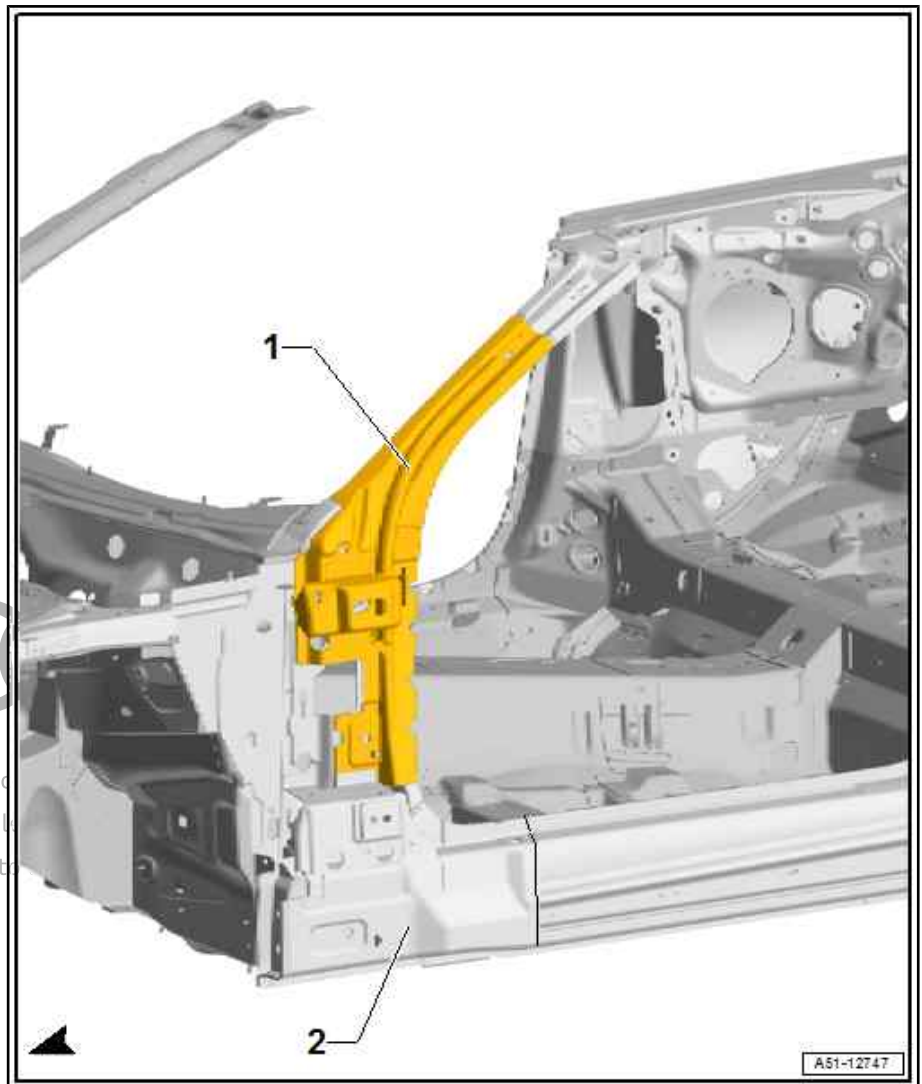


RO: 51 38 55 52

6 Upper A-pillar reinforcement - Renewal

1 - Upper A-pillar reinforcement

2 - Inner side member



6.1 Tool(s)

Special tools and workshop equipment required

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

6.2 Procedure

- Outer A-pillar already removed ⇒ [page 106](#)
- Upper A-pillar already removed ⇒ [page 111](#)
- Lower A-pillar reinforcement already removed ⇒ [page 116](#)

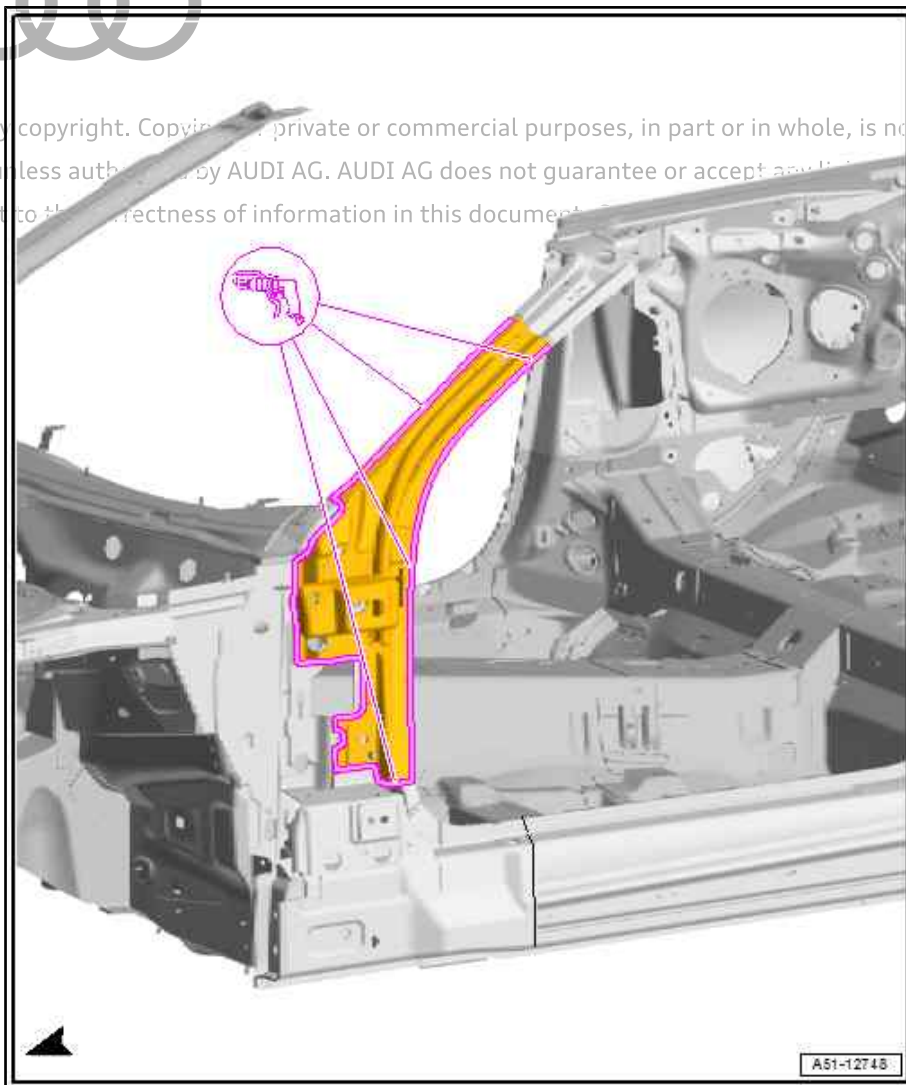


Cutting locations

- Drill out original joint using spot weld breaker .



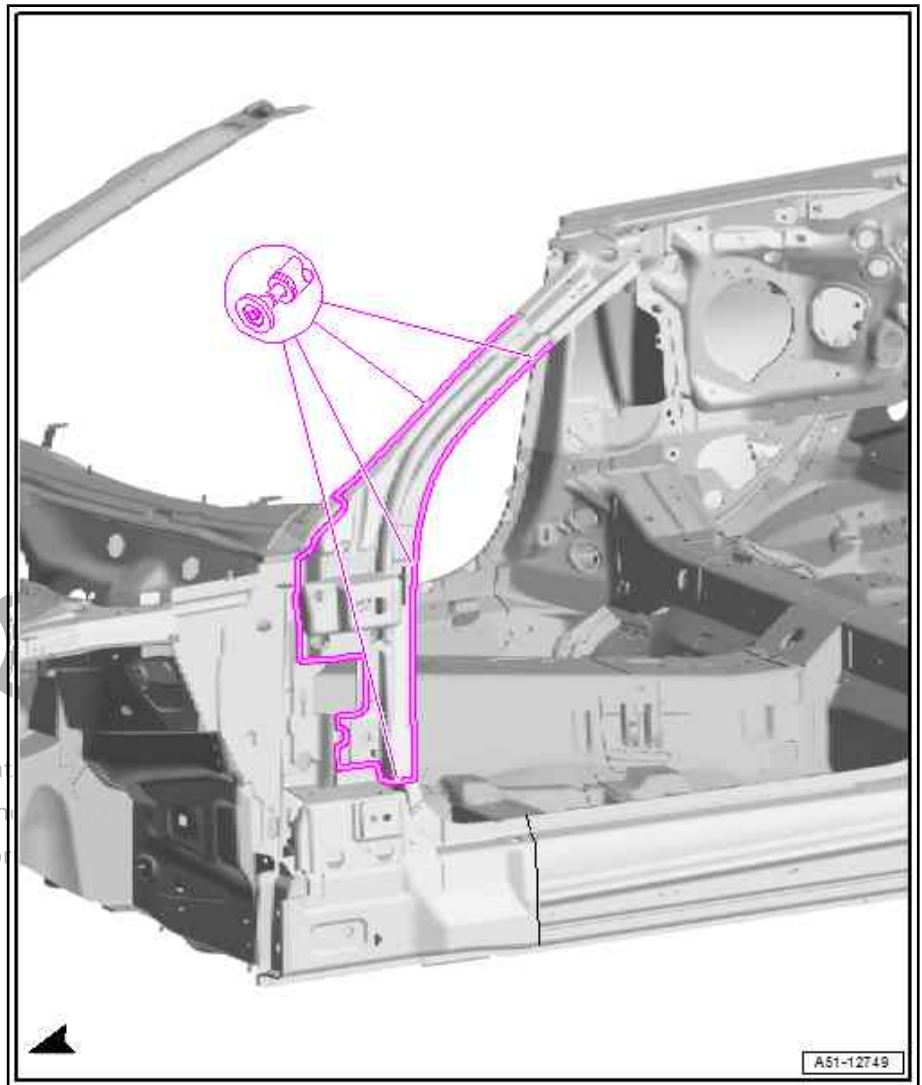
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- Remove remaining material using compact angle grinder .



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Replacement part

- ◆ Upper A-pillar reinforcement

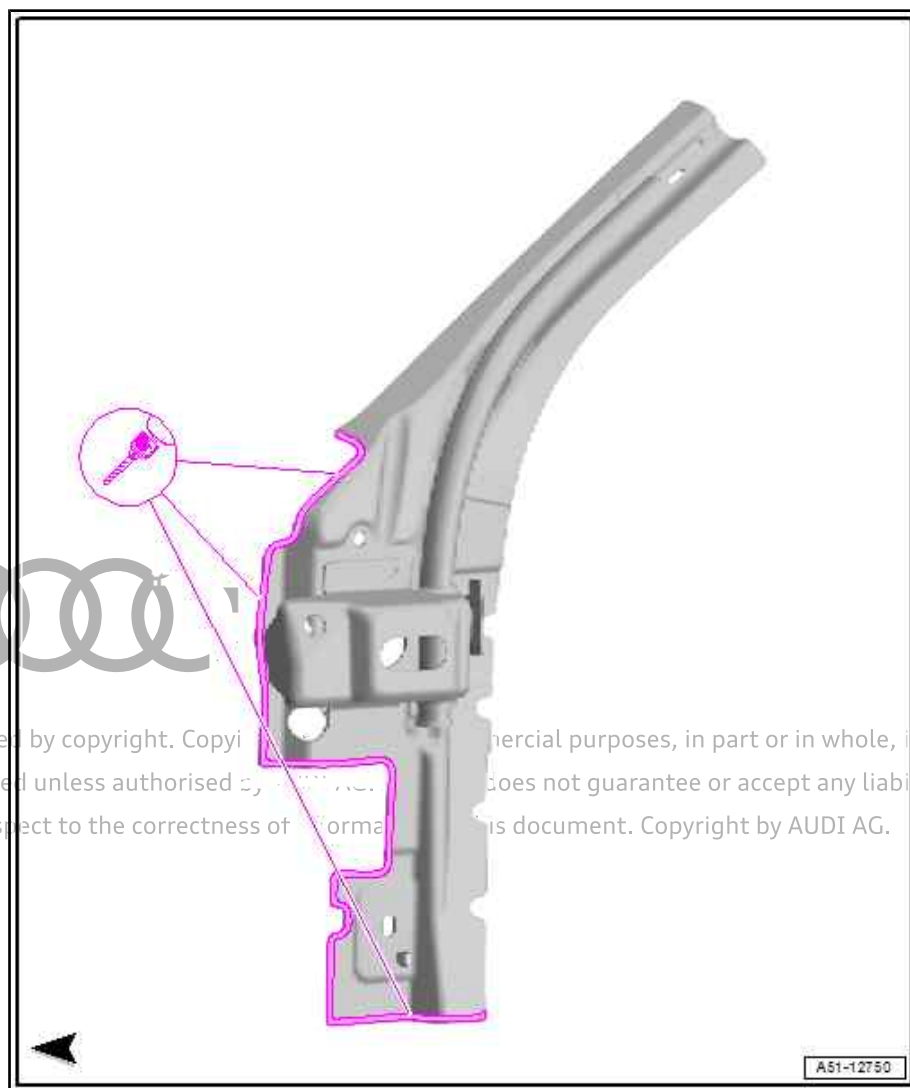
Preparing new part



Note

The replacement part must NOT be cut, otherwise the strength of the structure will be impaired.

- Drill holes for SG plug weld seam (7 mm Ø) using drill .



NOTICE

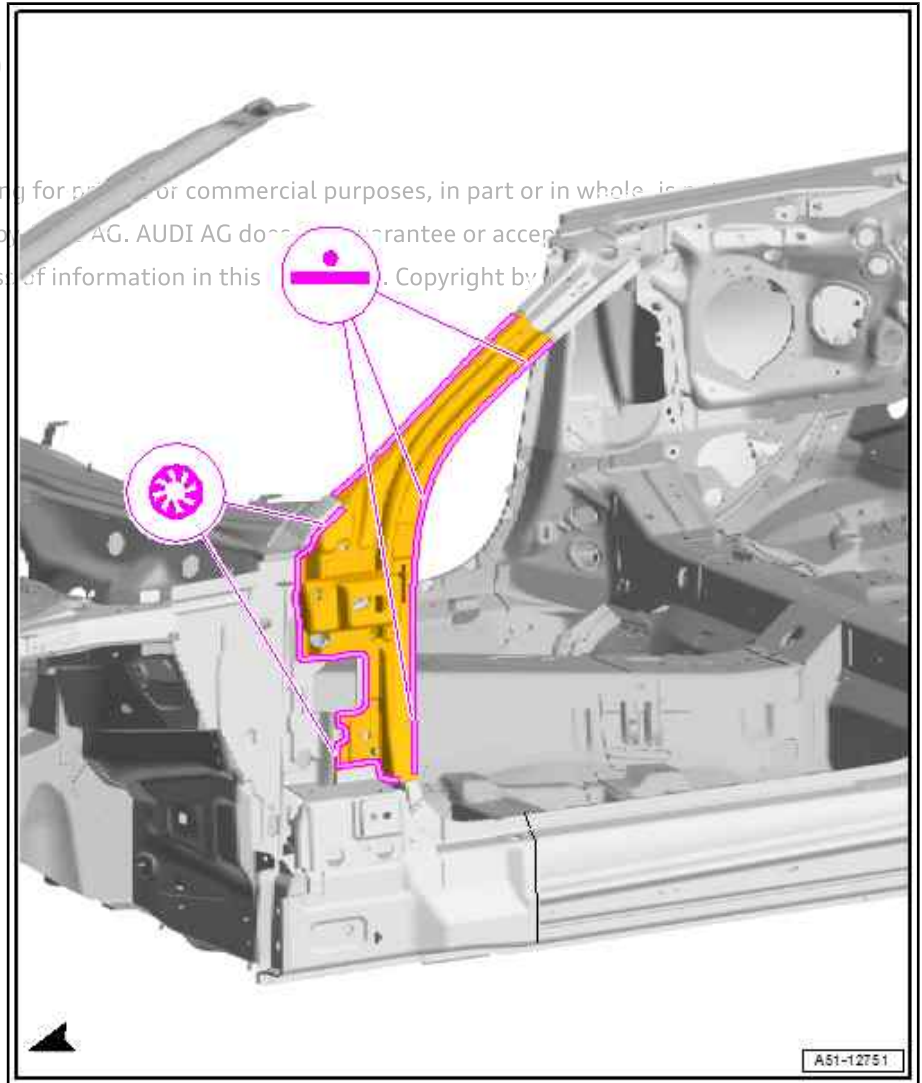
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" must be used to ensure correct results when spot welding.

Welding in

- With vehicle standing on alignment bracket set, match up new part and fix in position.
- Check fit relative to adjacent parts.
- Weld in reinforcement using resistance spot welder : RP spot weld seam.
- Weld in new part using shielded arc welding equipment : SG plug weld seam.



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- Welding in lower A-pillar ⇒ [page 106](#)
- Welding in upper A-pillar ⇒ [page 111](#)
- Welding in lower A-pillar reinforcement ⇒ [page 116](#)



RO: 51 42 55 50

7 B-pillar - Renewal

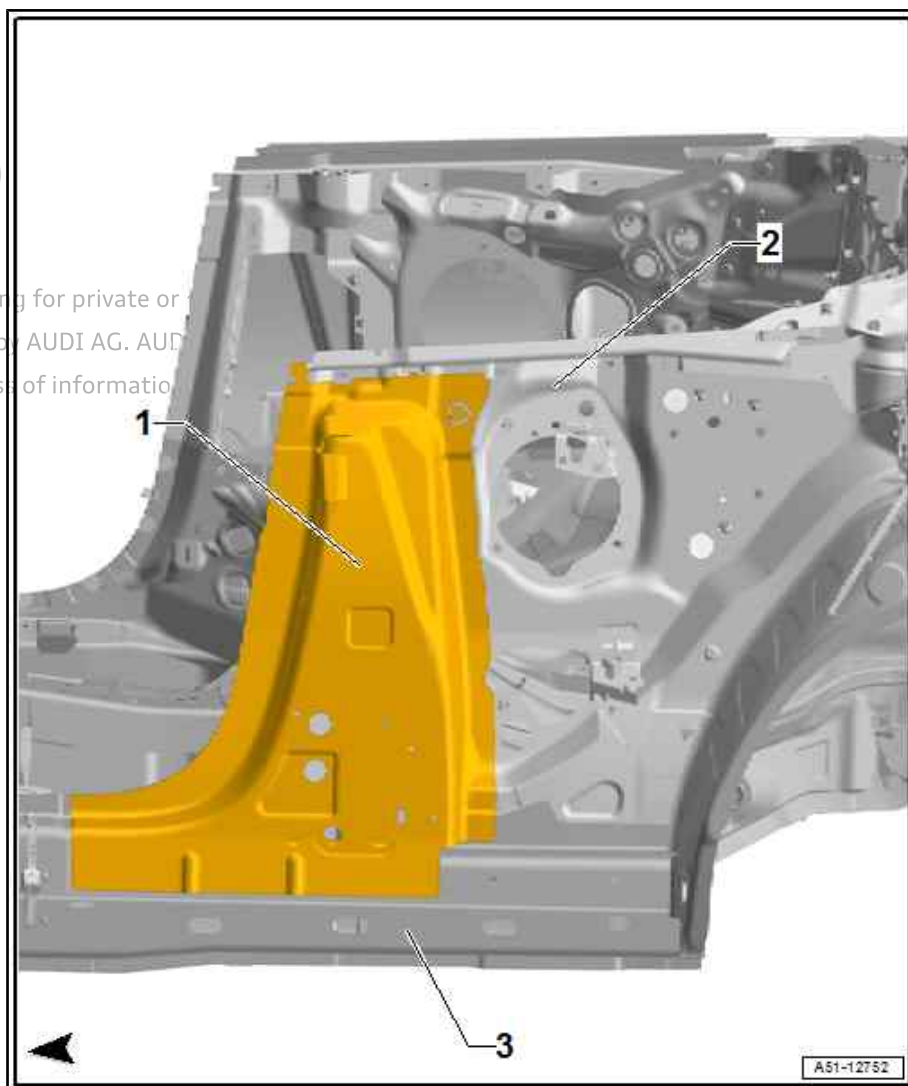
1 - B-pillar

2 - Inner side panel

3 - Outer side member



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7.1 Tools

Special tools and workshop equipment required

- ◆ Resistance spot welder
- ◆ Shielded arc welding equipment
- ◆ Compact angle grinder
- ◆ Spot weld breaker
- ◆ Pneumatic glue gun

Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 38](#).

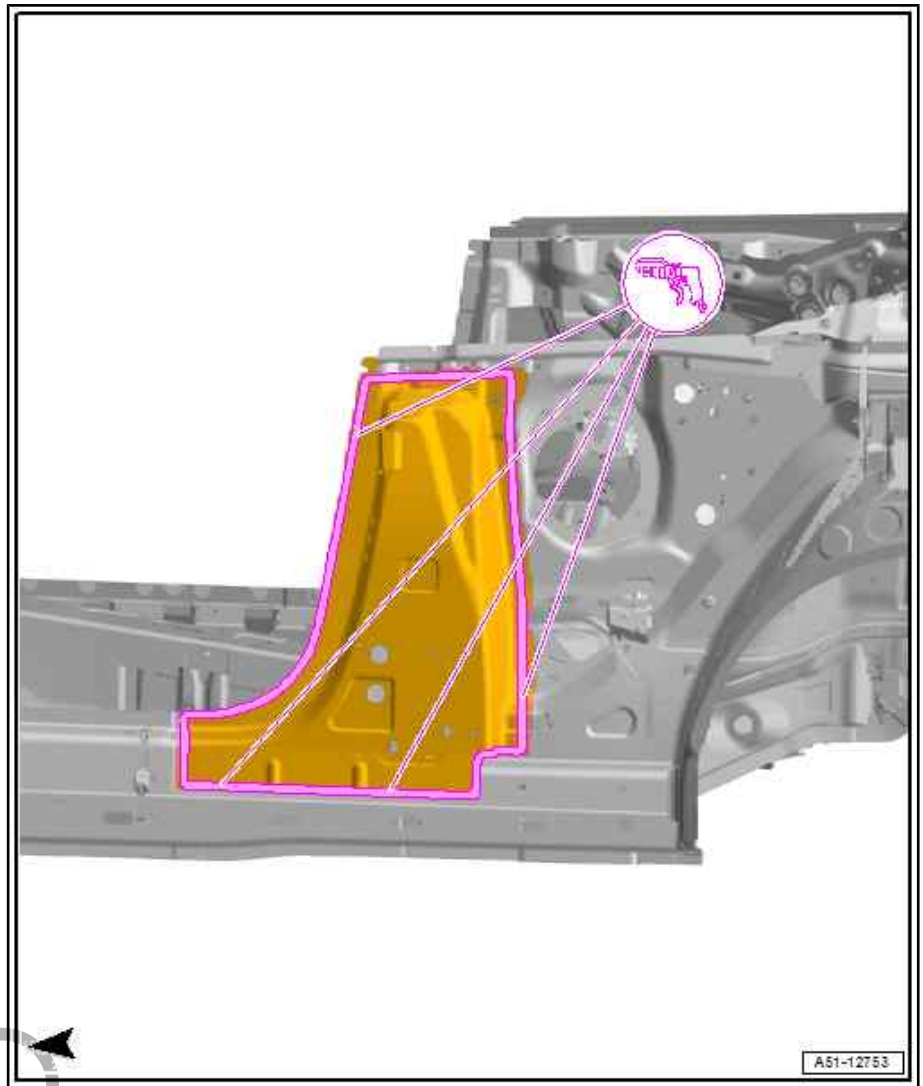
7.2 Procedure

- Side panel already removed ⇒ [page 176](#).



Cutting locations

- Drill out original joint using spot weld breaker .

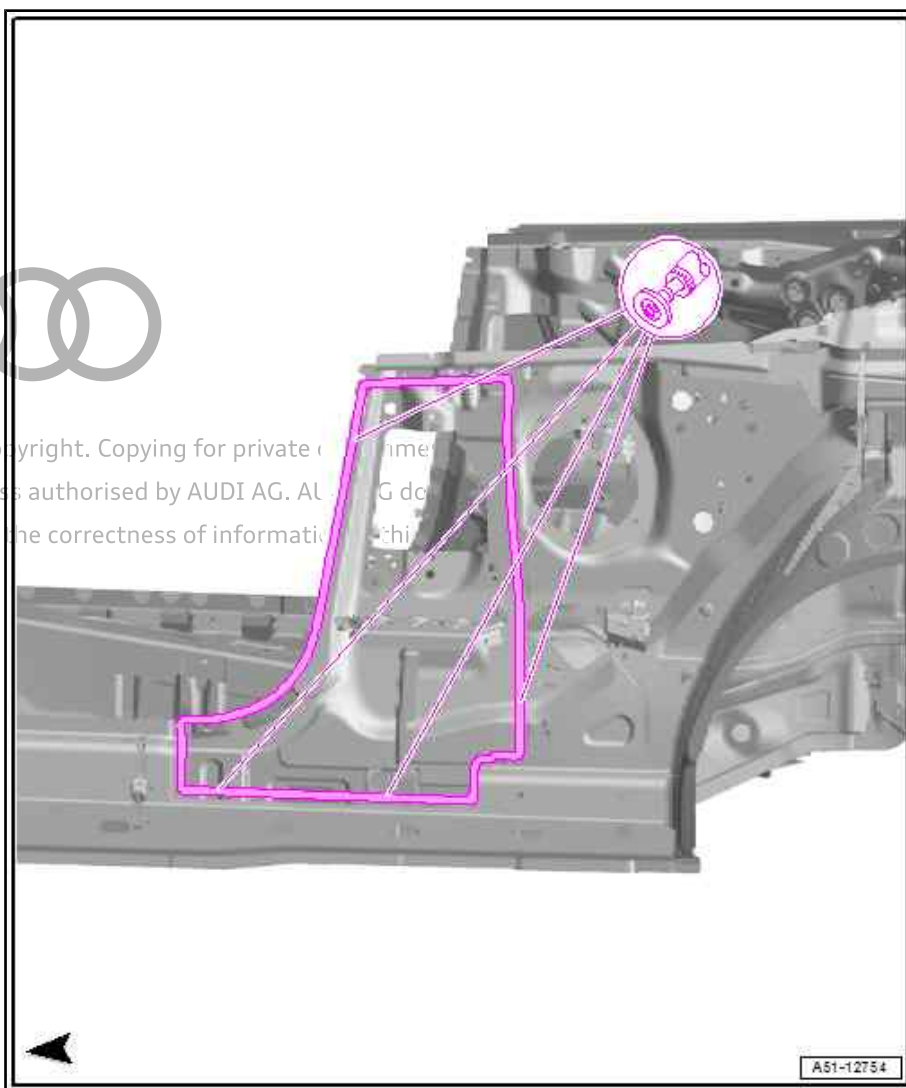


- Remove remaining material and adhesive using compact angle grinder .

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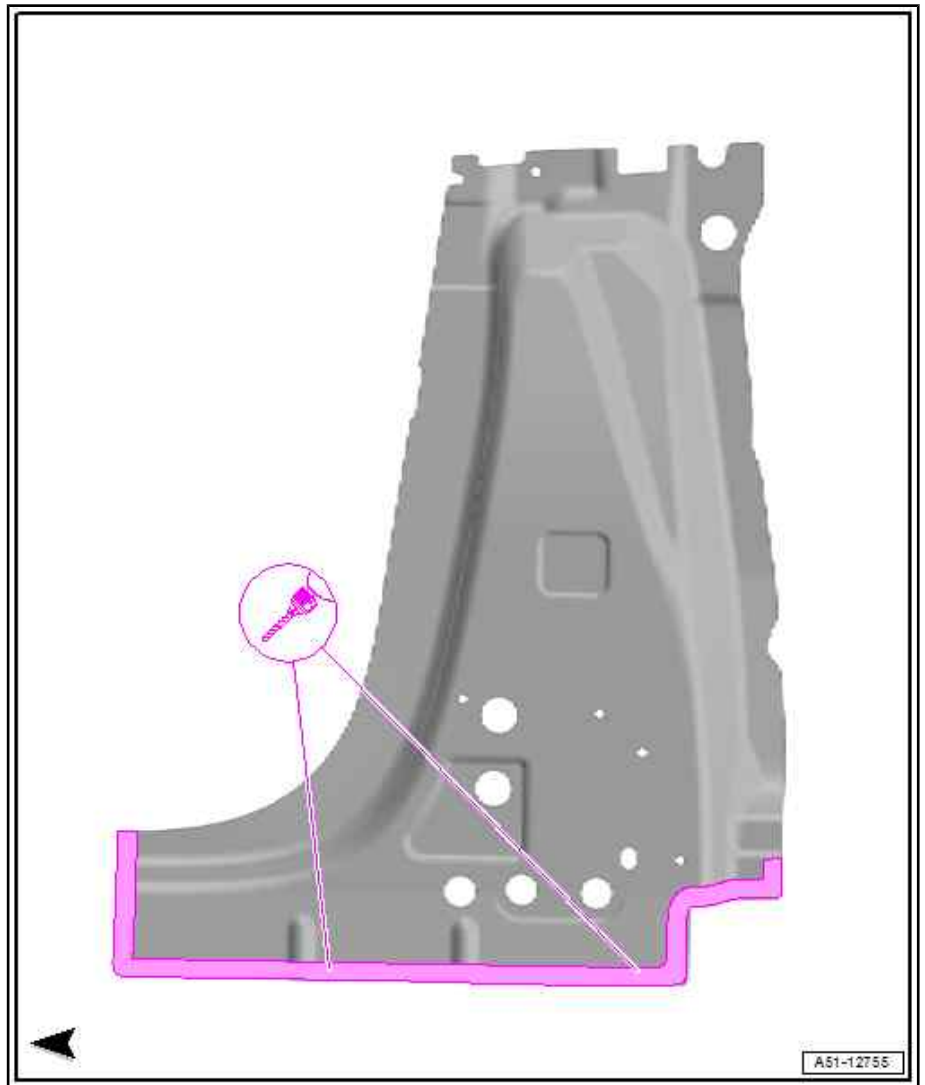


Replacement parts

- ◆ B-pillar

Preparing new part

- Drill holes for SG plug weld seam (7 mm Ø) using drill .

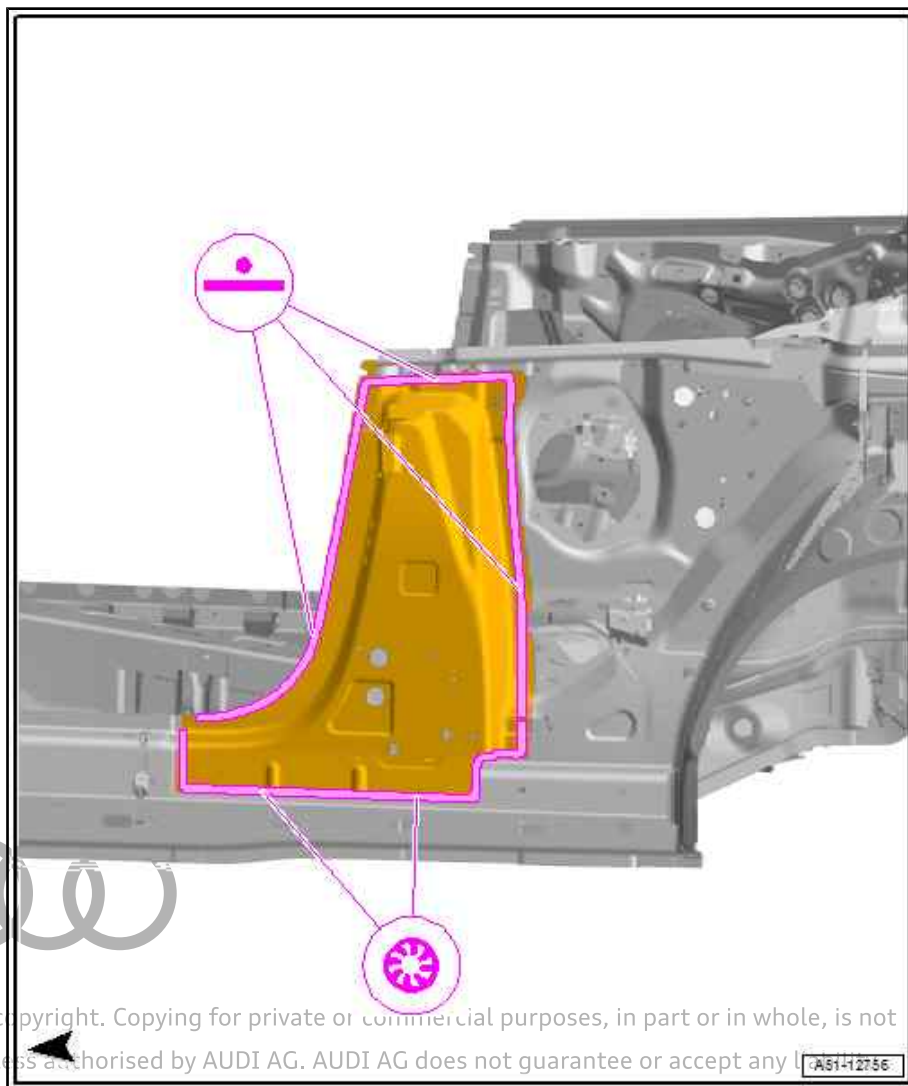


NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" must be used to ensure correct results when spot welding.

Welding in

- Check fit relative to side panel.
- Weld in B-pillar reinforcement using resistance spot welder : RP spot weld seam.
- Weld B-pillar reinforcement using shielded arc welding equipment : SG plug weld seam.



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- Weld in side panel ⇒ [page 176](#) .



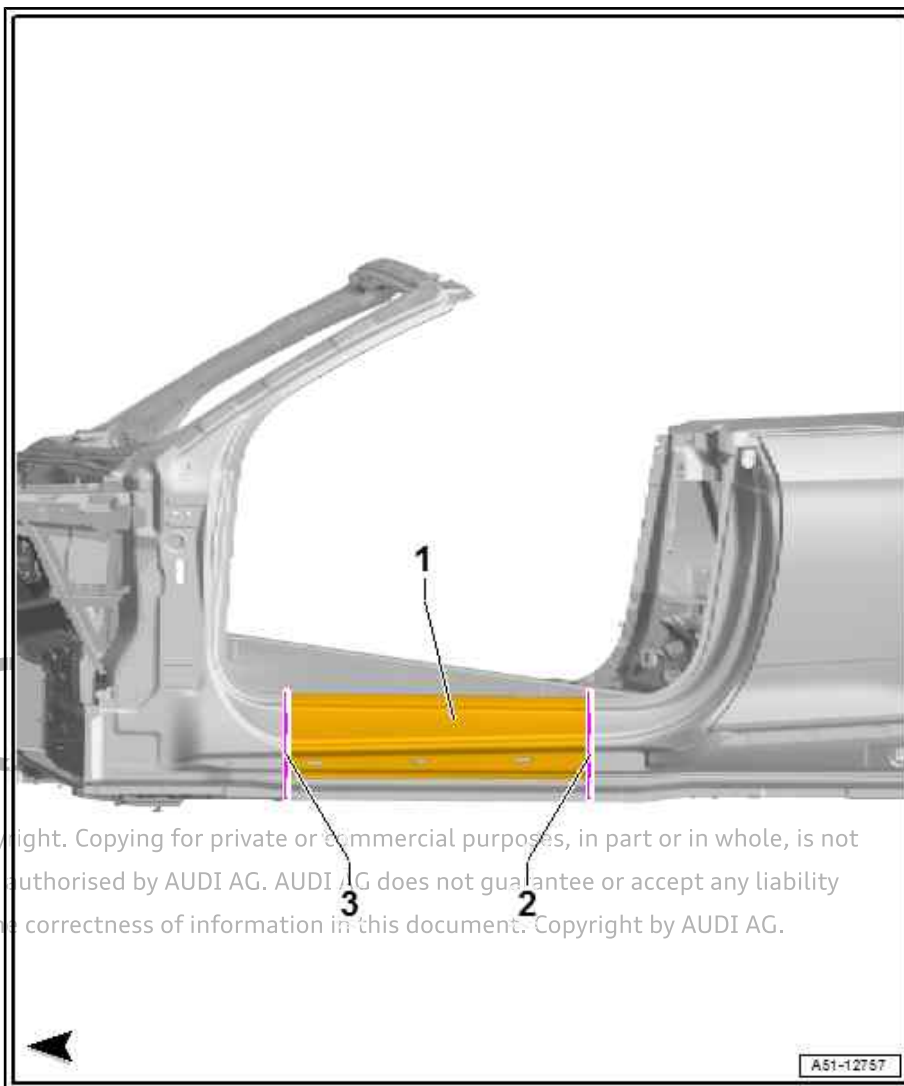
RO: 51 45 55 00

8 Outer side member - Renewal

1 - Outer side member

2 - Separating cut in side member (rear)

3 - Separating cut in side member (front)



8.1 Tools

Special tools and workshop equipment required

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

Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work [⇒ page 38](#).



8.2 Procedure

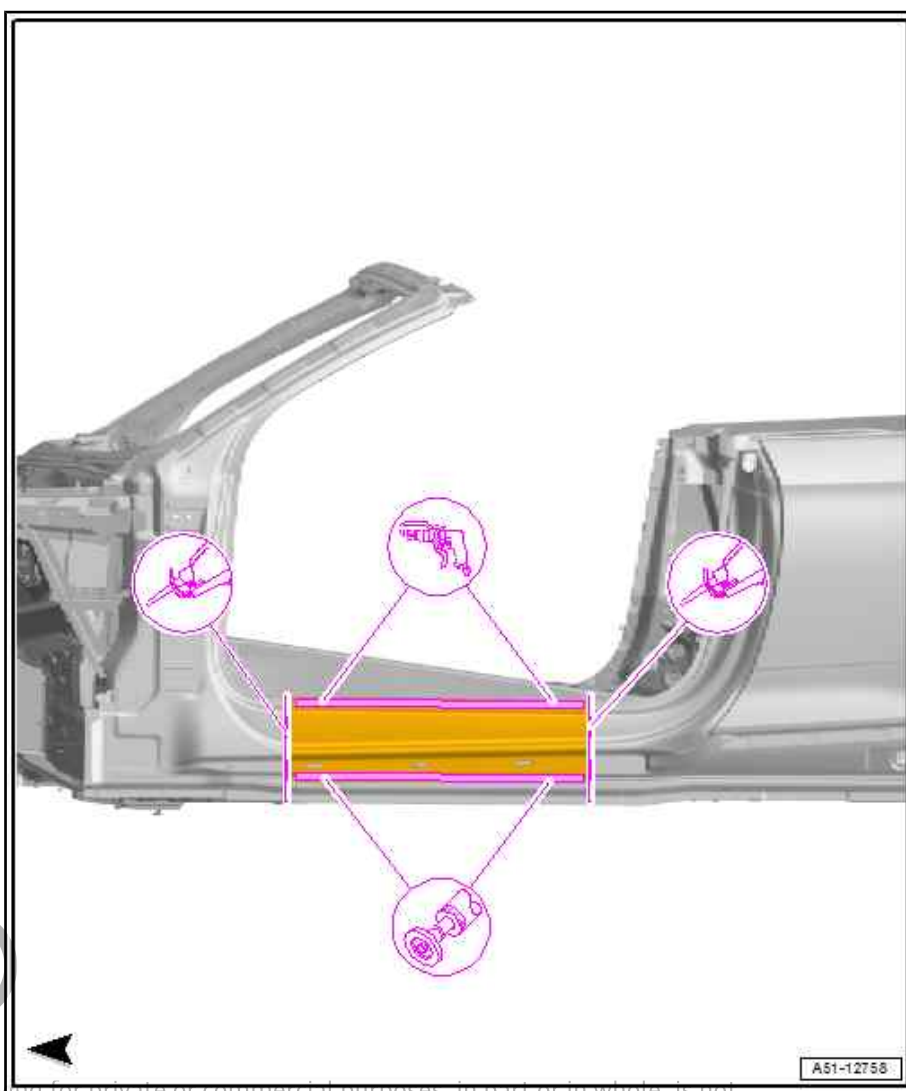
Cutting locations



Note

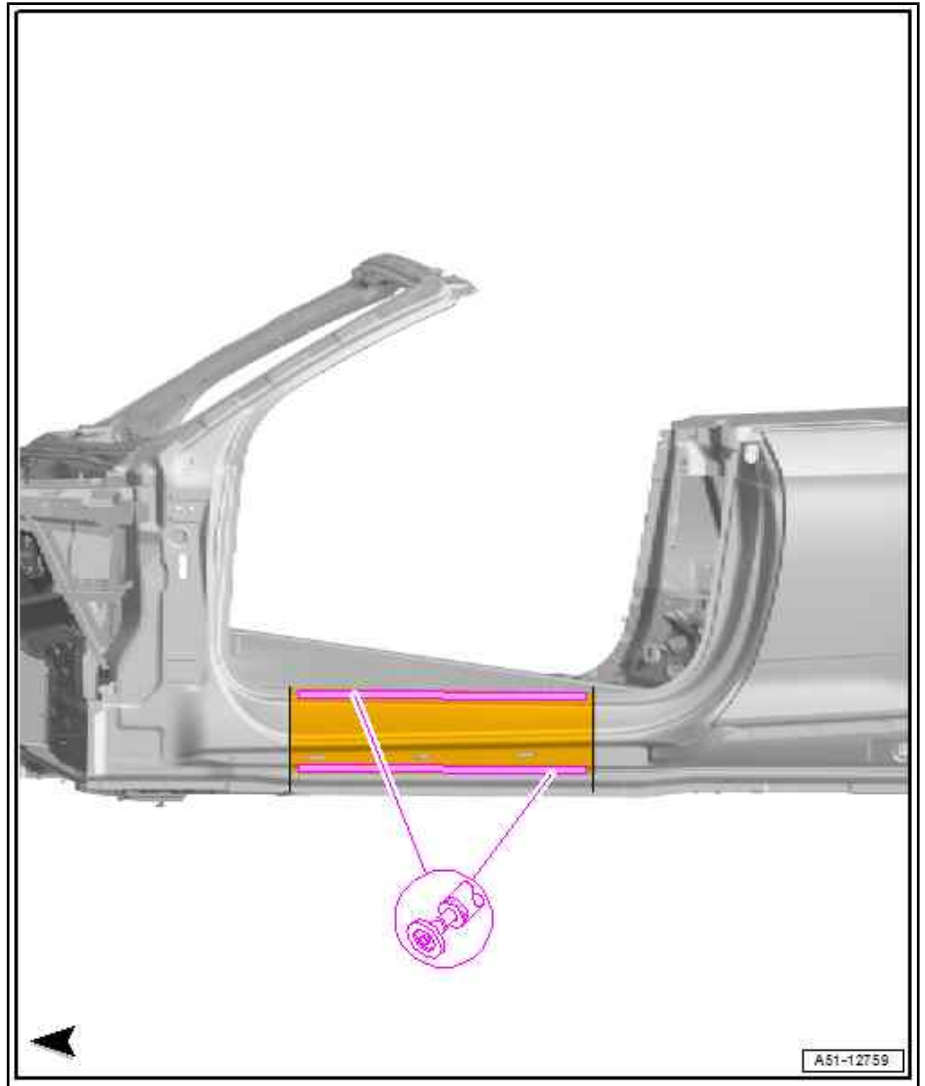
Take care not to damage any panels behind when making the separating cuts.

- Mark off separating cuts according to degree of damage and make the cuts using body saw .
- Drill out original joint using spot weld breaker .
- Separate laser weld seam using compact angle grinder .



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- Remove remaining material using compact angle grinder.
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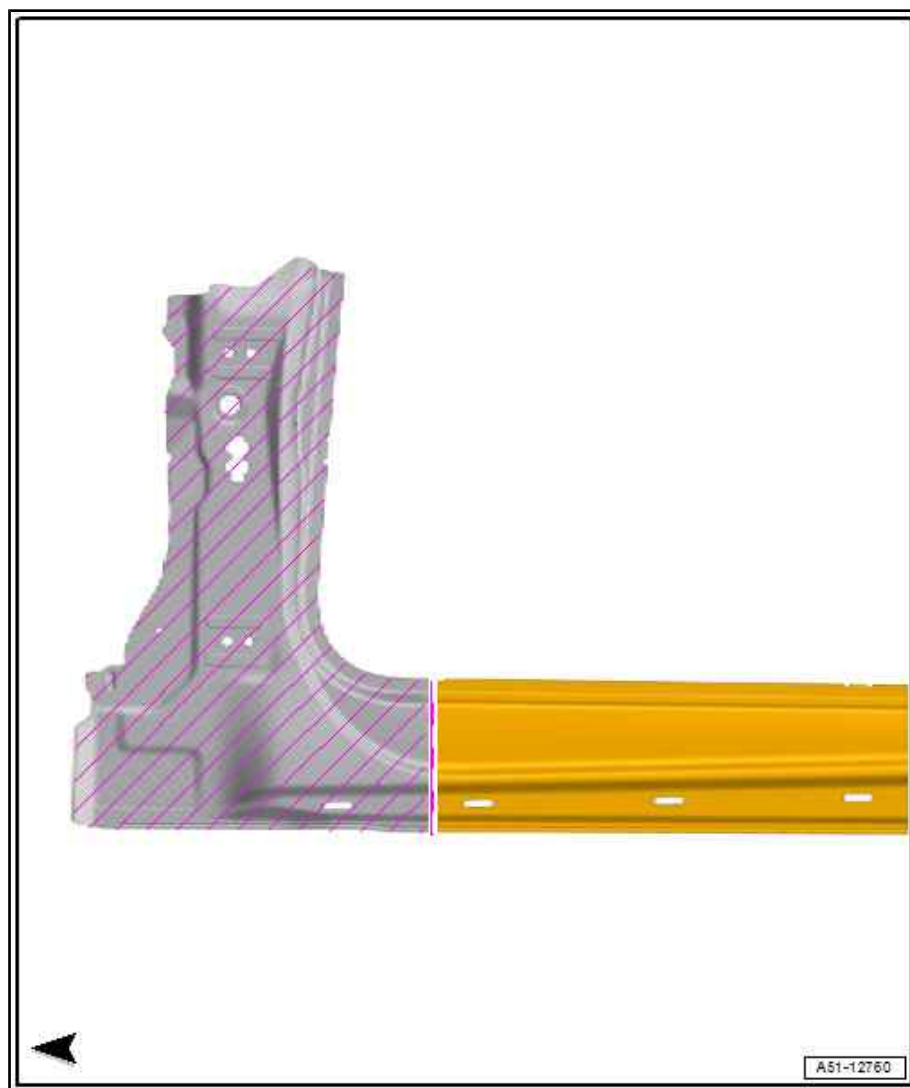
Replacement part

- ◆ Outer side member

Preparing new part

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

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NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" must be used to ensure correct results when spot welding.

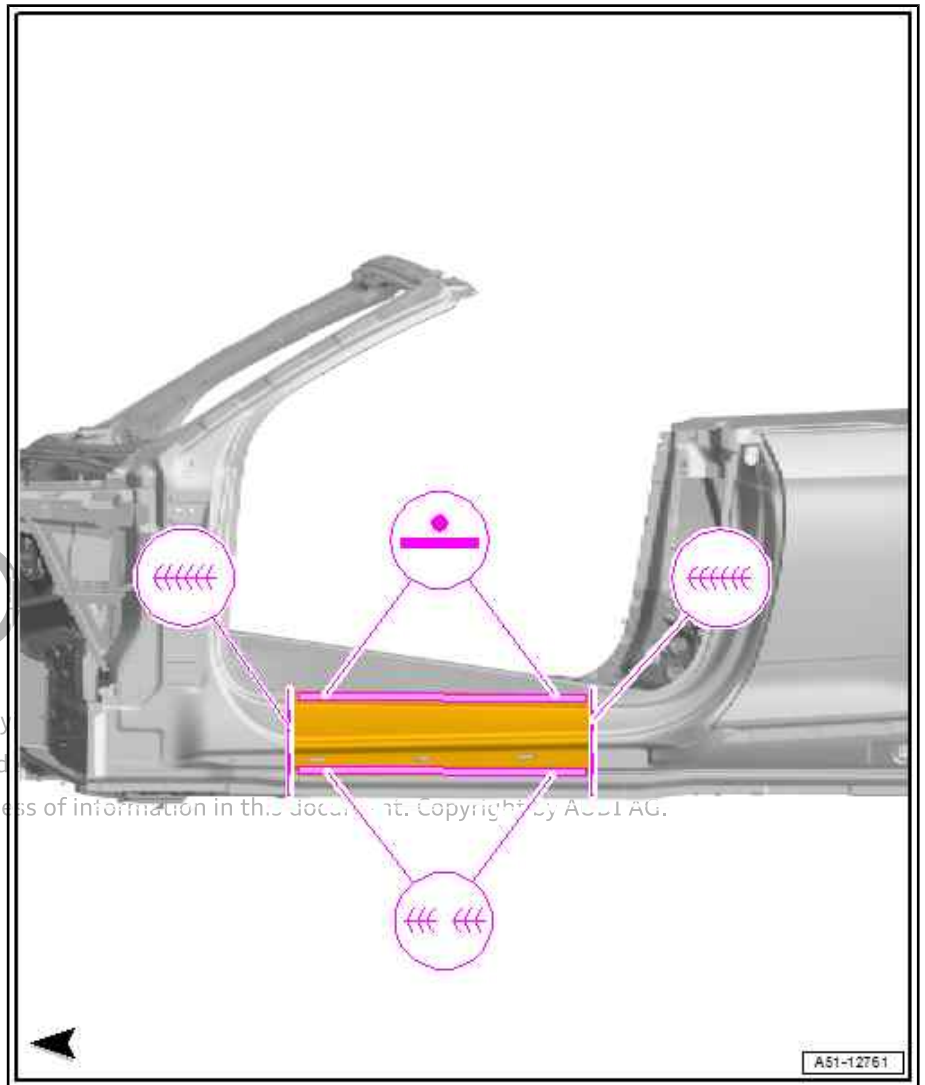
Welding in

- Place backing plates of same material behind joints.
- 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.
- Butt weld separating cuts using shielded arc welding equipment : SG continuous seam.
- Weld in new part using shielded arc welding equipment : SG continuous seam (staggered with gaps) in place of laser weld.

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RO: 51 49 55 50

9 Outer side member reinforcement - Renewal

1 - Inner A-pillar

2 - Separating cut for partial renewal

Partial renewal

Partial renewal of the side member is possible using this separating cut.

3 - Outer side member reinforcement

4 - Separating cut for partial renewal

Partial renewal

Partial renewal of the side member is possible using this separating cut.

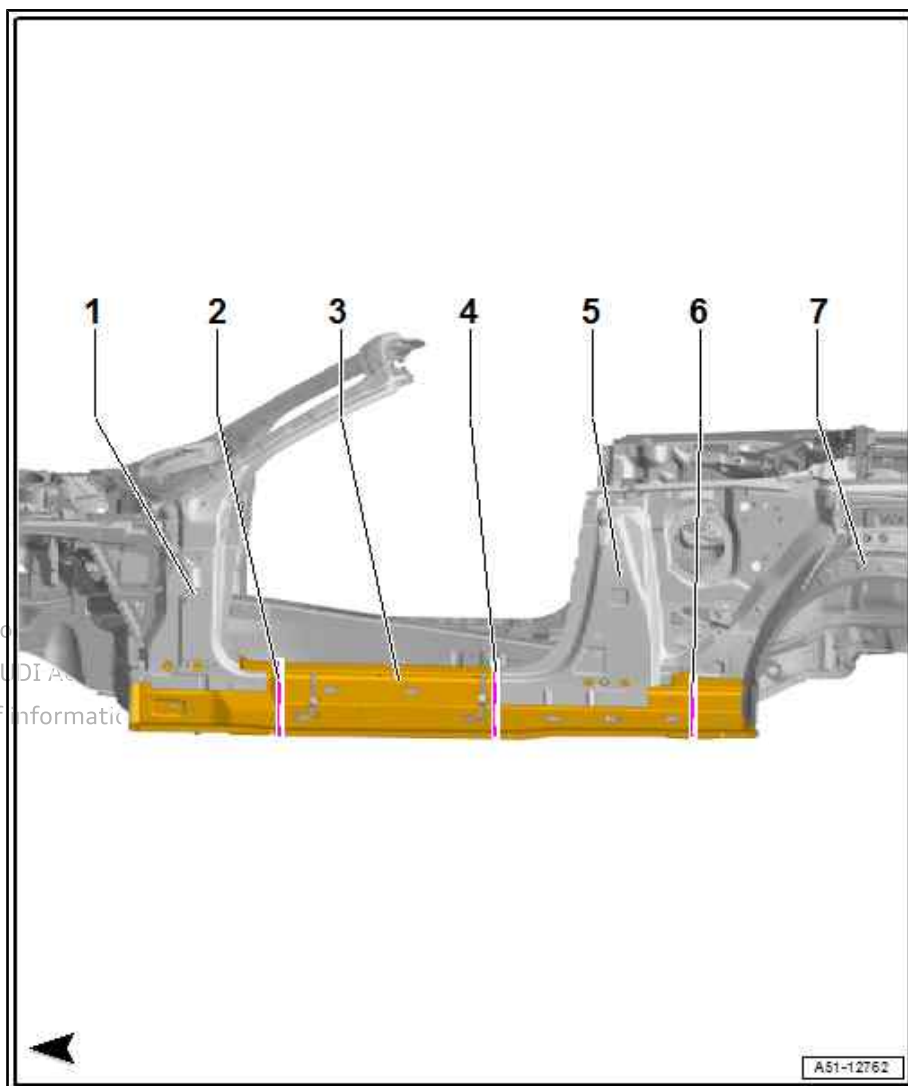
5 - Inner B-pillar

6 - Separating cut for partial renewal

Partial renewal

Partial renewal of the side member is possible using this separating cut.

7 - Rear outer wheel housing



9.1 Tools

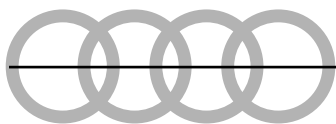
Special tools and workshop equipment required

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

Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 38](#) .

9.2 Procedure

- Lower A-pillar already removed ⇒ [page 106](#)



- Outer side member already removed ⇒ [page 131](#)

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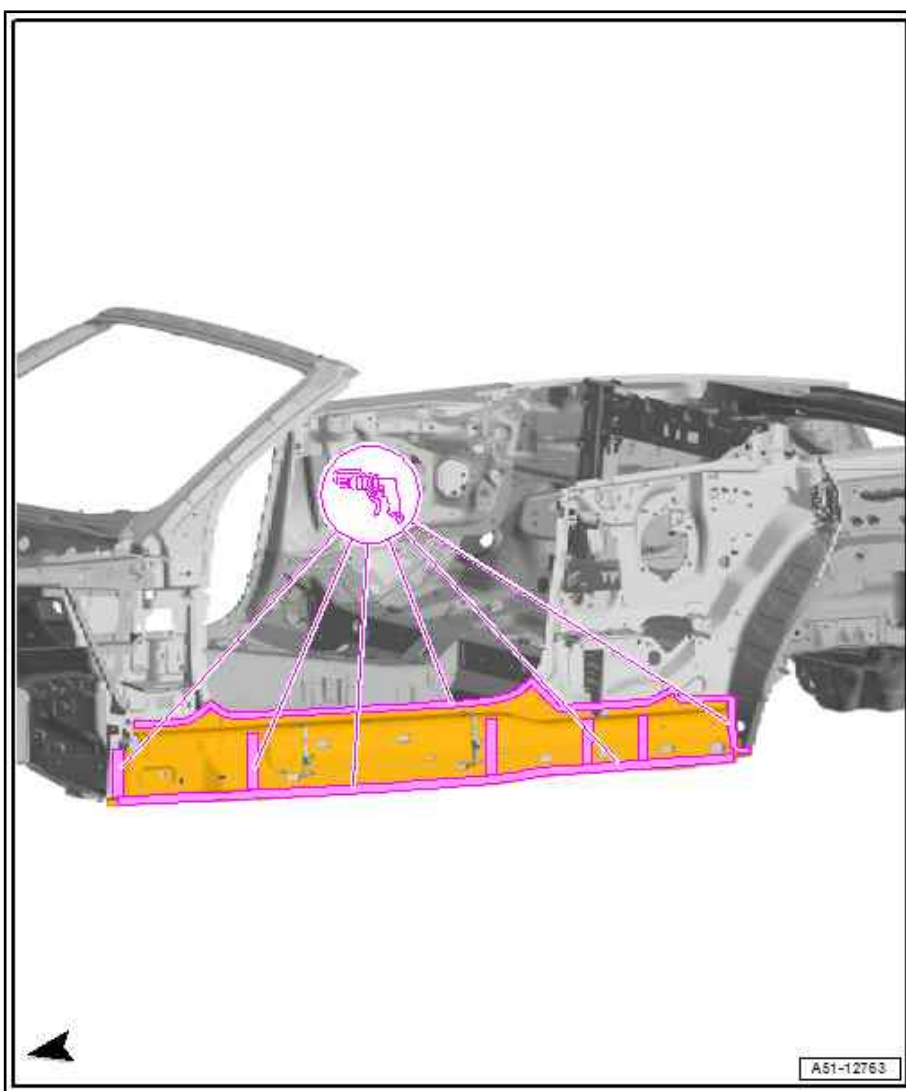
- Side panel already removed ⇒ [page 176](#)

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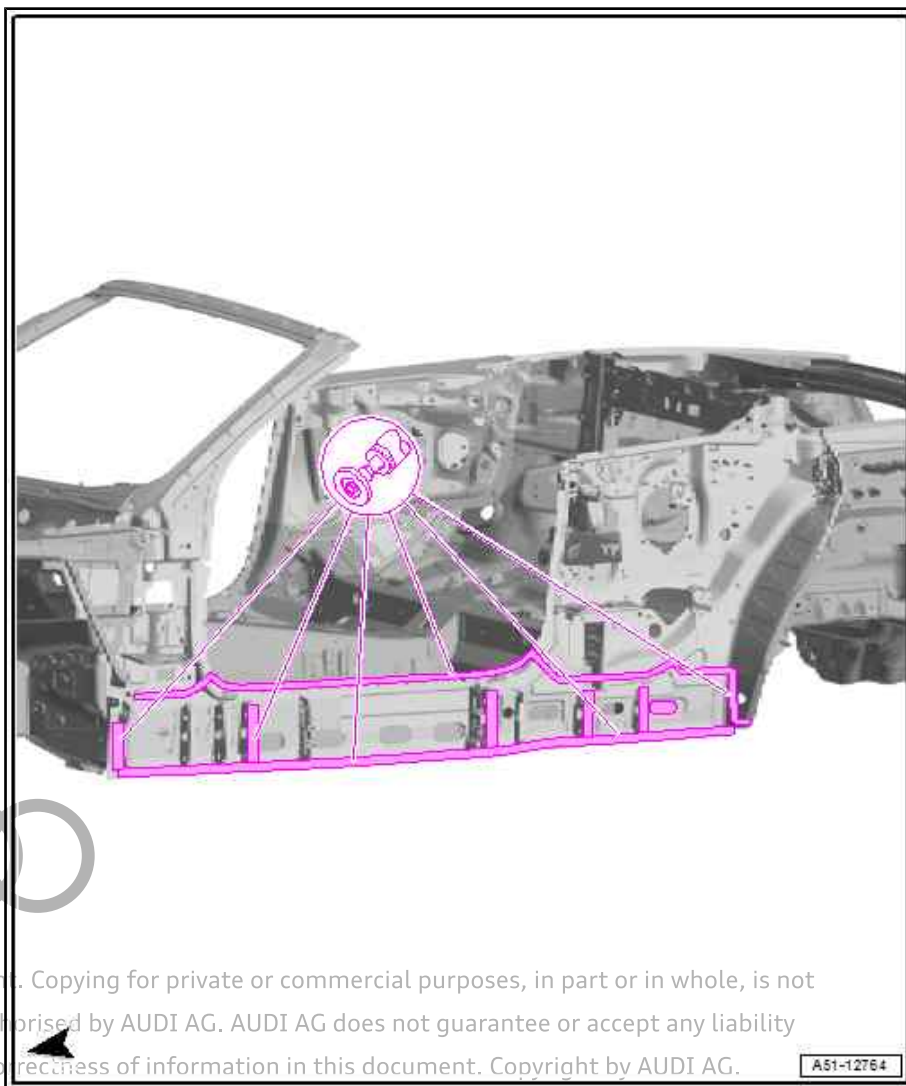
- Inner B-pillar already removed ⇒ [page 126](#)

Cutting locations

- Drill out original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .



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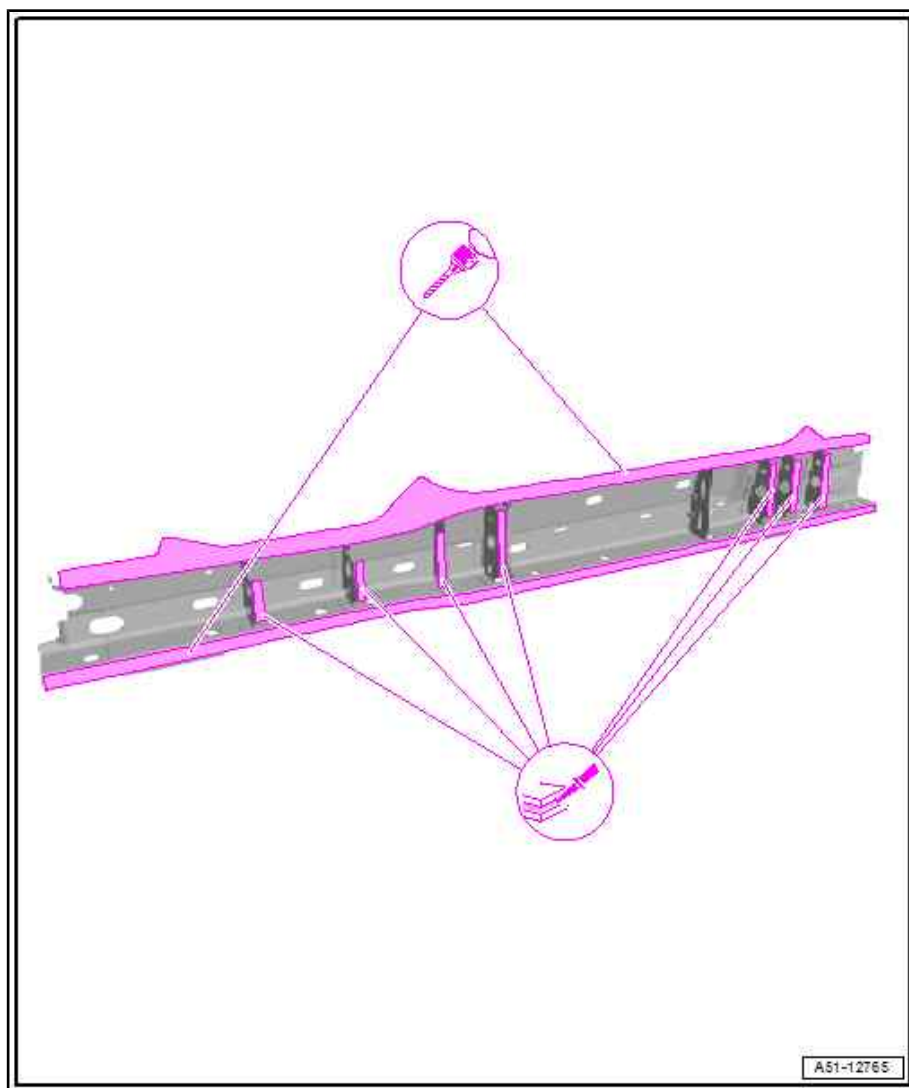
A51-12764

Replacement part

- ◆ Side member reinforcement
- ◆ 2-component epoxy adhesive - DA 001 730 A2-

Preparing new part

- Drill holes for SG plug weld seam (7 mm Ø) using drill .
- Apply 2-component epoxy adhesive - DA 001 730 A2- to bulkhead plates in area of original adhesive joints used in production (2 beads of adhesive, approx. 4 mm Ø); use pneumatic glue gun - V.A.G 2005 B- .



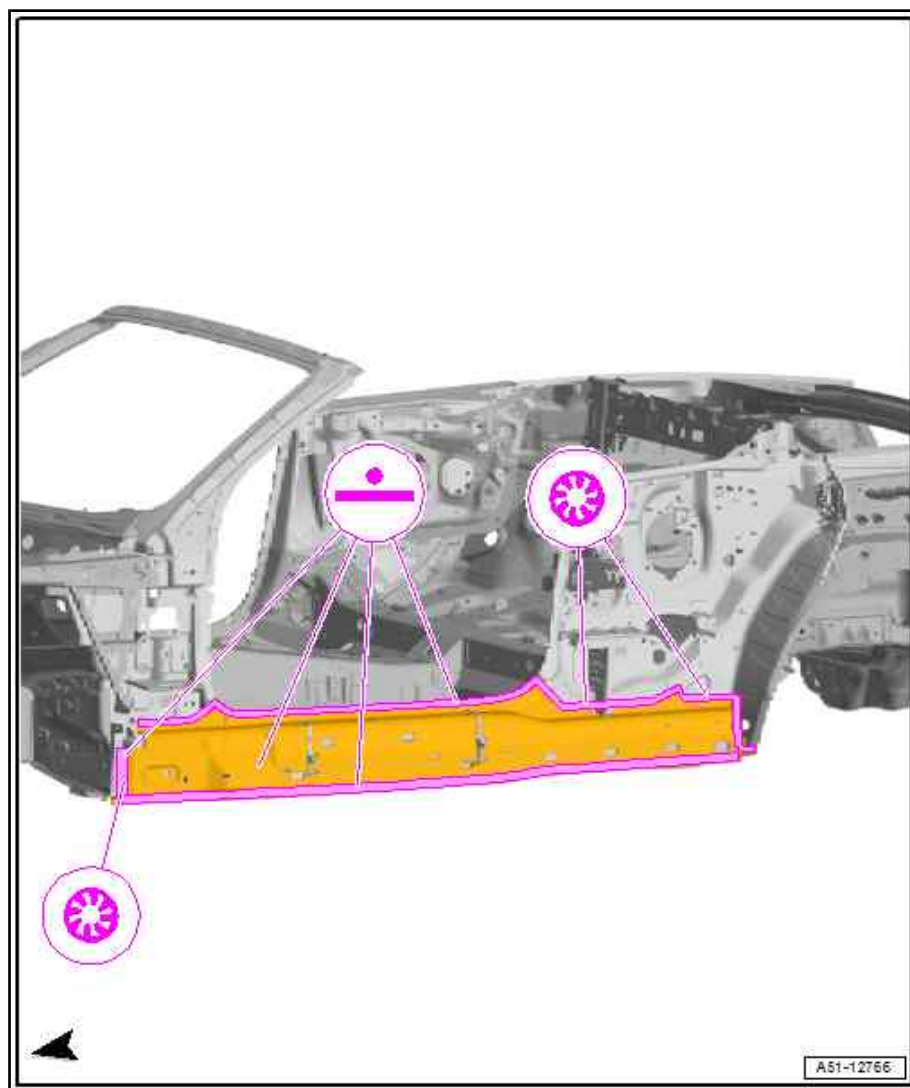
! NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" must be used to ensure correct results when spot welding.

Welding in

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

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- Welding in lower A-pillar ⇒ [page 106](#)
- Welding in outer side member ⇒ [page 131](#)
- Welding in lower A-pillar reinforcement ⇒ [page 116](#)
- Weld in side panel ⇒ [page 176](#) .
- Welding in B-pillar reinforcement ⇒ [page 126](#)



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RO: 51 46 55 01

10 Front seat cross member - Renewal



Note

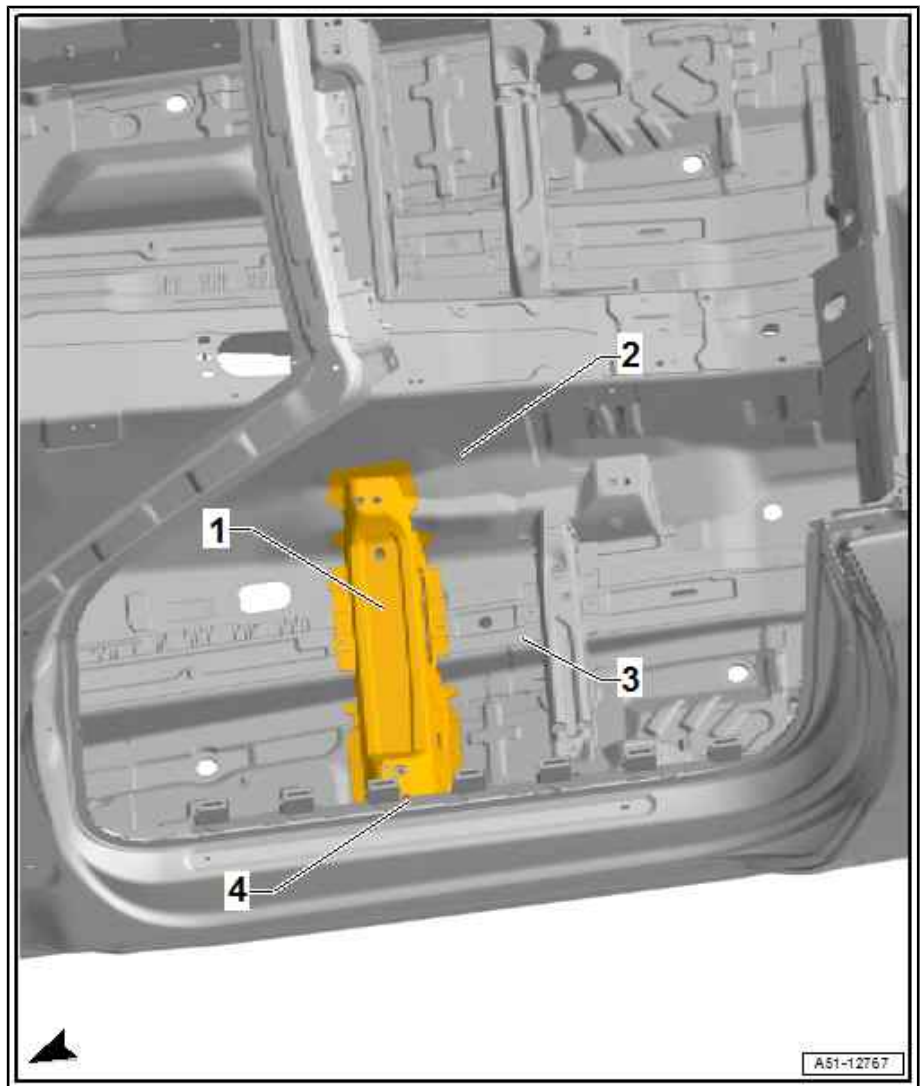
- ◆ If one of the threads in the seat cross member is damaged, the component must be renewed.
- ◆ The following instructions apply to the left side of the vehicle; the procedure for the right side is similar.

1 - Front seat cross member

2 - Centre tunnel

3 - Floor panel

4 - Inner side member



10.1 Tools

Special tools and workshop equipment required

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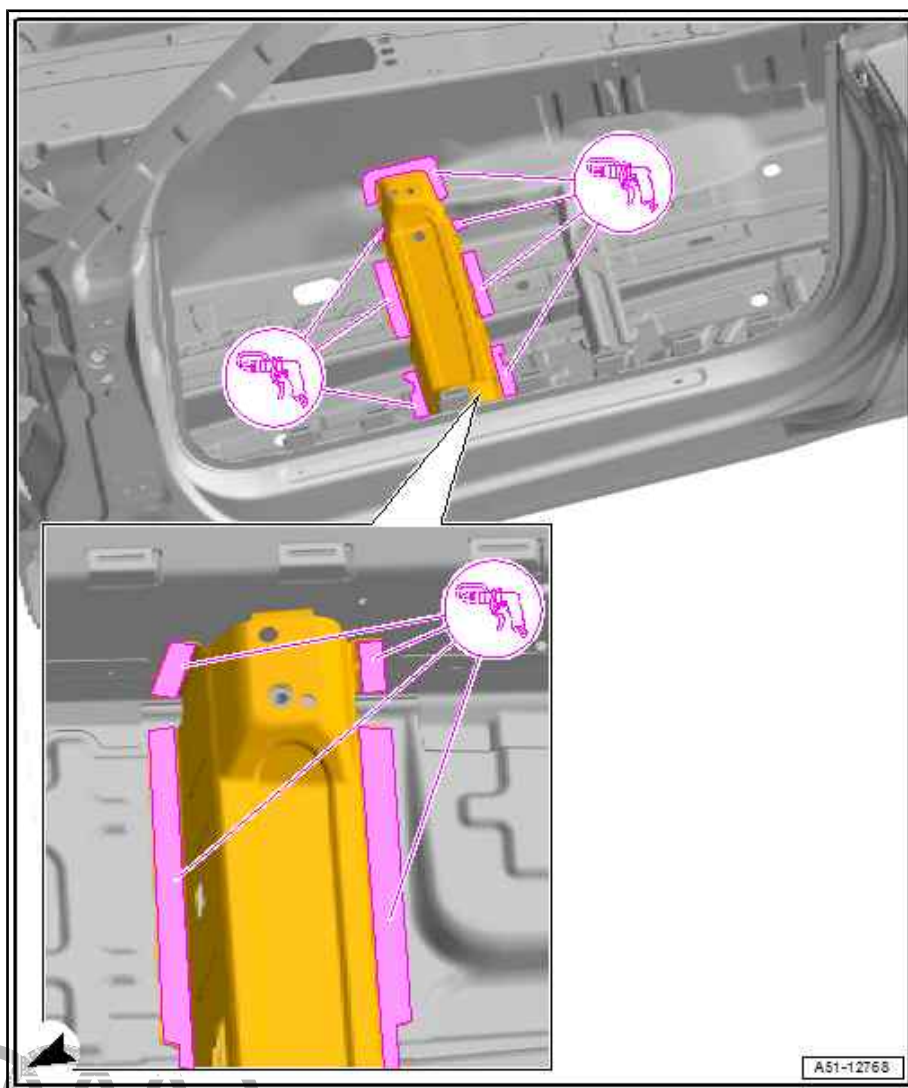
- ◆ Drill
- ◆ Spot weld breaker

Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 38](#) .

10.2 Procedure

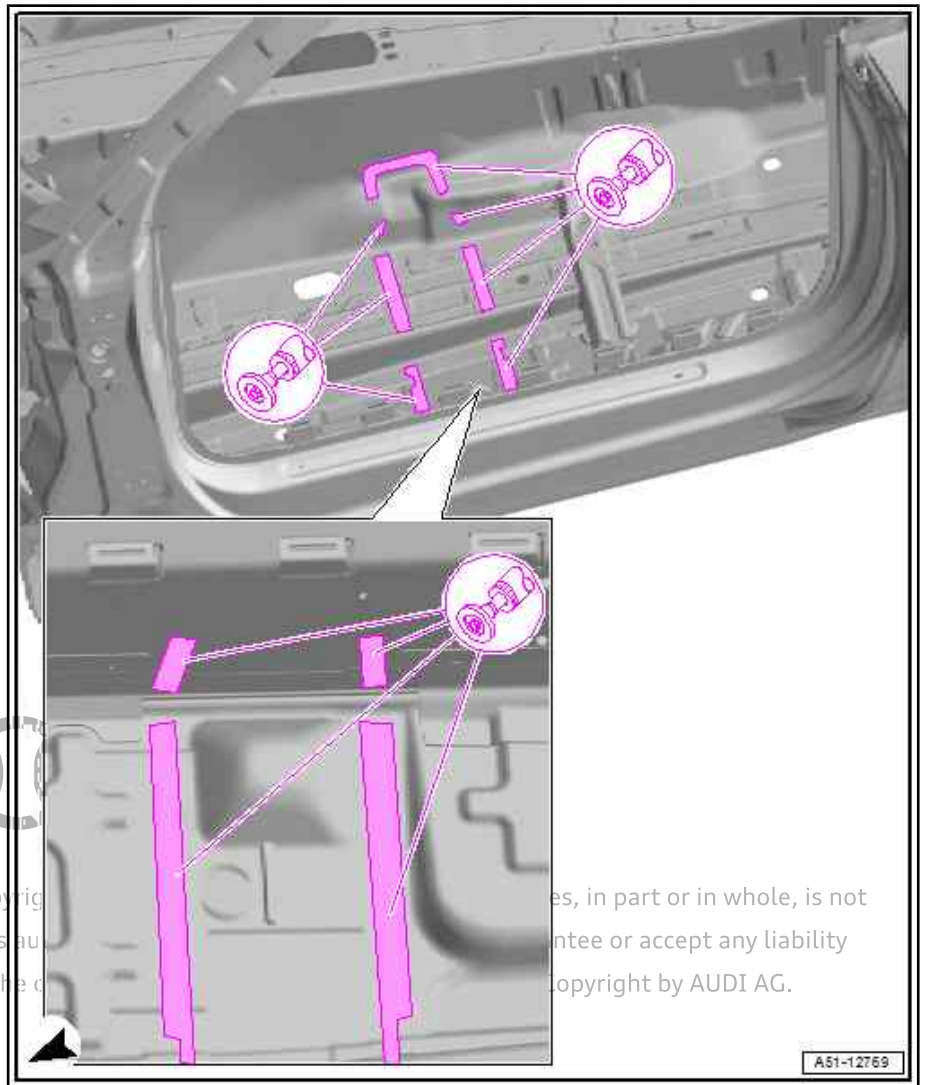
Cutting locations

- Separate original joint using spot weld breaker .



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

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Replacement part

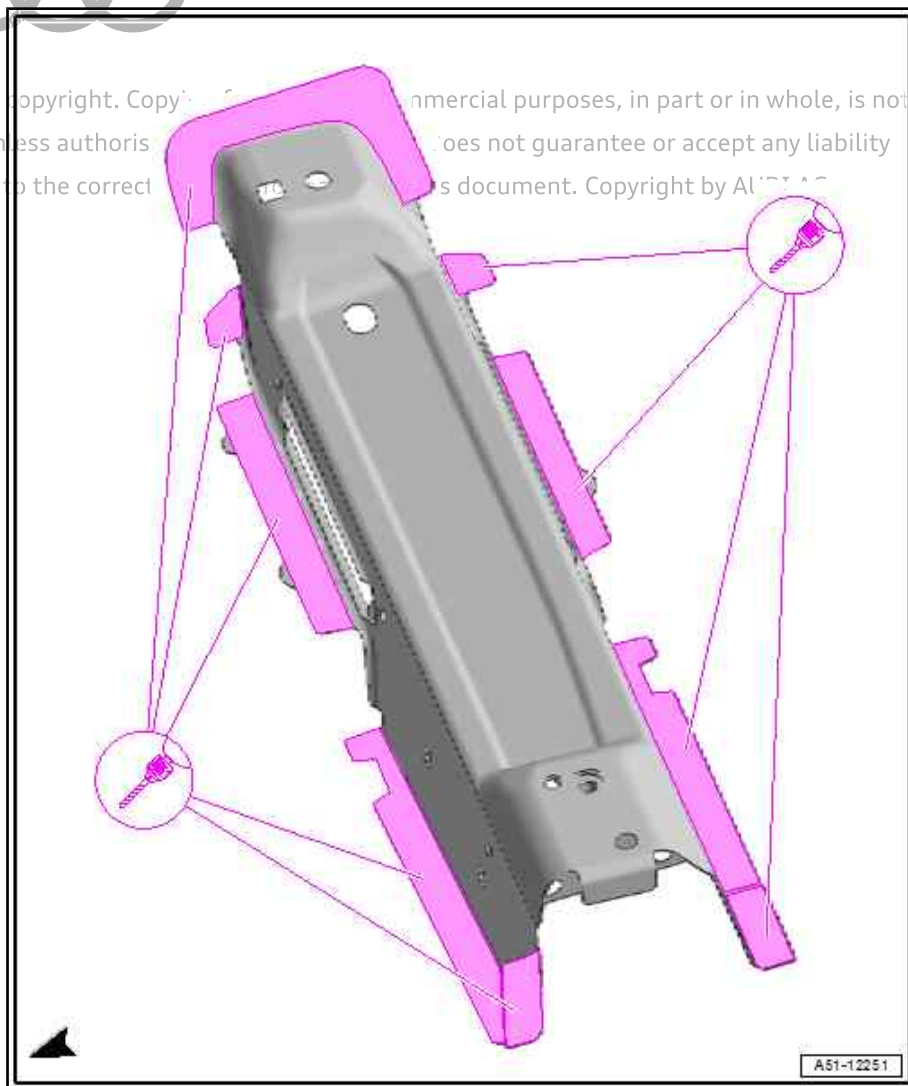
- ◆ Front seat cross member

Preparing new part

- Drill holes for SG plug weld seam, 8.0 mm Ø using drill .



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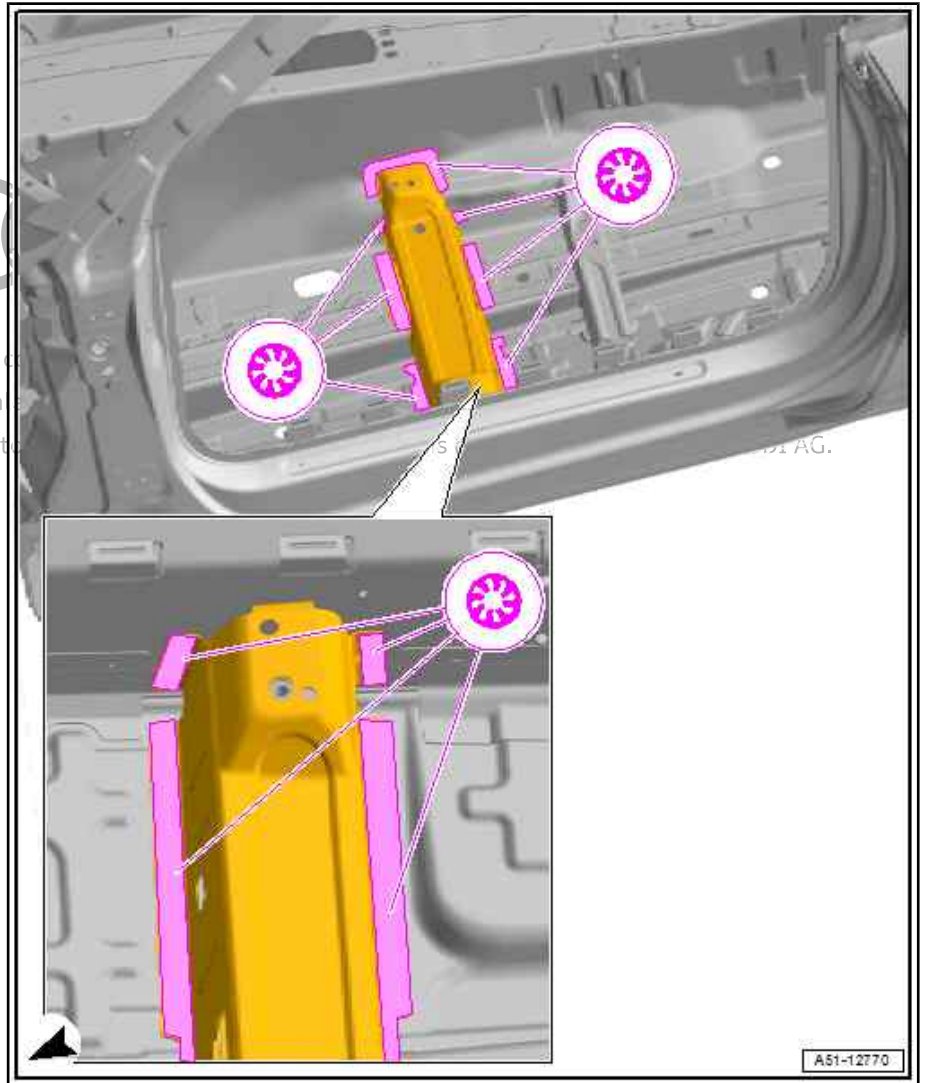
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" must be used to ensure correct results when spot welding.

Welding in

- Match up and fix new part in position.
- Check fit relative to bolt-on parts.
- Weld in new part using shielded arc welding equipment : SG plug weld seam.



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RO: 51 46 55 02

11 Rear seat cross member - Renewal



Note

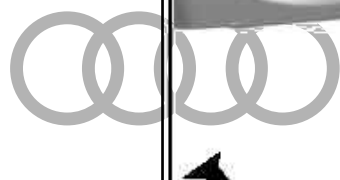
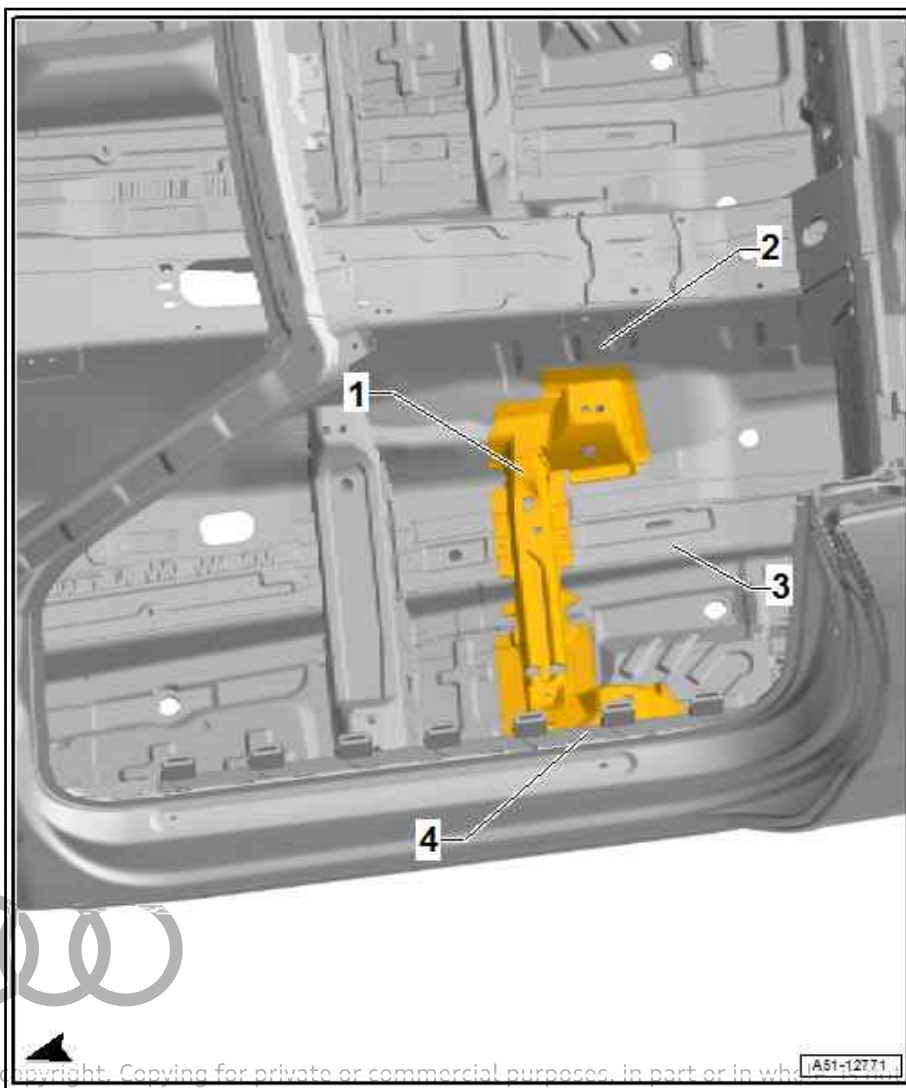
- ◆ If one of the threads in the seat cross member is damaged, the component must be renewed.
- ◆ The following instructions apply to the left side of the vehicle; the procedure for the right side is similar.

1 - Rear seat cross member

2 - Centre tunnel

3 - Floor panel

4 - Inner side member



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11.1 Tools

Special tools and workshop equipment required

- ◆ Shielded arc welding equipment
- ◆ Brush grinder
- ◆ Spot weld breaker
- ◆ Drill

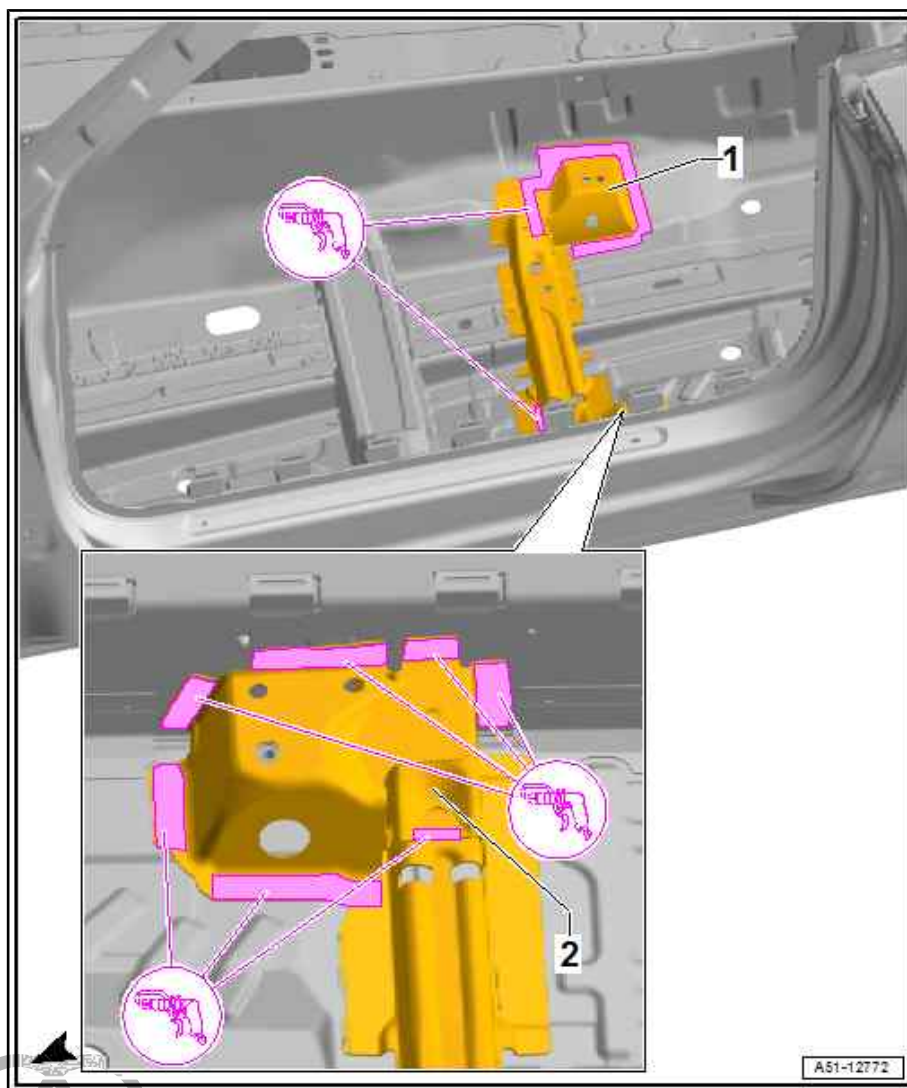


Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 38](#) .

11.2 Procedure

Cutting locations

- Separate original joint using spot weld breaker .
- Detach seat mounting reinforcements -1- and -2-.

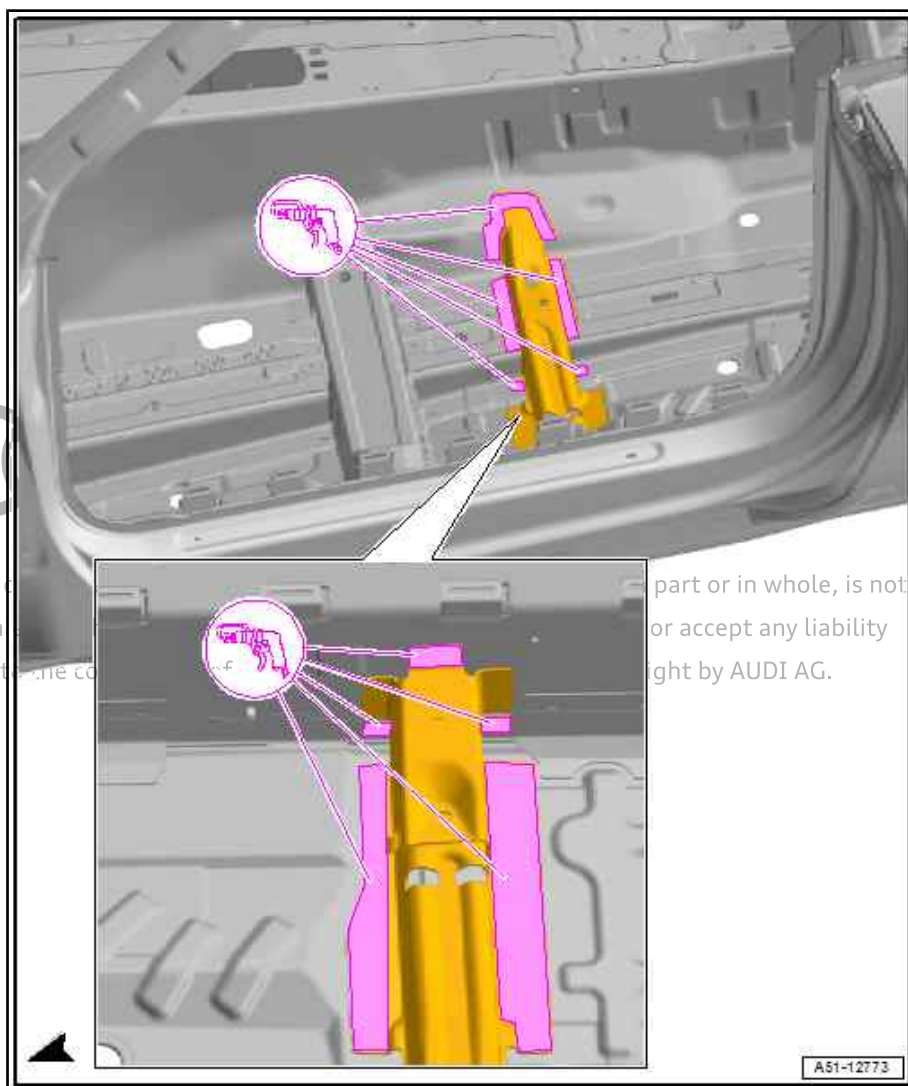


- Separate original joint using spot weld breaker .

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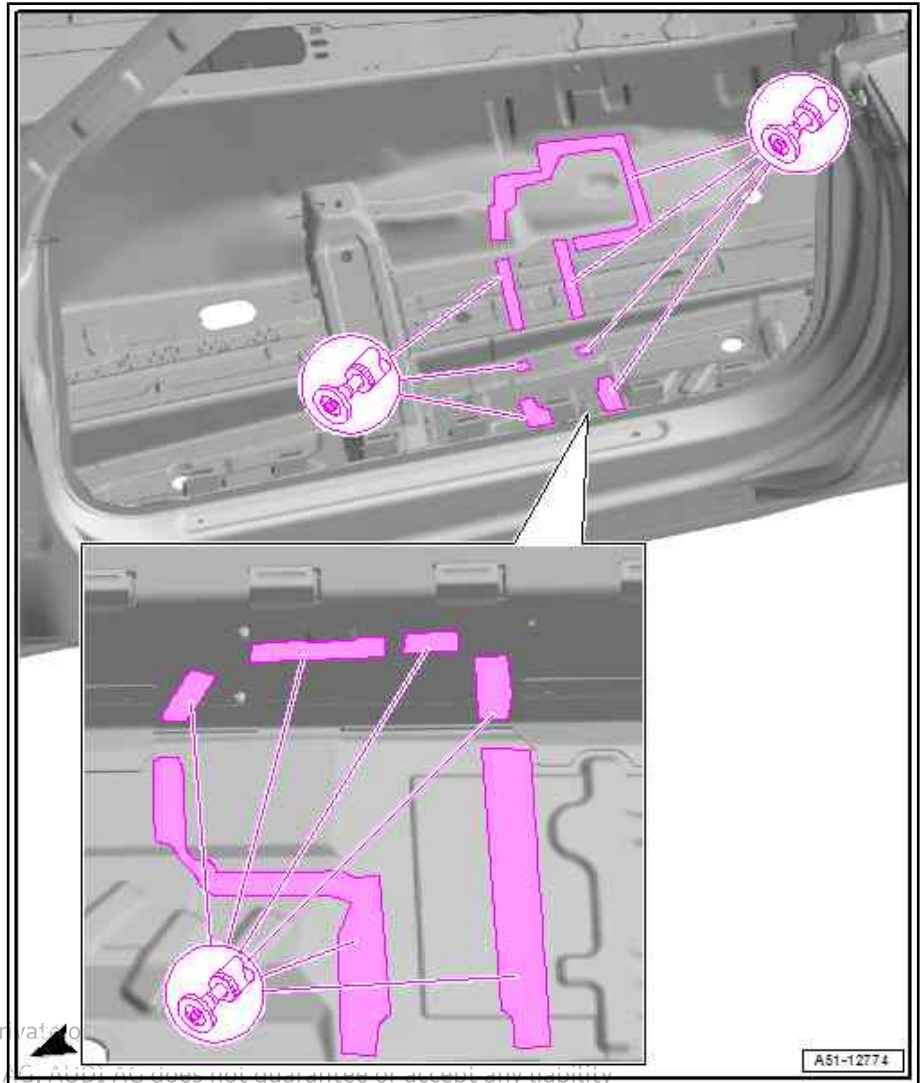


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- Remove remaining material using compact angle grinder .
- Grind welding areas down to bare metal.



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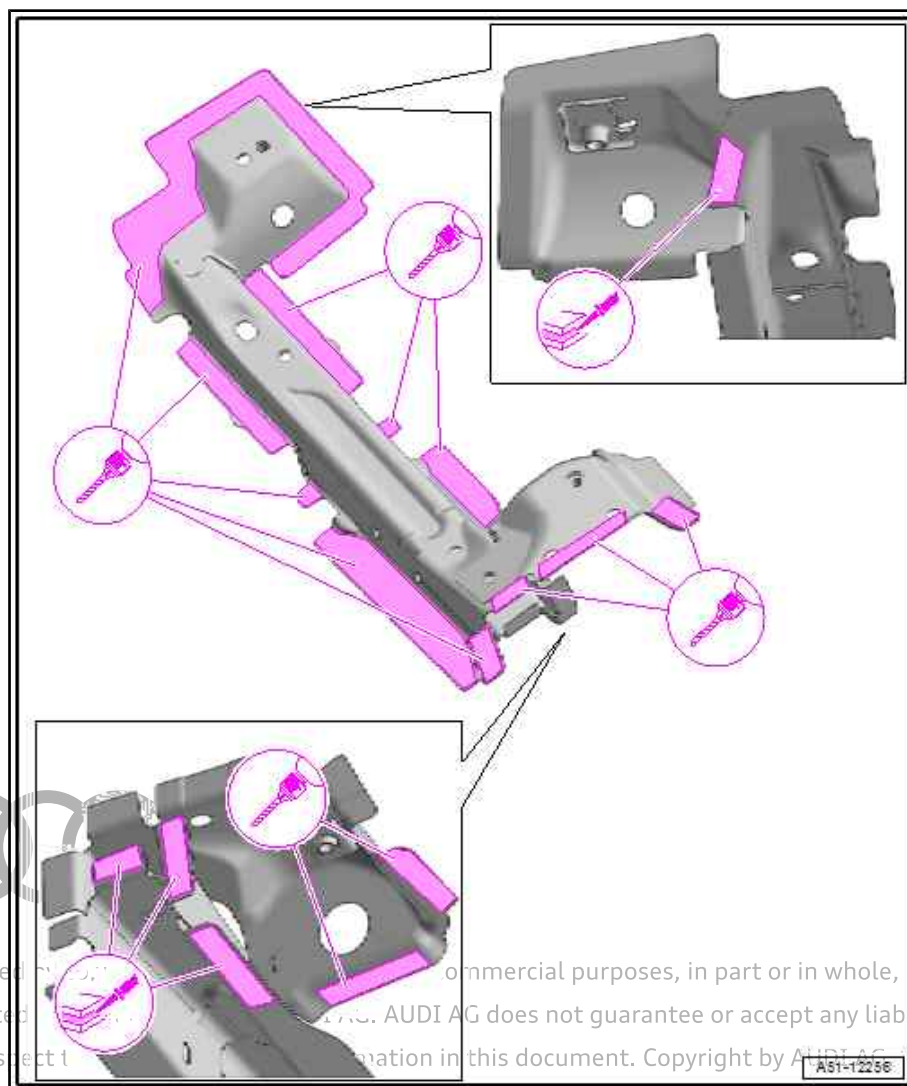


Replacement part

- ◆ Rear seat cross member
- ◆ 2-component epoxy adhesive - DA 001 730 A2-

Preparing new parts

- Drill holes for SG plug weld seam, 8.0 mm Ø using drill .
- Apply 2-component epoxy adhesive - DA 001 730 A2- (4 mm thick) using pneumatic glue gun - V.A.G 2005 B- .

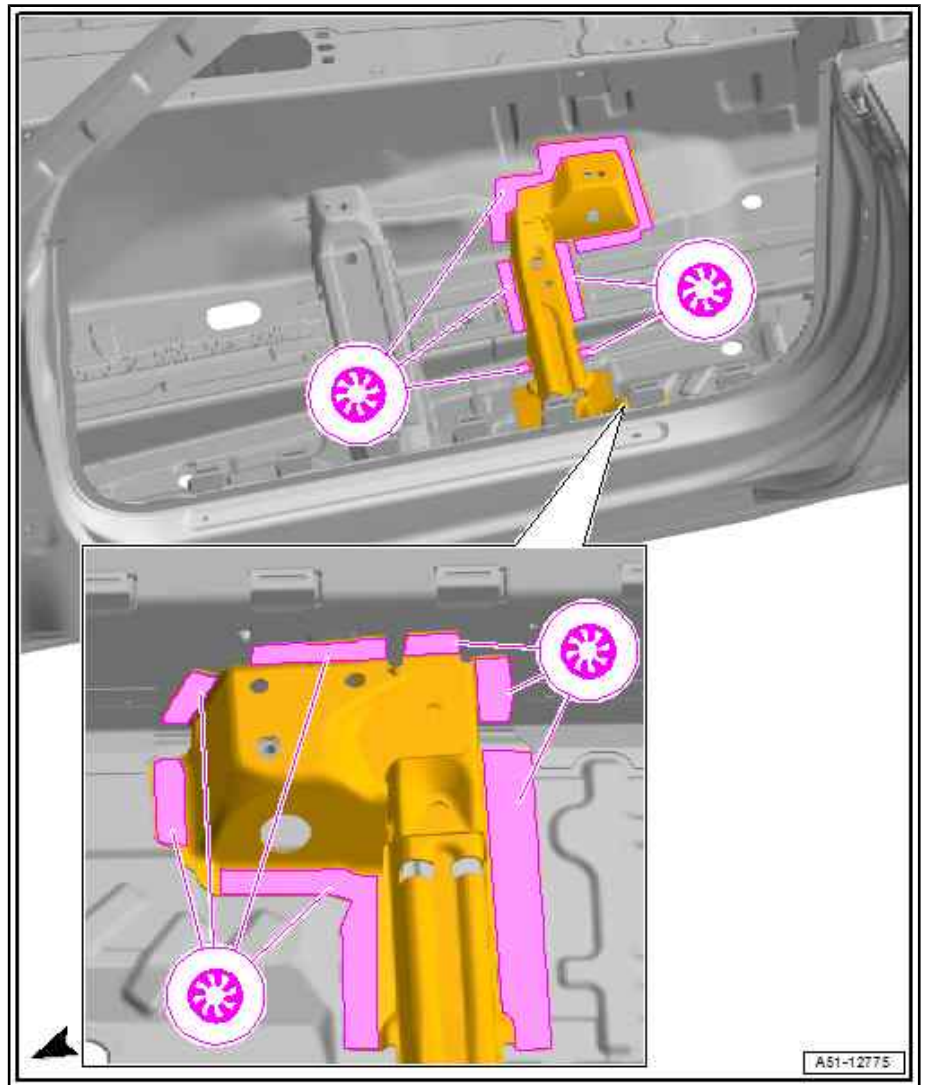


! NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" 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 new part using shielded arc welding equipment : SG plug weld seam.



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RO: 51 73 55 05

12 Centre tunnel - Renewal

1 - Centre tunnel

- ❑ With ultra-high strength steel (hot-formed)

2 - Upper footwell cross member

3 - Longitudinal member (right-side)

4 - Front right seat cross member

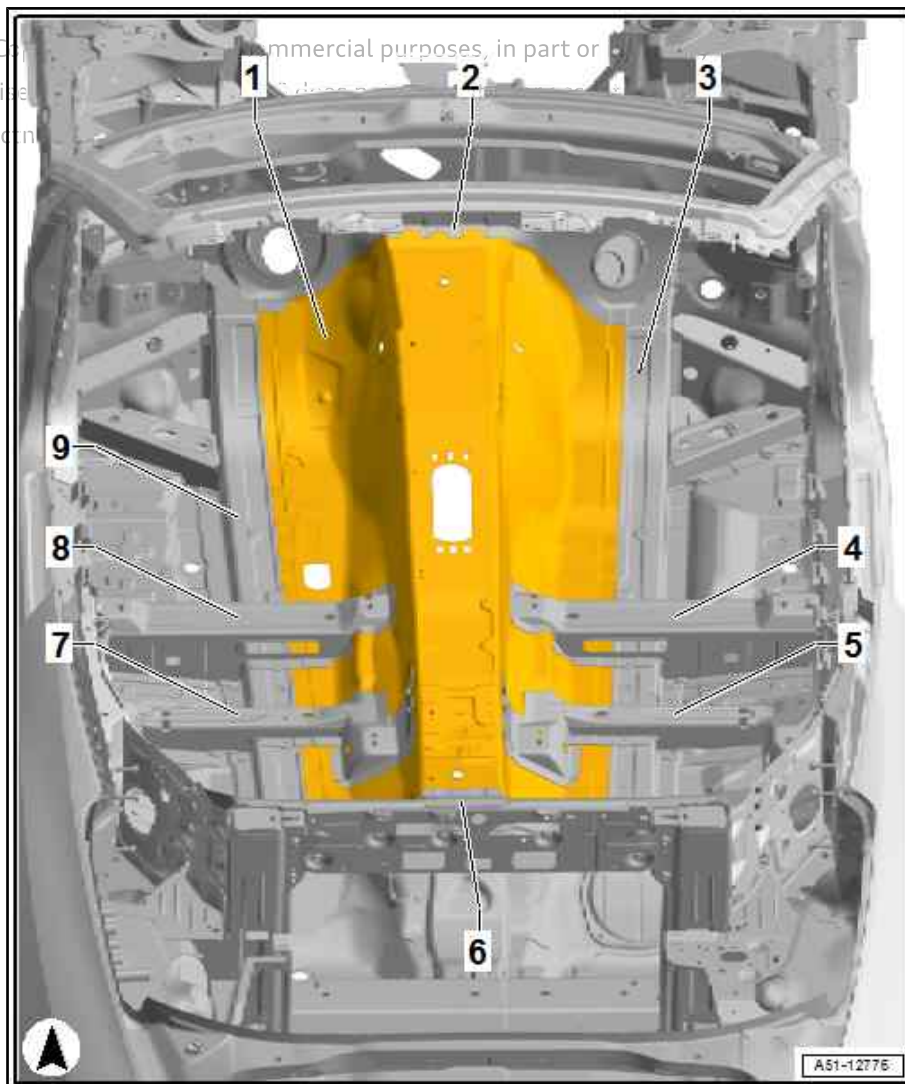
5 - Rear right seat cross member

6 - Seat cross member for rear seat bench

7 - Rear left seat cross member

8 - Front left seat cross member

9 - Longitudinal member (left-side)



12.1 Tools

Special tools and workshop equipment required

- ◆ Shielded arc welding equipment
- ◆ Pneumatic brush grinder set
- ◆ Compact angle grinder
- ◆ Body saw
- ◆ Spot weld breaker
- ◆ Drill

Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 38](#).

12.2 Procedure

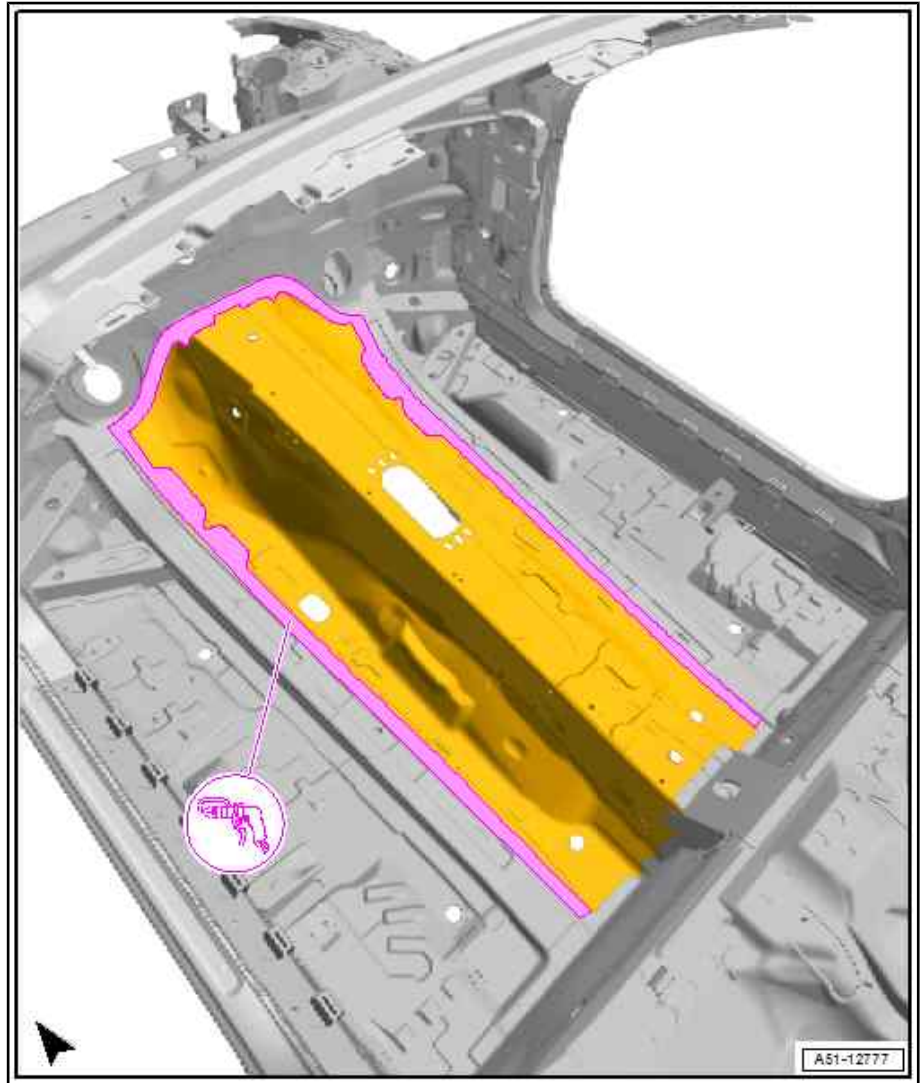
- Footwell cross member removed ⇒ [page 89](#)



- Rear seat cross member removed ⇒ [page 146](#) .
- Front seat cross member removed ⇒ [page 141](#) .

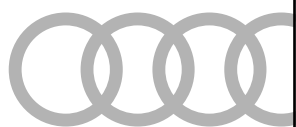
Cutting locations

- Separate original joint using spot weld breaker .

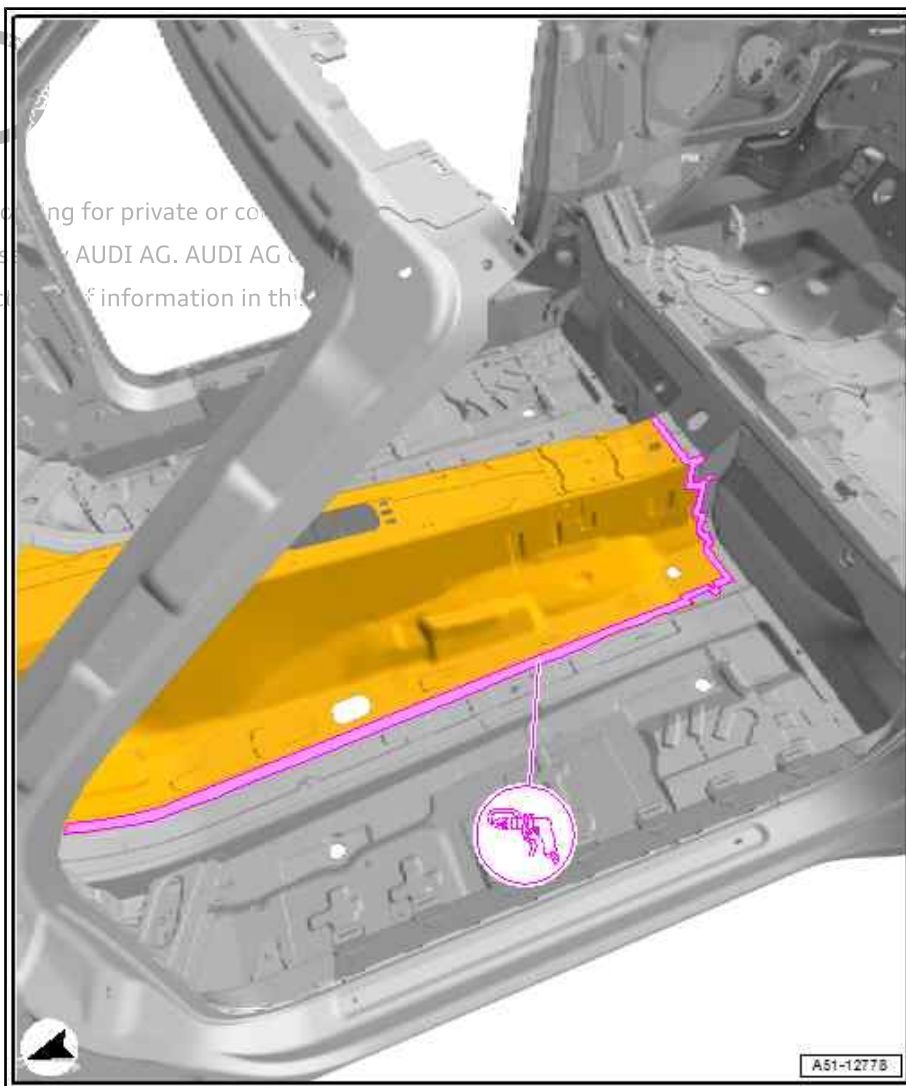


- Separate original joint using spot weld breaker .

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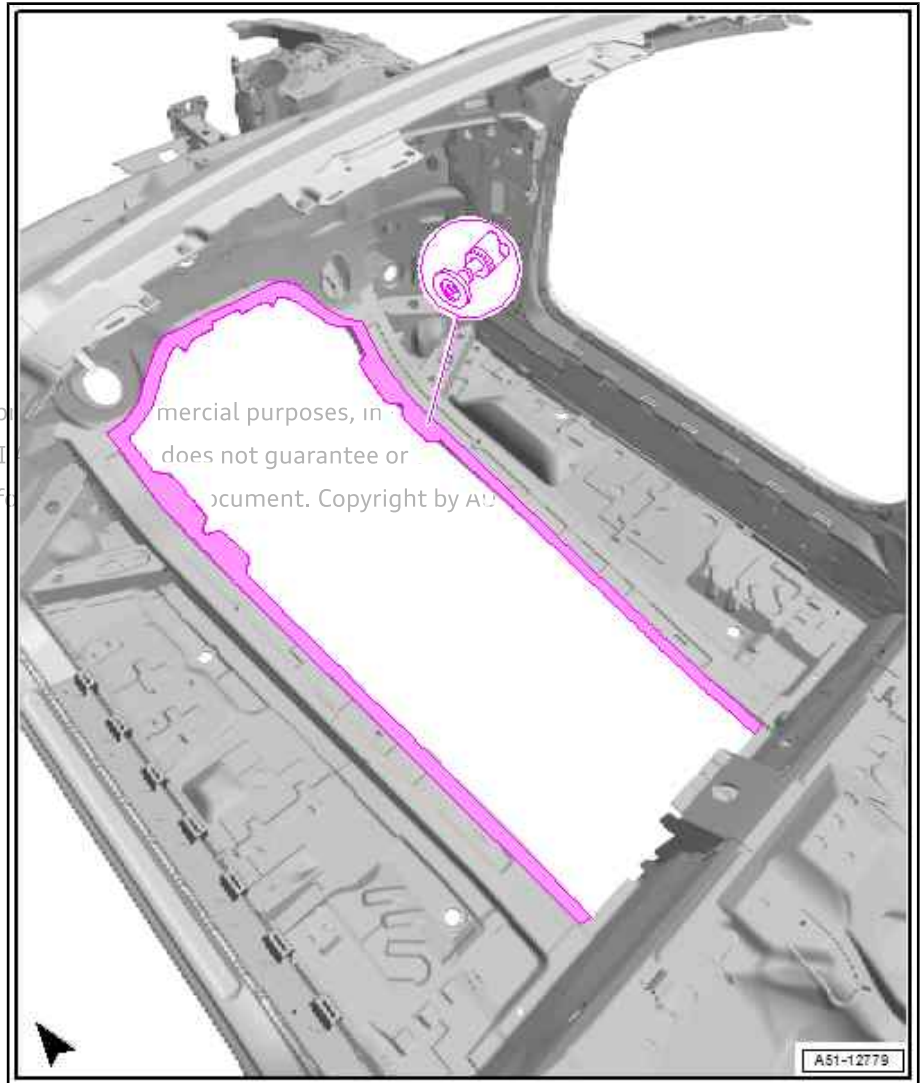
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- Remove remaining material using compact angle grinder .
- Grind welding areas down to bare metal.



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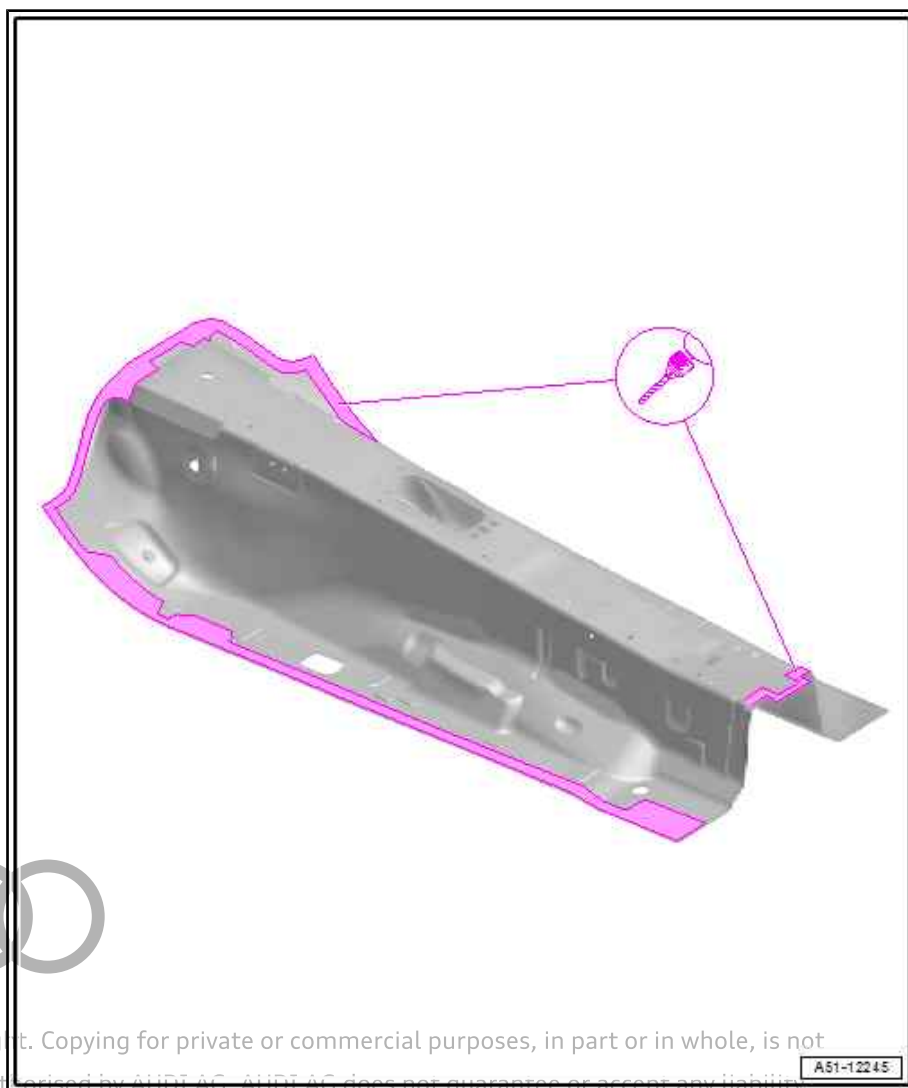


Replacement parts

- ◆ Tunnel

Preparing new part

- Drill holes for SG plug weld seam, 8.0 mm Ø using drill .



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NOTICE

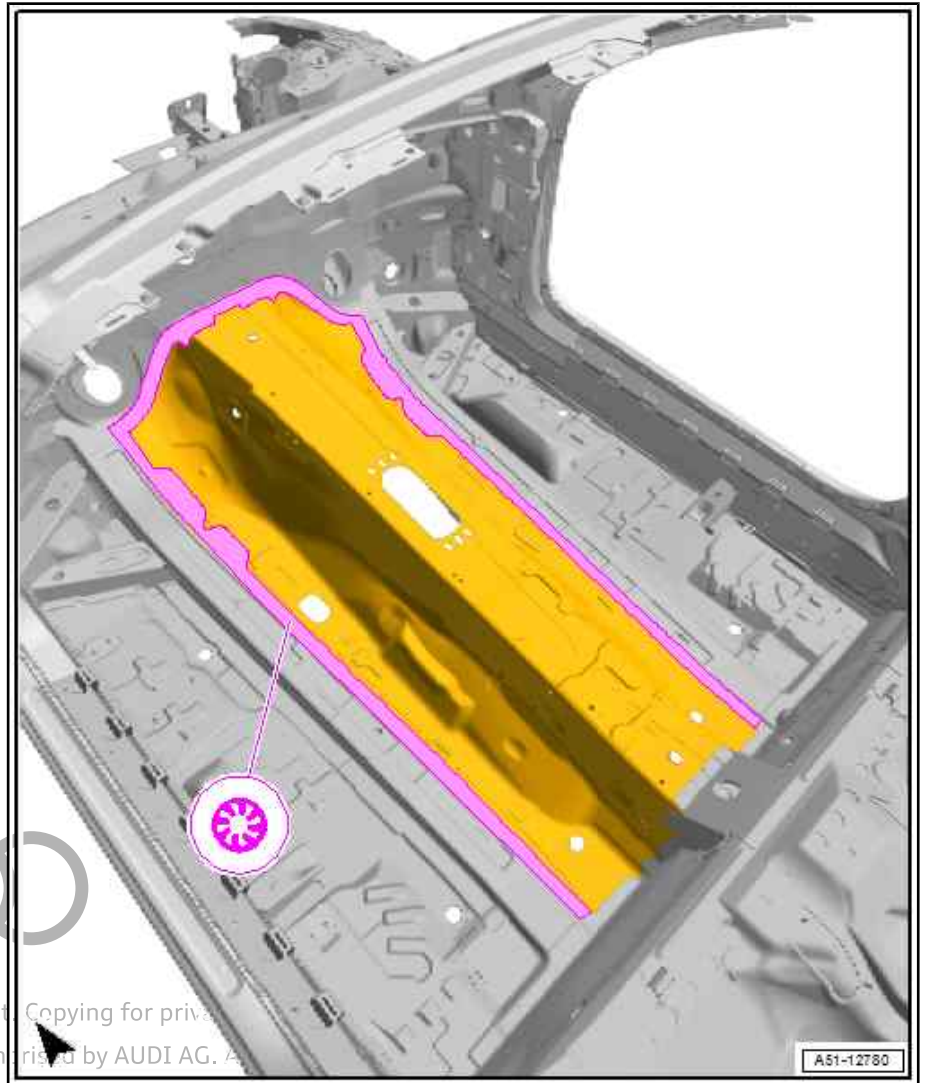
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" must be used to ensure correct results when spot welding.

Welding in

- Match up new part with vehicle positioned on alignment bracket set and fix in place.
- Check fit relative to adjacent parts.
- Weld in new part using shielded arc welding equipment : SG plug weld seam.



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



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- Install footwell cross member ⇒ [page 89](#) .
- Install rear seat cross member ⇒ [page 146](#) .
- Install front seat cross member ⇒ [page 141](#) .



53 – Body - rear

RO: 53 16 55 00

1 Rear cross member - Renewal

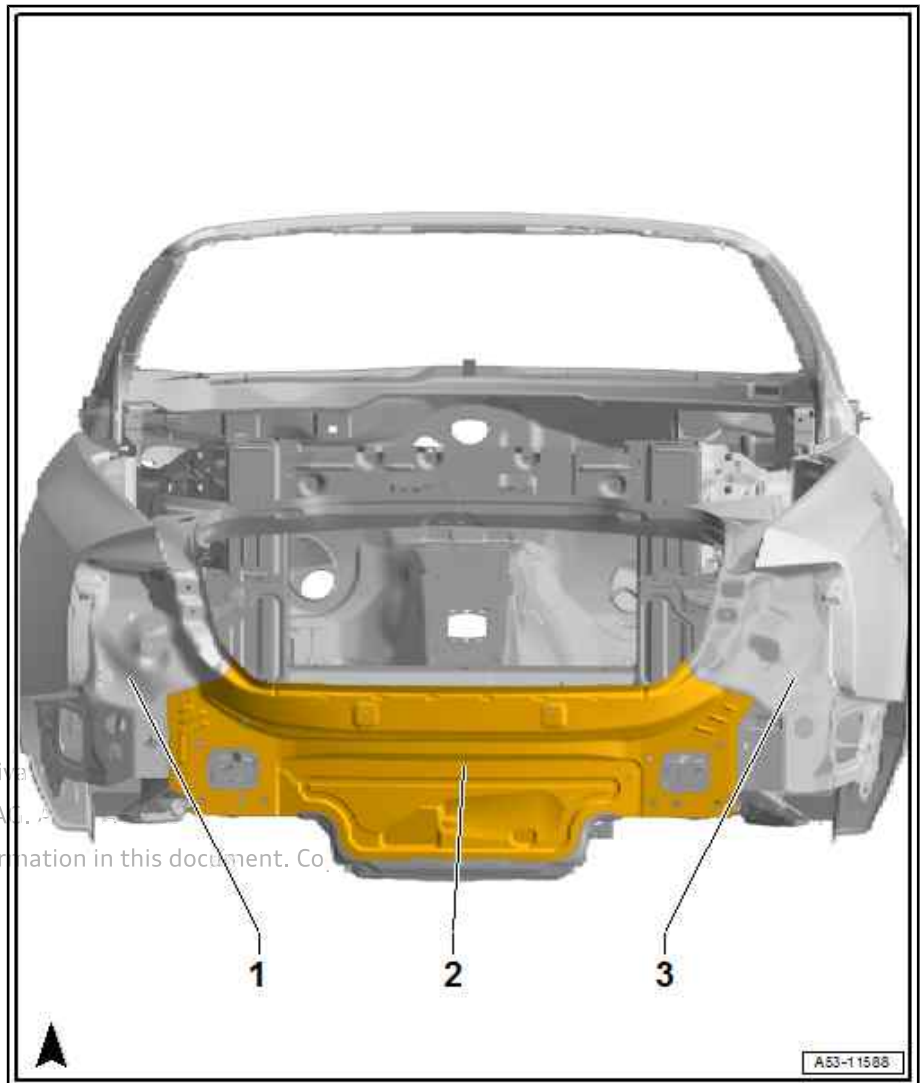
1 - Tail light mounting (left-side)

2 - Rear cross member

3 - Tail light mounting (right-side)



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1.1 Tools

Special tools and workshop equipment required

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

Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work [⇒ page 38](#).

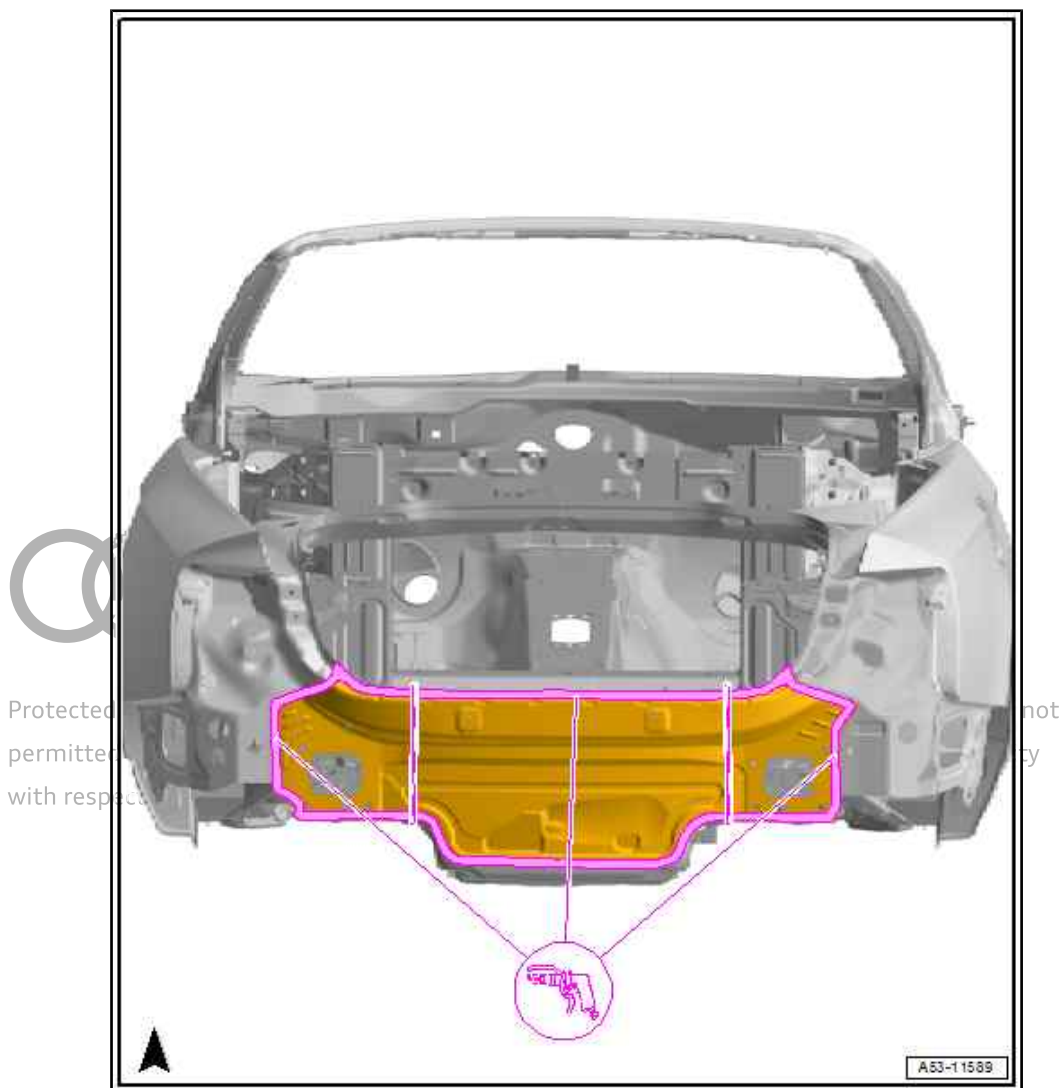


1.2 Procedure

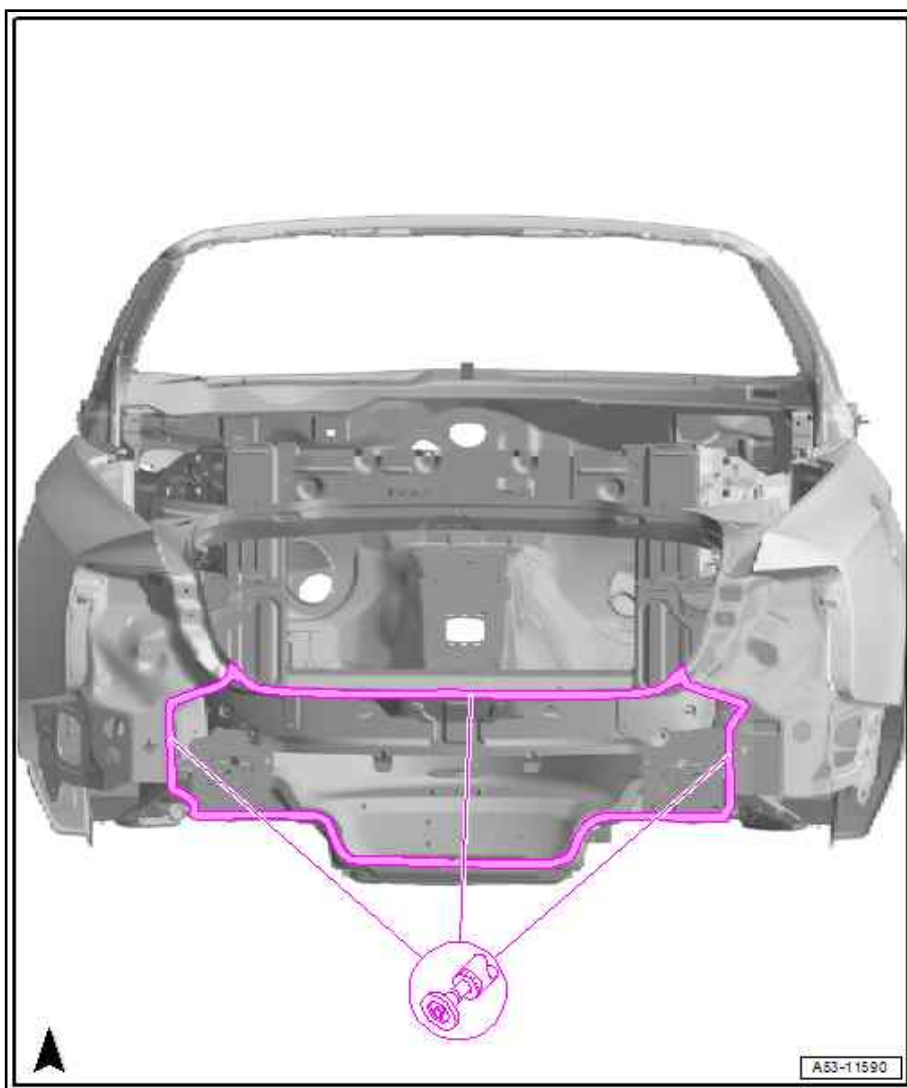
Cutting locations

Partial renewal is possible using the separating cuts shown.

- Drill out original joint using spot weld breaker .
- Detach rear cross member.



- Remove remaining material using compact angle grinder .



Replacement part

- ◆ Rear cross member



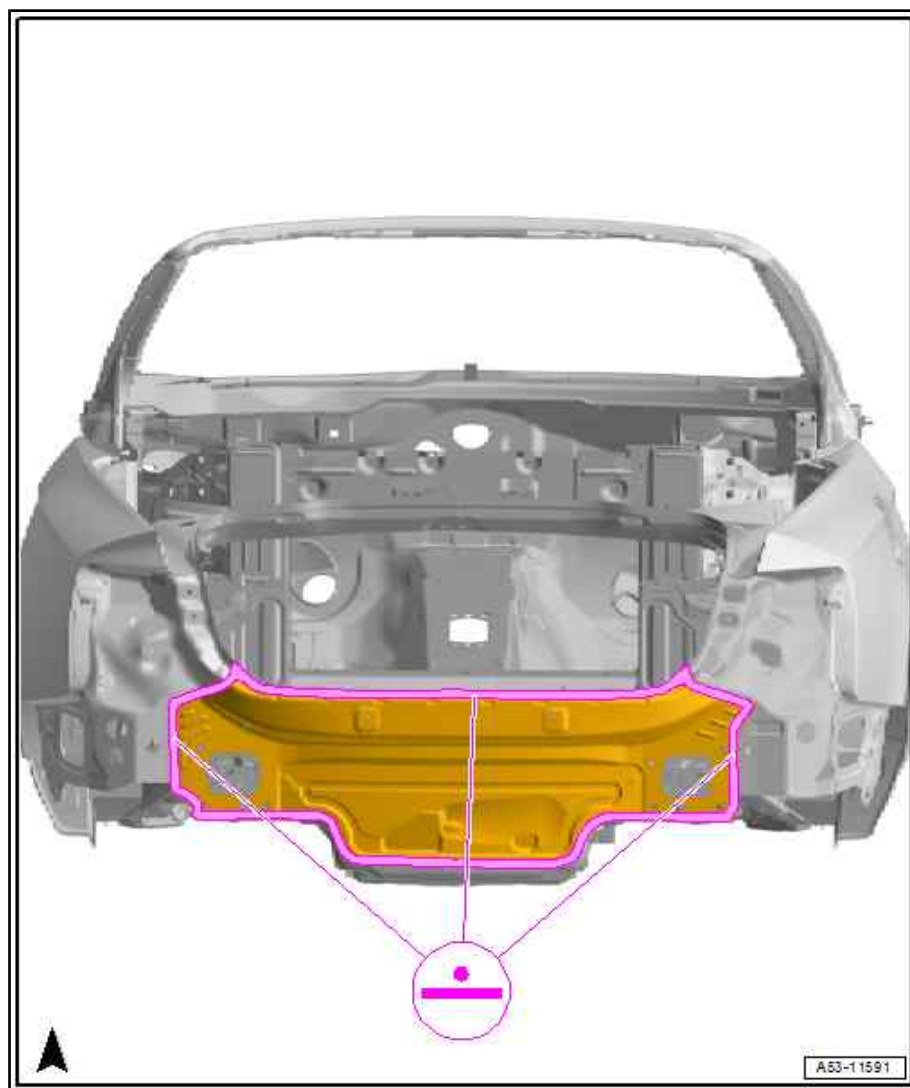
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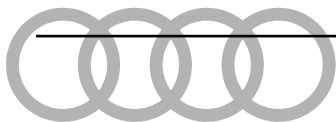
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" must be used to ensure correct results when spot welding.

Welding in

- Match up rear cross member and fix in position.
- Check fit relative to rear lid.
- Weld in rear cross member using resistance spot welder : RP spot weld seam.



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RO: 53 05 55 52

2 Inner cross panel - Renewal

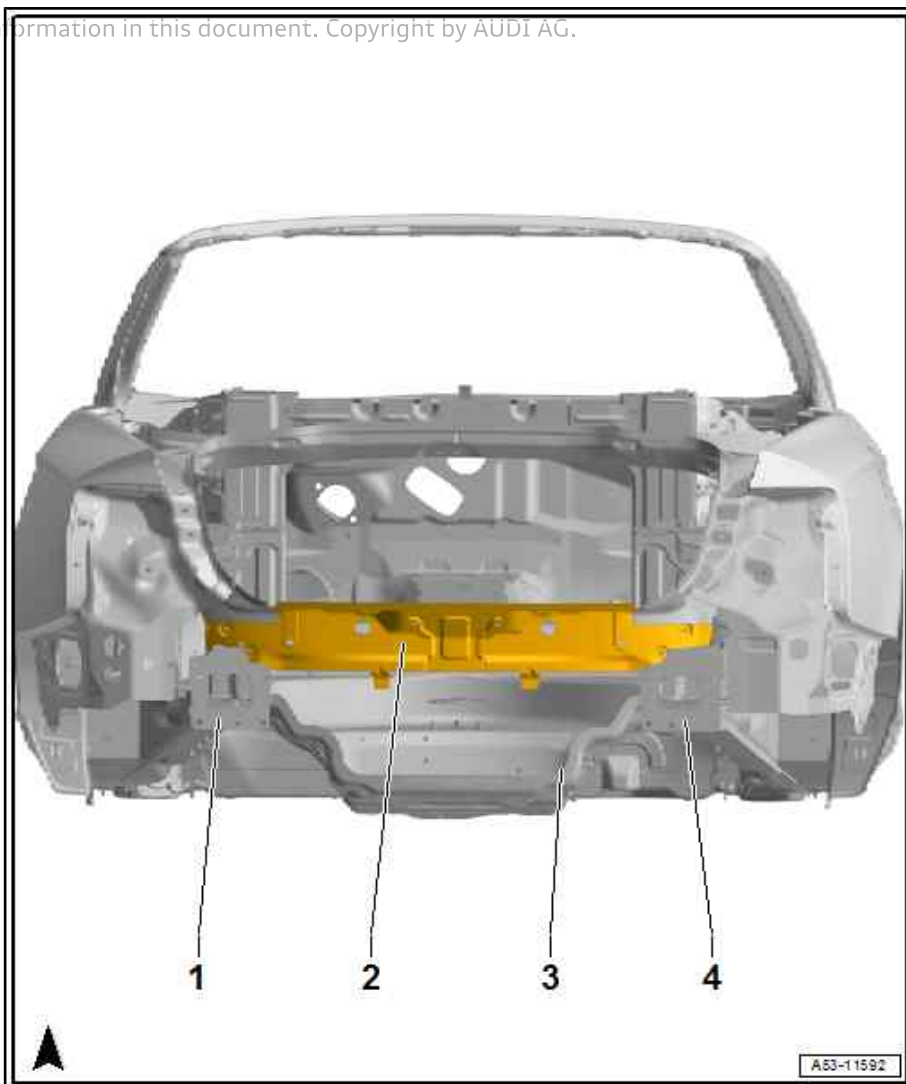
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1 - Longitudinal member (right-side)

2 - Inner cross panel

3 - Spare wheel well

4 - Longitudinal member (left-side)



2.1 Tools

Special tools and workshop equipment required

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

Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 38](#) .

2.2 Procedure

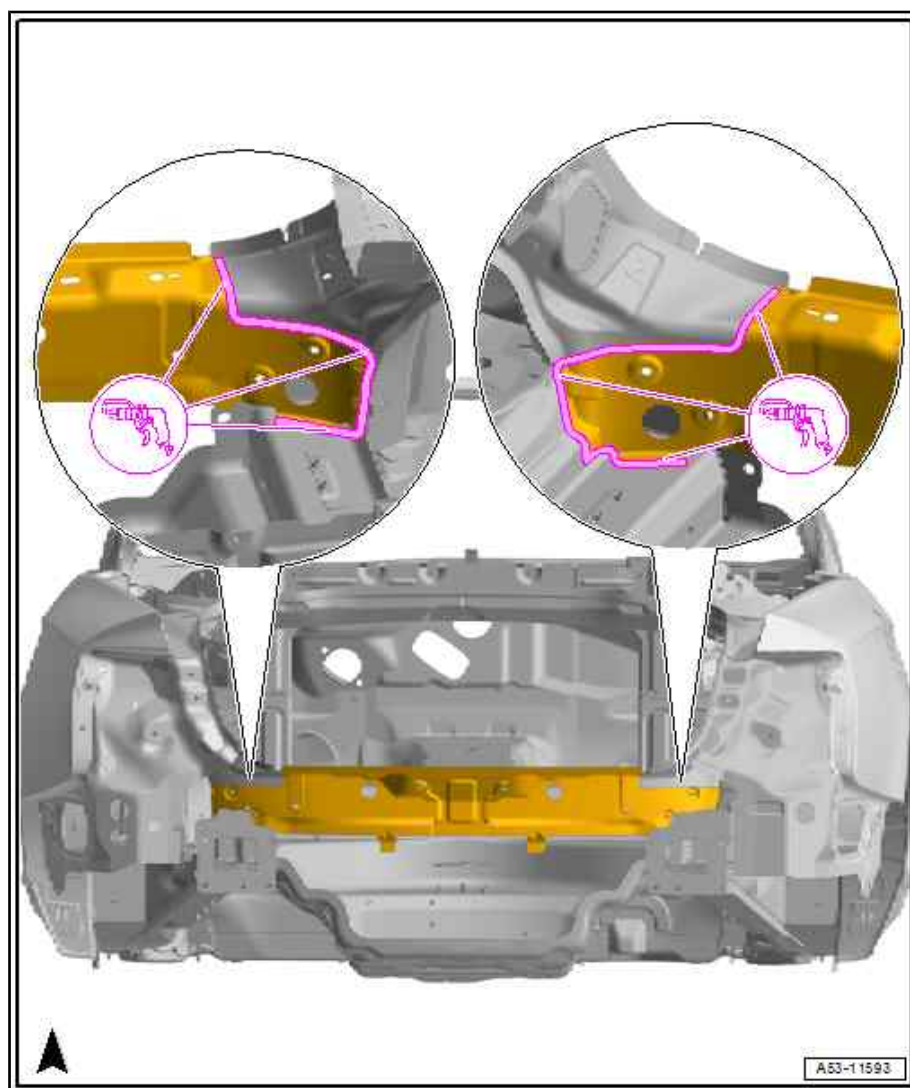
- Rear cross member already removed ⇒ [page 159](#)

Cutting locations

- Drill out original joint using spot weld breaker .



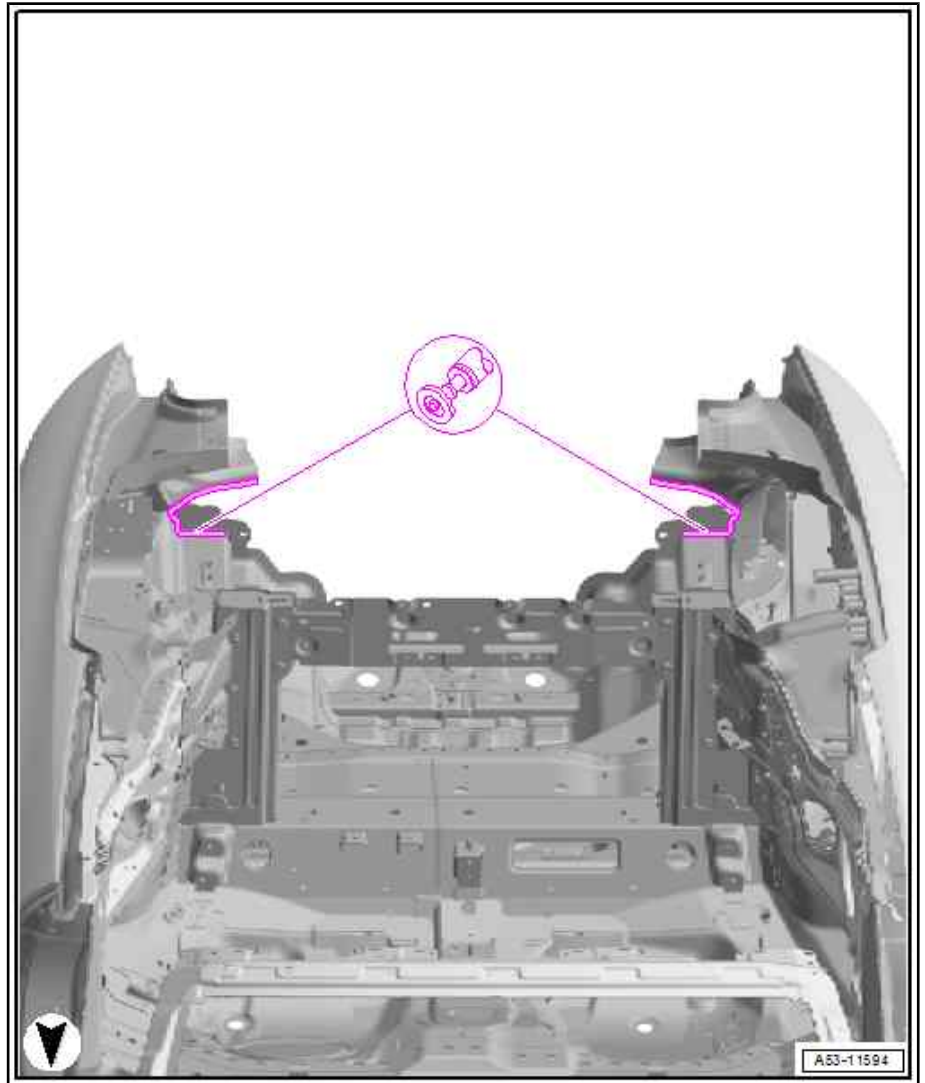
- Detach inner cross panel.



- Remove remaining material using compact angle grinder .



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Replacement part

- ◆ Inner cross panel

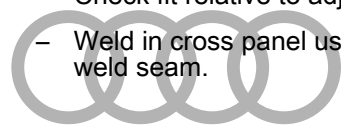


NOTICE

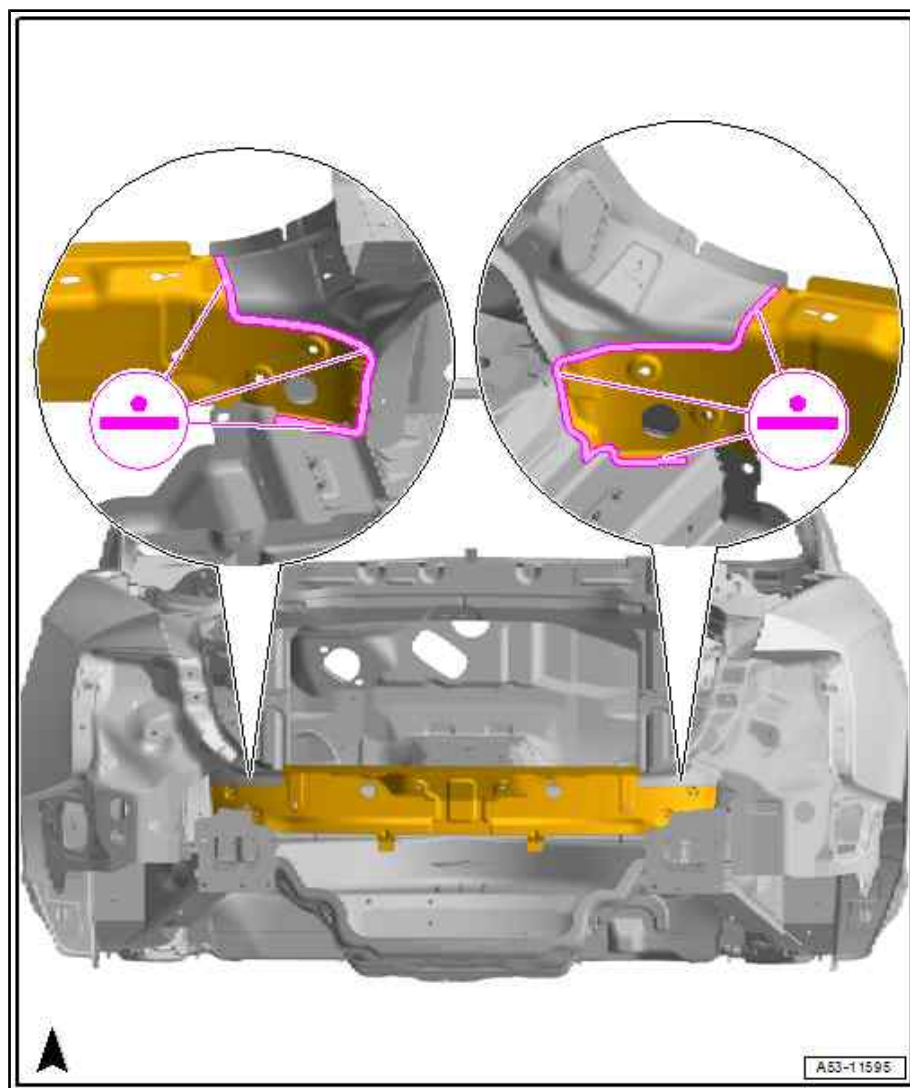
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" must be used to ensure correct results when spot welding.

Welding in

- Match up inner cross panel and fix in position.
- Check fit relative to adjacent parts.
- Weld in cross panel using resistance spot welder : RP spot weld seam.



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- Welding in rear cross member ⇒ [page 159](#)



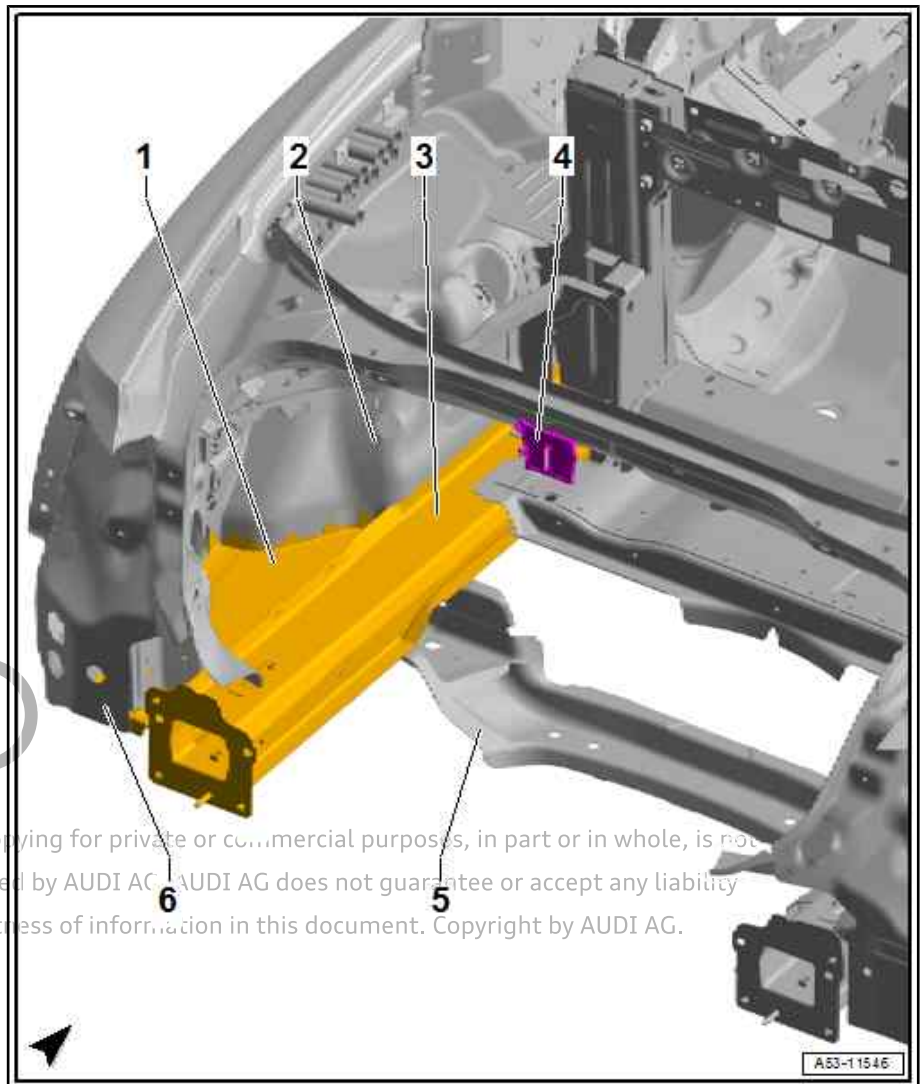
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RO: 53 48 55 52

3 Rear longitudinal member - Partial renewal

- 1 - Closure plate
- 2 - Inner wheel housing
- 3 - Rear longitudinal member
- 4 - Moulded foam insert
- 5 - Cross member for spare wheel well
- 6 - Tail light mounting



3.1 Tools

Special tools and workshop equipment required

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

Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 38](#) .

3.2 Procedure

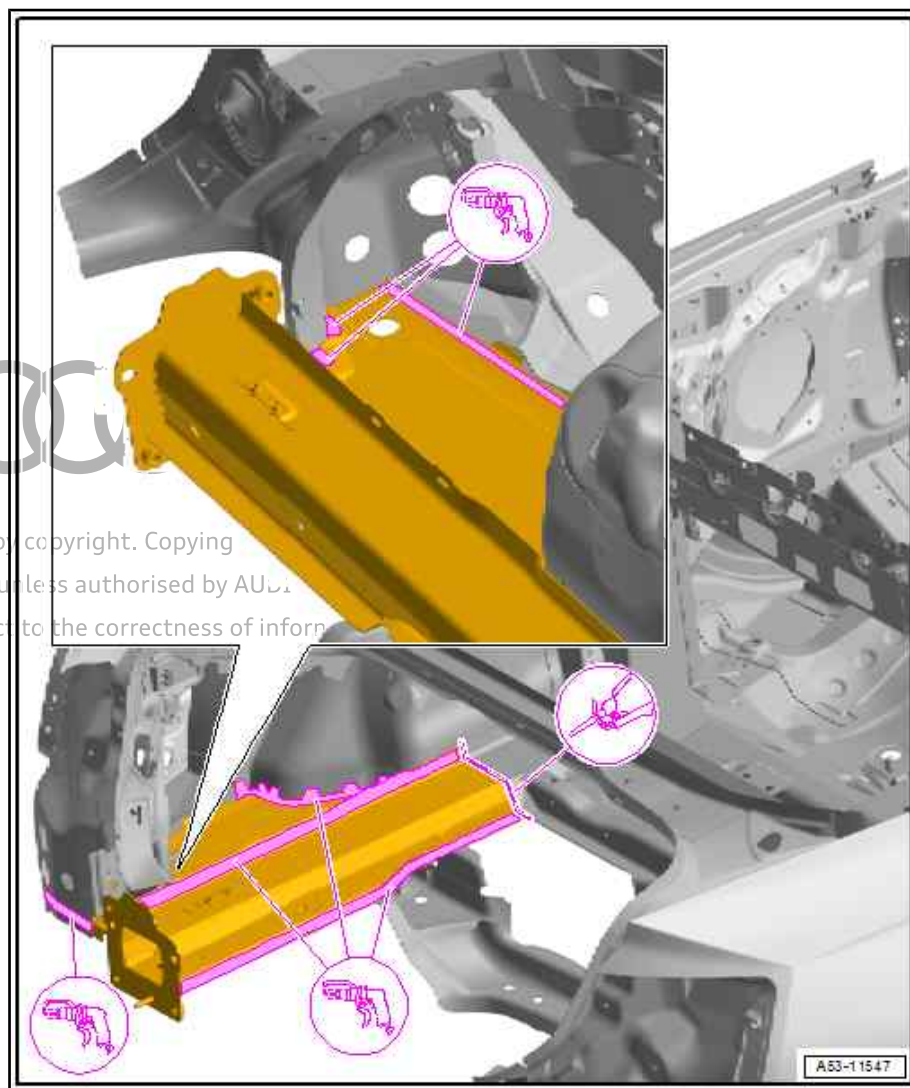
- Rear cross member removed ⇒ [page 159](#)



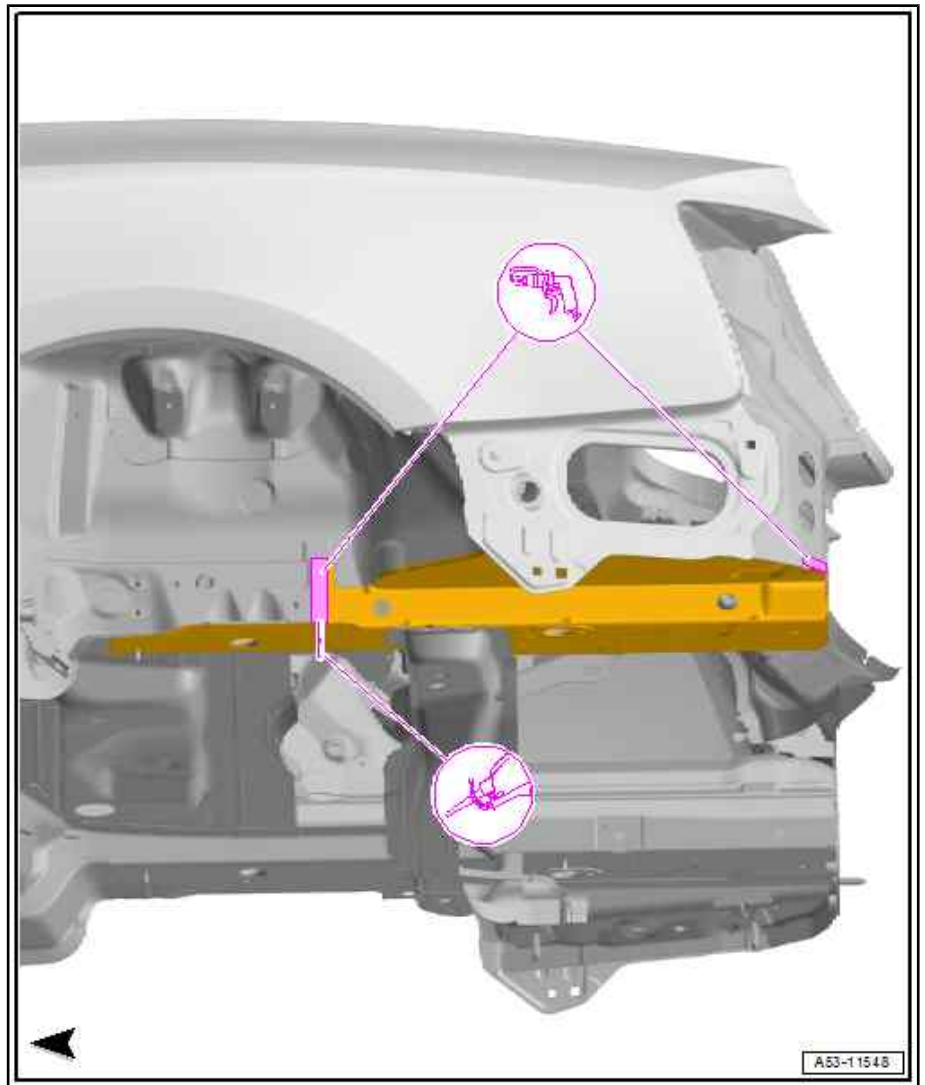
- Luggage compartment floor removed ⇒ [page 197](#)

Cutting locations

- Make separating cut with body saw , as shown.
- Separate original joint using spot weld breaker .



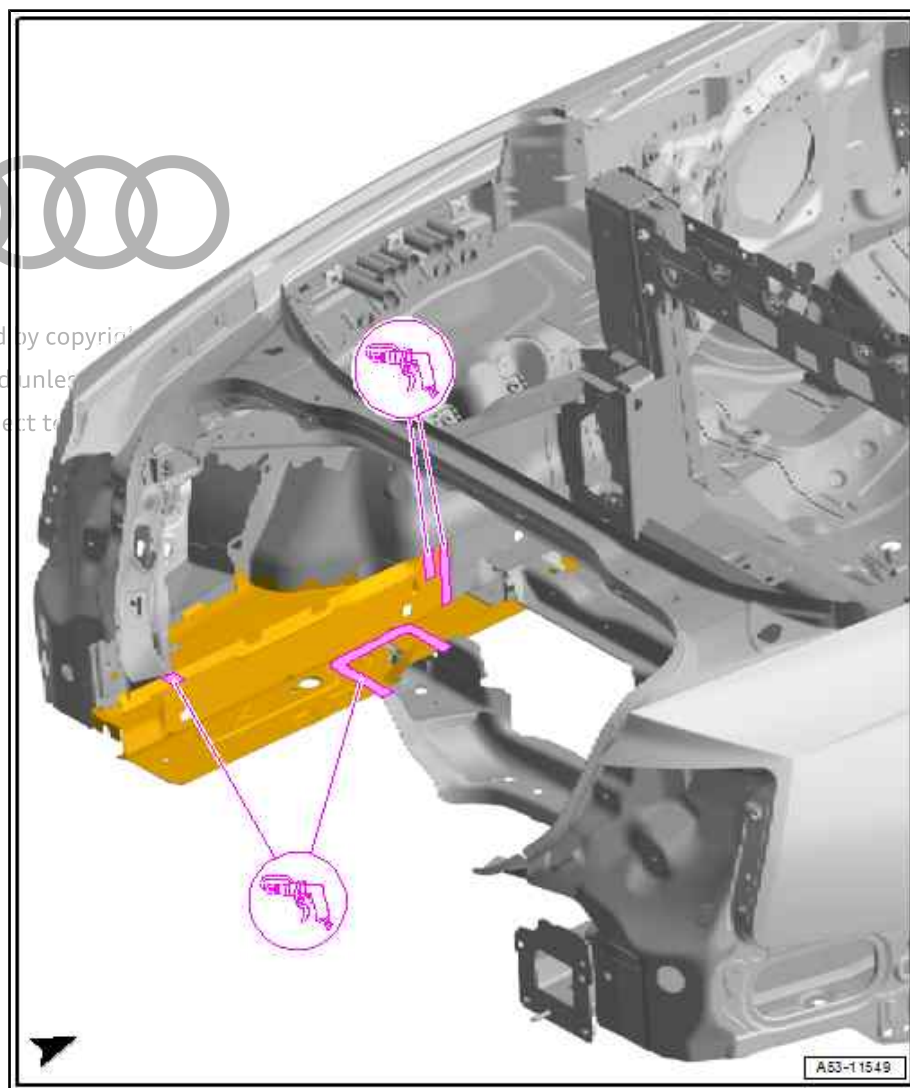
- Make separating cut with body saw , as shown.
- Separate original joint using spot weld breaker .



- Separate original joint using spot weld breaker .



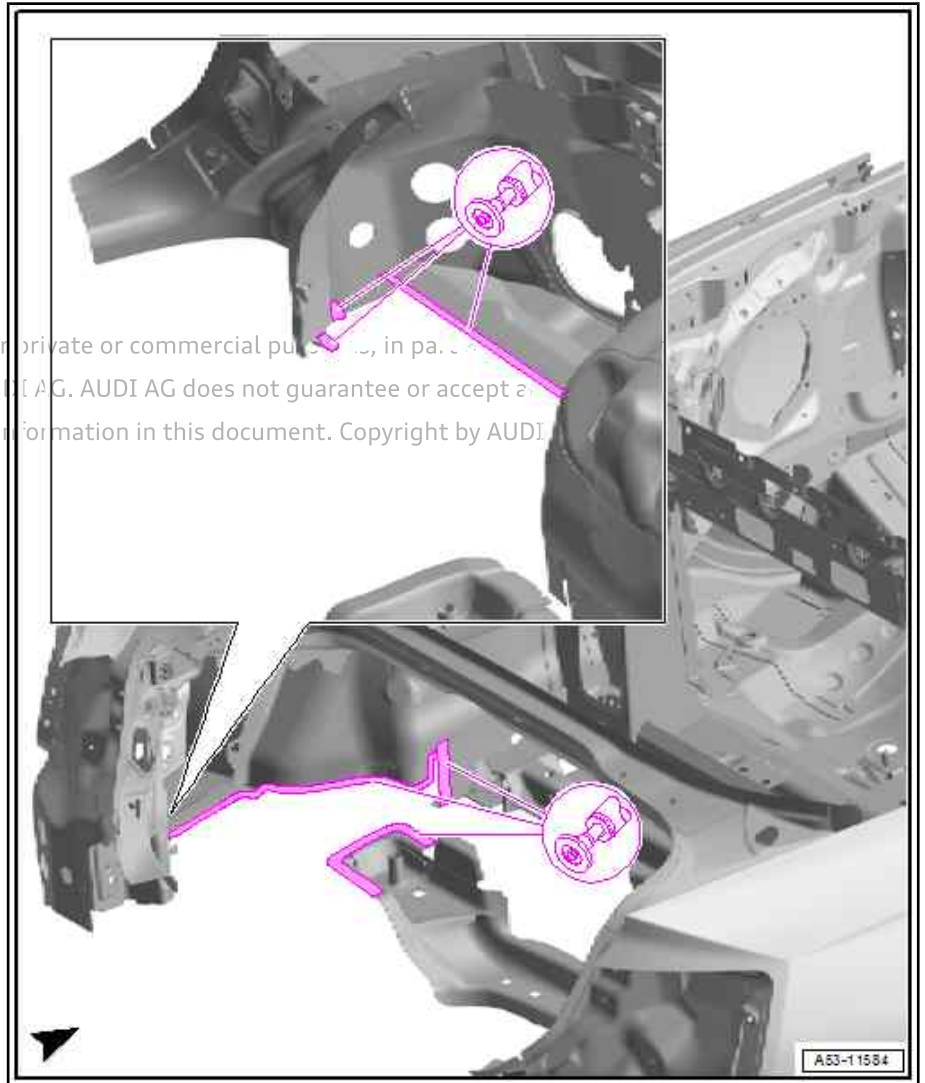
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- Remove remaining material using compact angle grinder .
- Grind welding areas down to bare metal.



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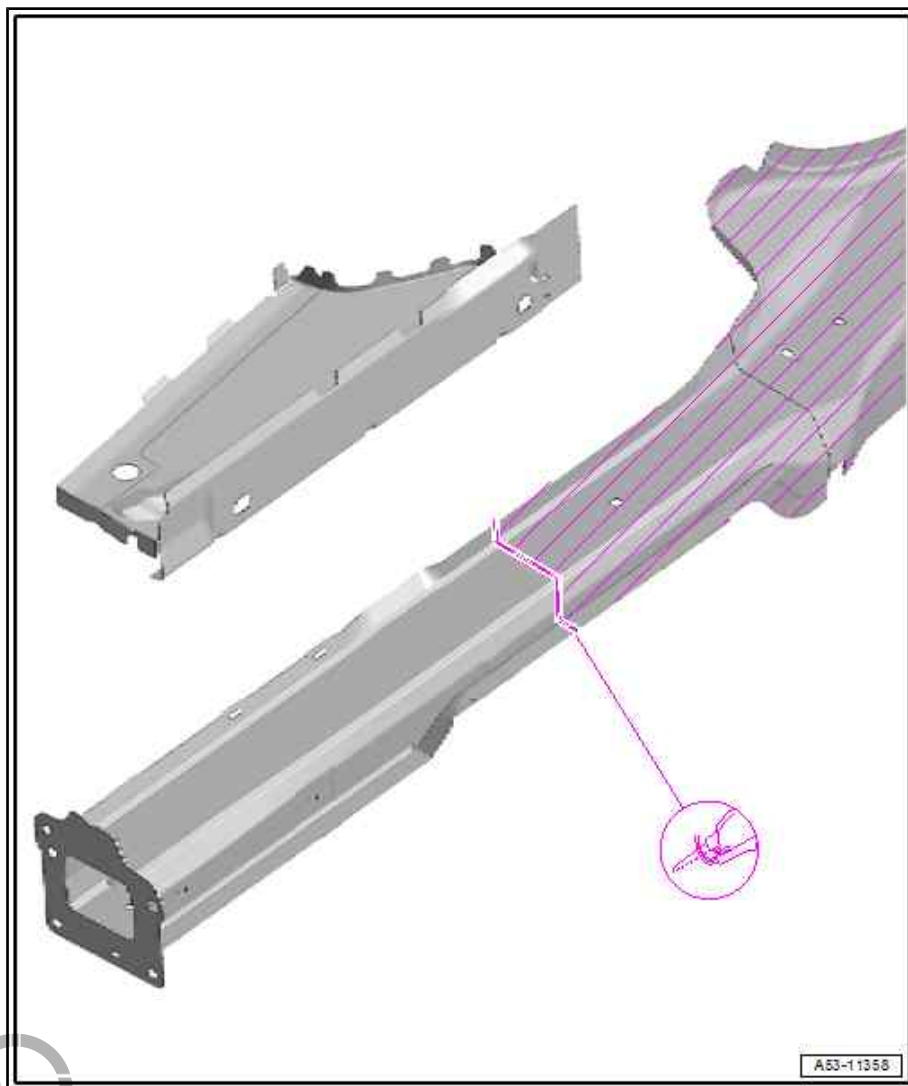


Replacement part

- ◆ Longitudinal member
- ◆ Floor plate, side section

Preparing new part

- Transfer separating cuts to new part.
- Cut new part to size using body saw .
- Grind welding areas down to bare metal.



NOTICE

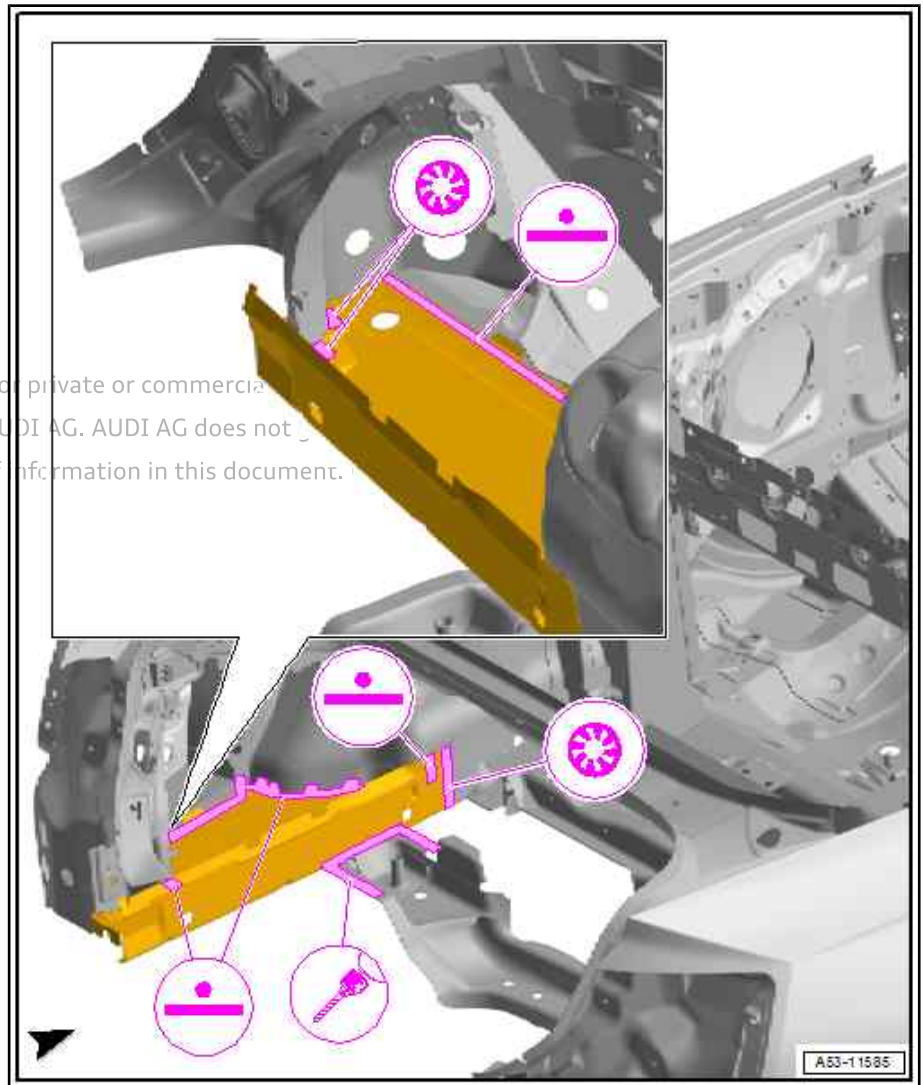
Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" must be used to ensure correct results when spot welding.

Welding in

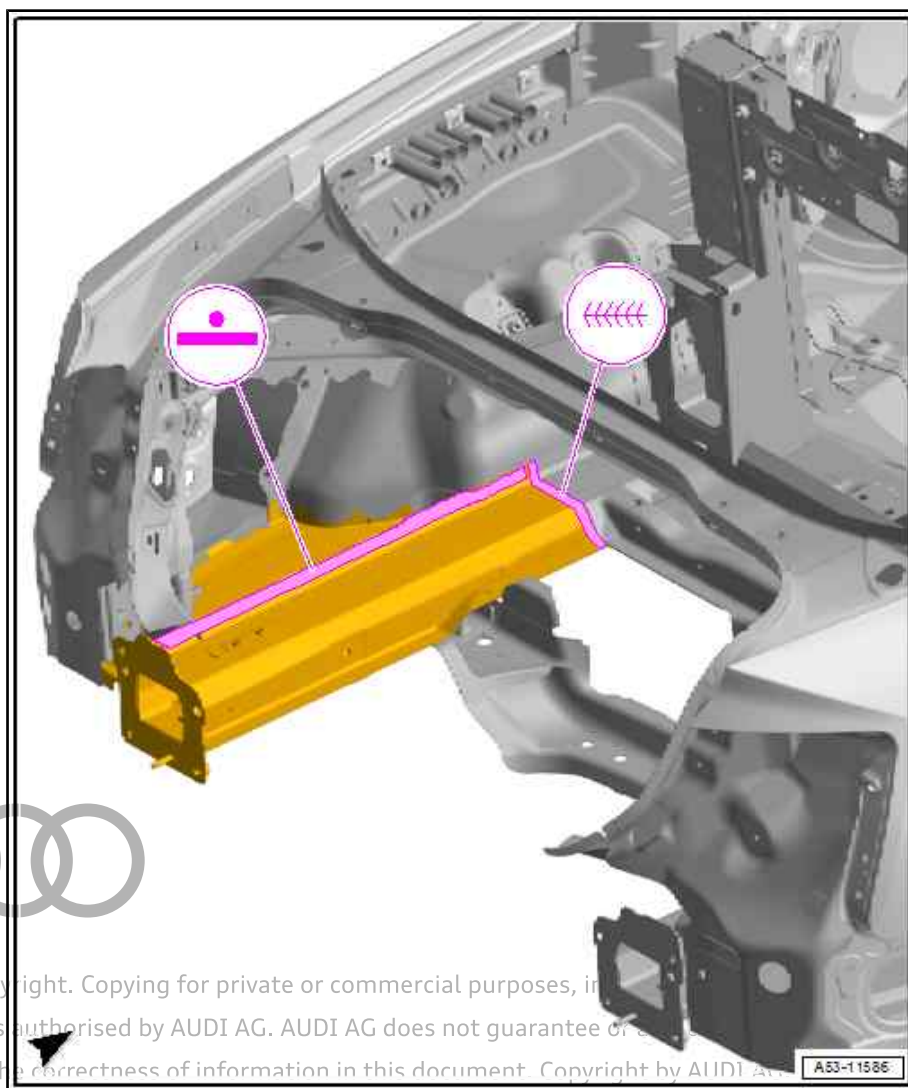
- Match up new part with vehicle positioned on alignment bracket set and fix in place.
- Check fit relative to adjacent parts.
- Weld in new part using resistance spot welder : RP spot weld seam.
- Weld in new part using shielded arc welding equipment : SG plug weld seam.
- Drill holes for SG plug weld seam, 8.0 mm Ø using drill .



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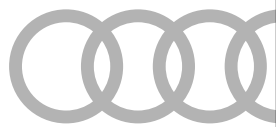


- Weld in new part using resistance spot welder : RP spot weld seam.
- Butt weld at separating cut using shielded arc welding equipment : SG continuous seam.

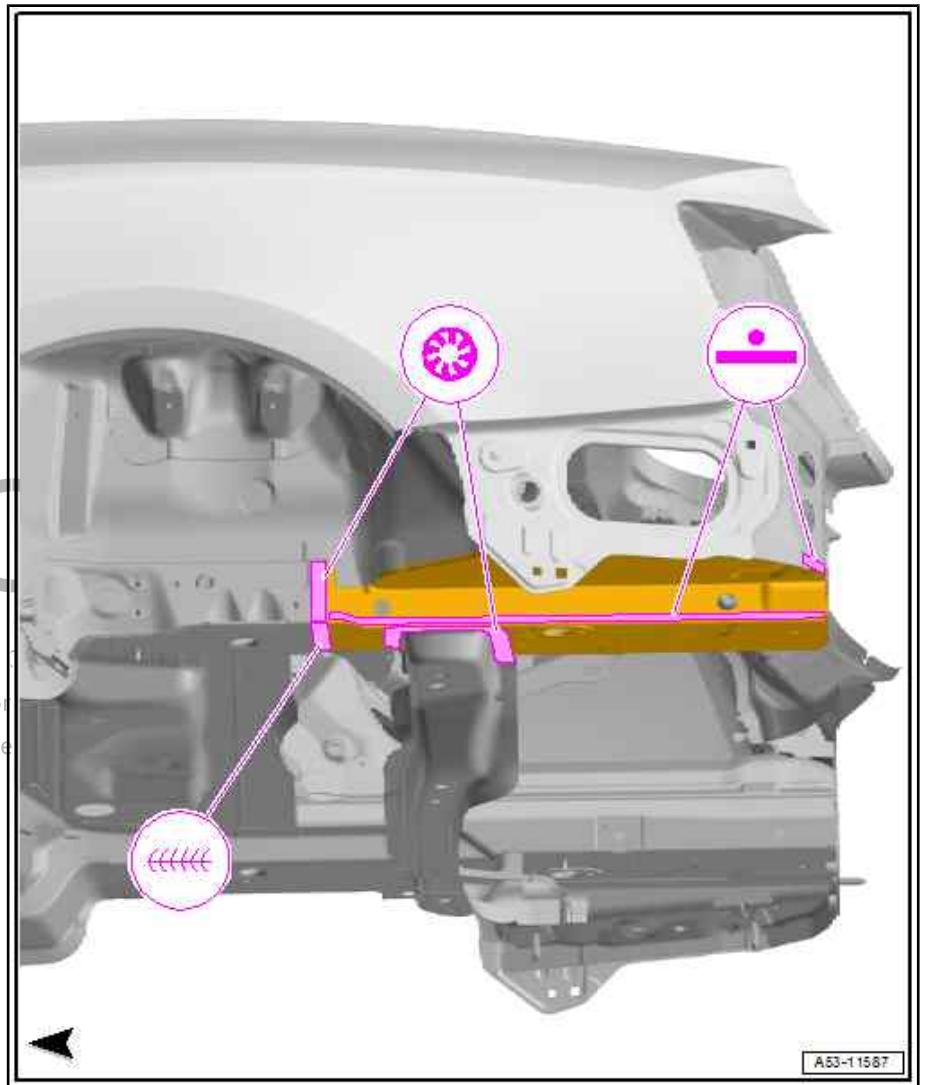


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- Weld in new part using resistance spot welder : RP spot weld seam.
- Weld in new part using shielded arc welding equipment : SG plug weld seam.
- Butt weld at separating cut using shielded arc welding equipment : SG continuous seam.



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- Install rear cross member ⇒ [page 159](#) .
- Install luggage compartment floor ⇒ [page 197](#) .



RO: 53 55 55 00

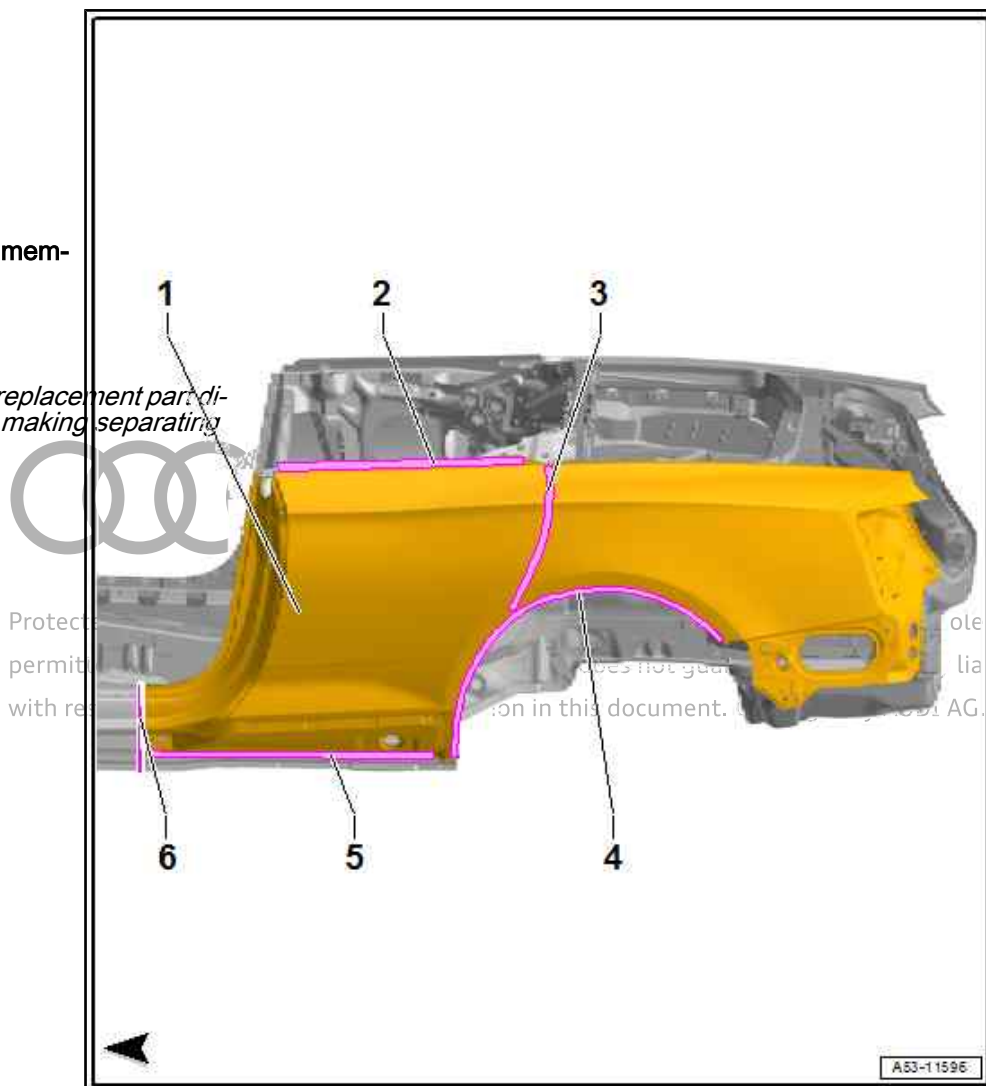
4 Side panel - Renewal

- 1 - Side panel
- 2 - Bonded area
- 3 - Moulded foam insert
- 4 - Bonded area
- 5 - Laser weld seam
- 6 - Separating cut in side member



Note

Pay attention to replacement part dimensions when making separating cut.



4.1 Tools

Special tools and workshop equipment required

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

Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 38](#) .

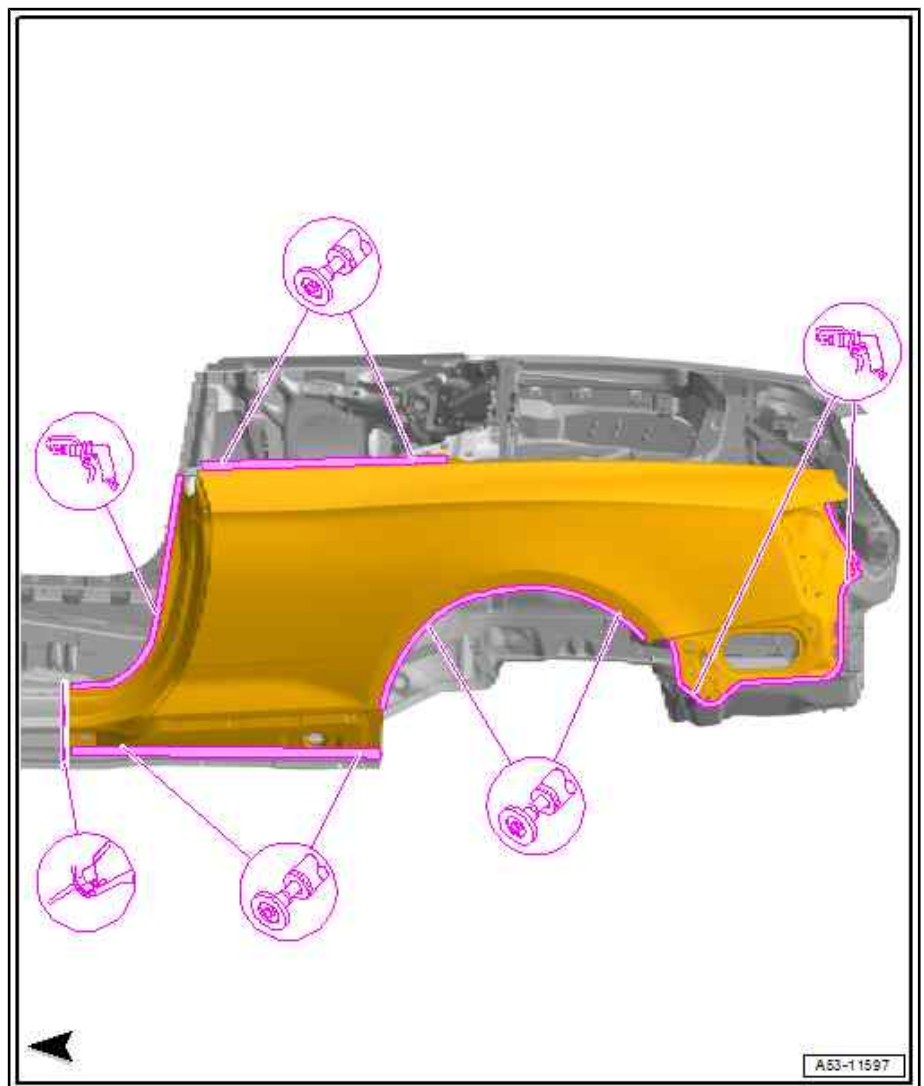


4.2 Procedure

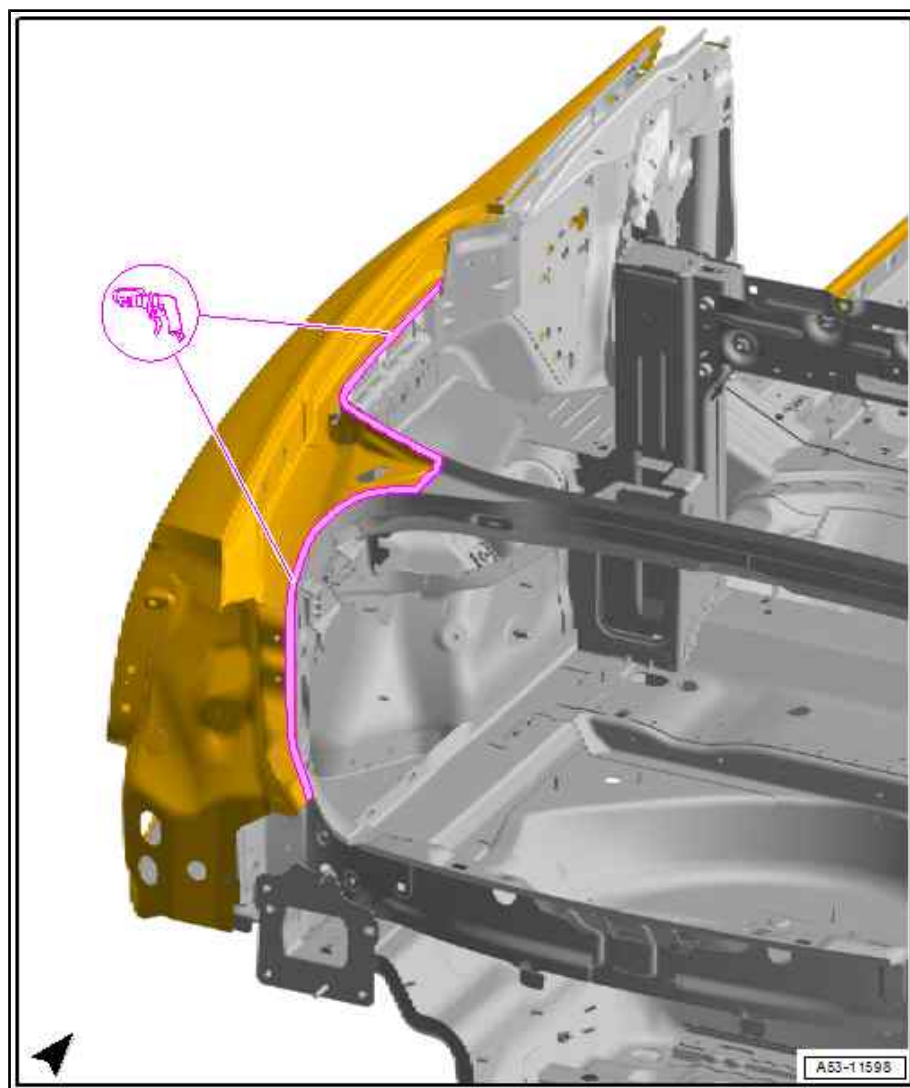
Cutting locations

Note

- ◆ *Take care not to damage the panels behind when making the separating cut.*
- ◆ *Remove as much of the foam residue as possible before starting grinding work.*
- Make separating cut as shown using body saw .
- Drill out original joint using spot weld breaker .
- Grind through outer edge at wheel arch using compact angle grinder .
- Grind through outer edge of side panel (top) using compact angle grinder .



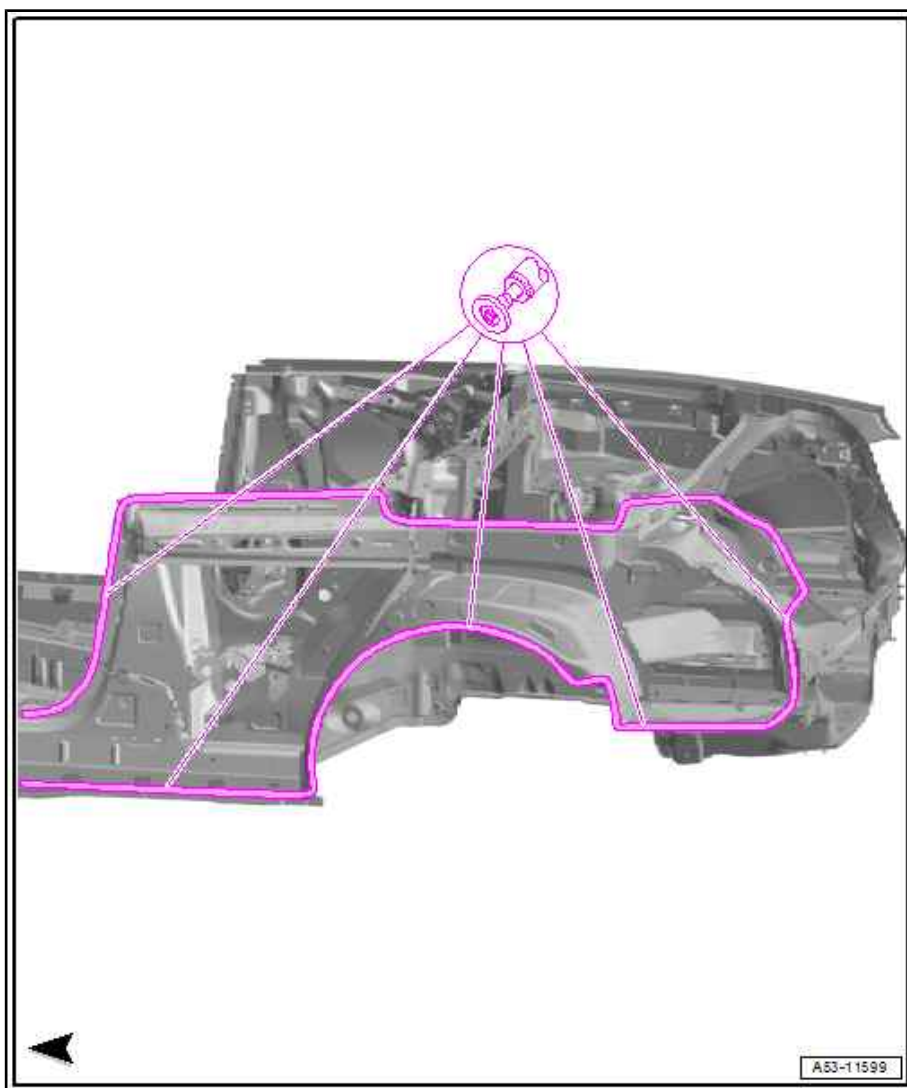
- Drill out original joint using spot weld breaker .



- Remove remaining adhesive completely and sand bonding surfaces down to bare metal.
- Clean flange area and bonding area (it must be free of dust and grease).
- Remove remaining material using compact angle grinder .



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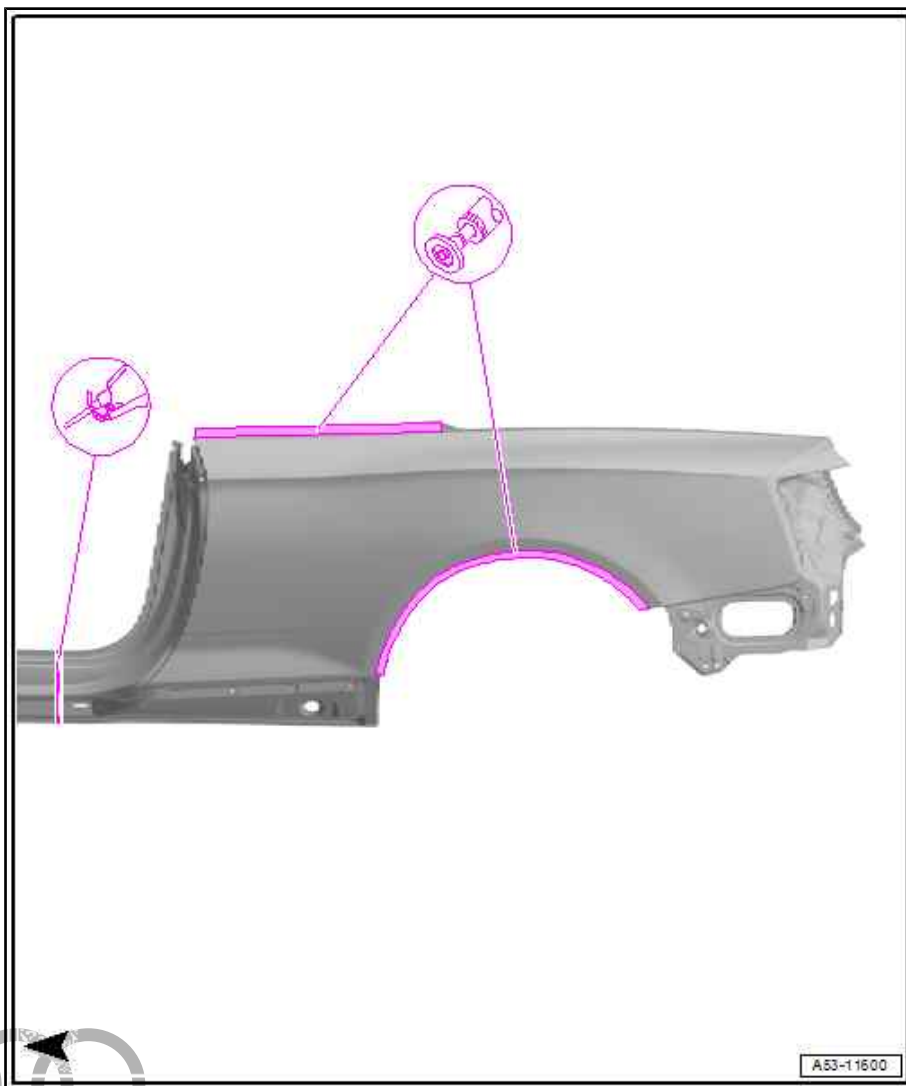


Replacement parts

- ◆ Side panel
- ◆ 2-component epoxy adhesive - DA 001 730 A2-

Preparing new part

- Grind bonding surfaces down to bare metal using compact angle grinder .
- Clean flange area and bonding area (it must be free of dust and grease).
- 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 under "Tools" must be used to ensure correct results when spot welding.

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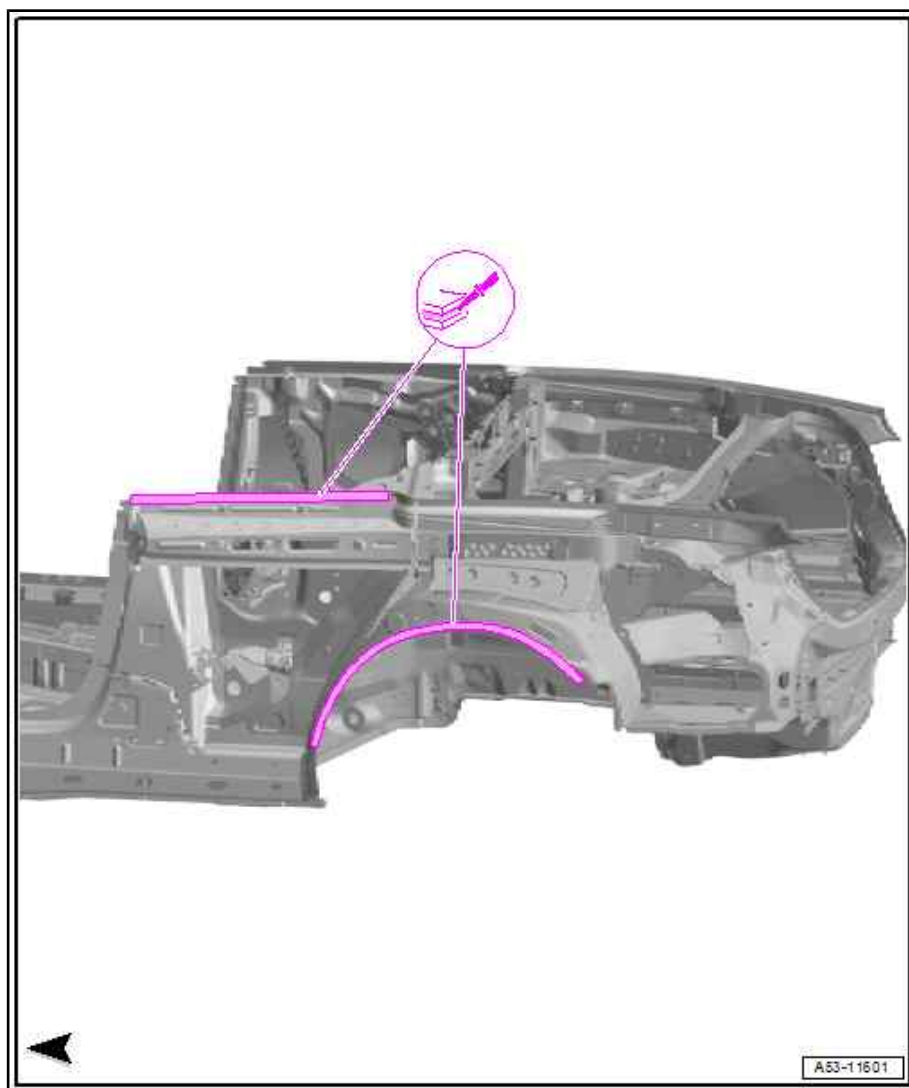
Welding in



Note

The new part must be welded in within 30 minutes, otherwise the adhesion of the bond will be impaired.

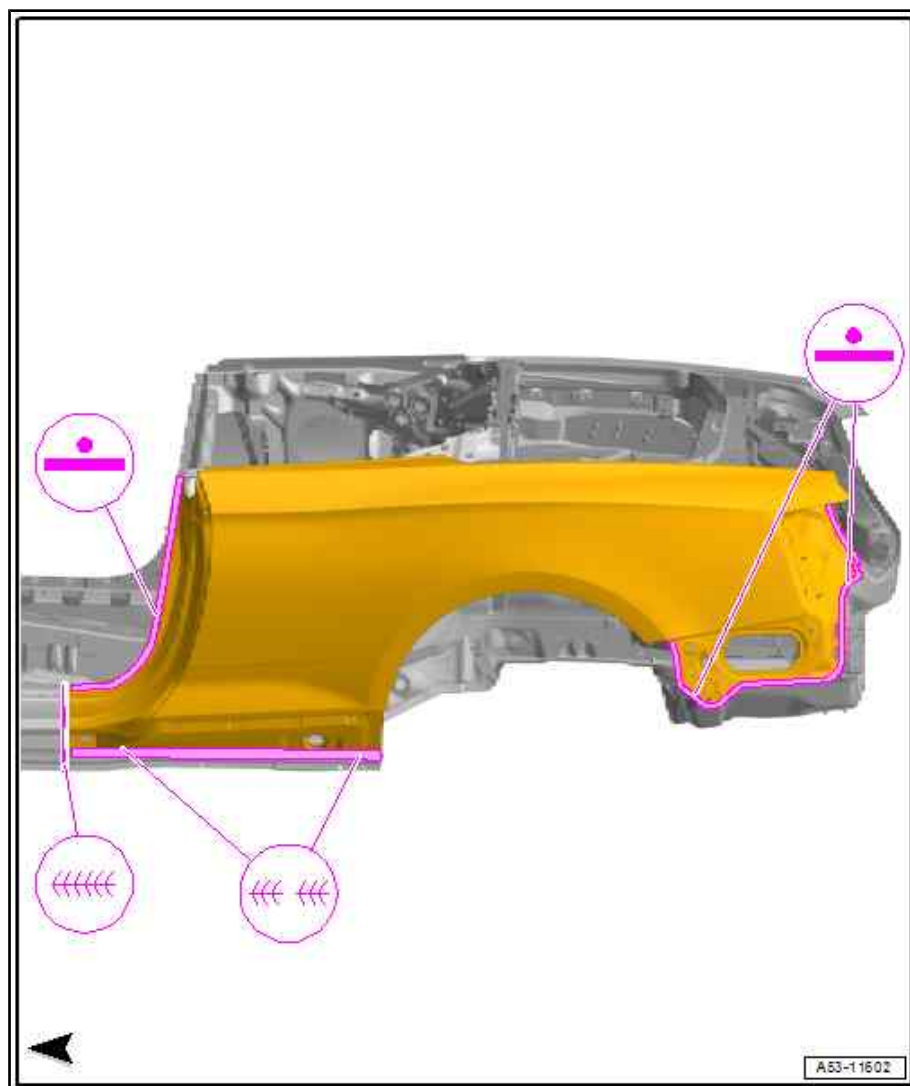
- Apply 2-component epoxy adhesive - DA 001 730 A2- to area of wheel arch and on side panel (top) (2 beads of adhesive, approx. 4 mm Ø) using pneumatic glue gun - V.A.G 2005 B- .



- Match up and fix new part in position.
- Check fit relative to adjacent parts.
- Weld in new part using shielded arc welding equipment : SG continuous seam (staggered - with gaps) in place of laser weld.
- Weld in side panel using resistance spot welder : RP spot weld seam.

Protective film on the new part must be removed before welding. If the part is damaged, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.

- Weld at separating cut using shielded arc welding equipment : SG continuous seam.
- Wipe off emerging adhesive and seal joint.

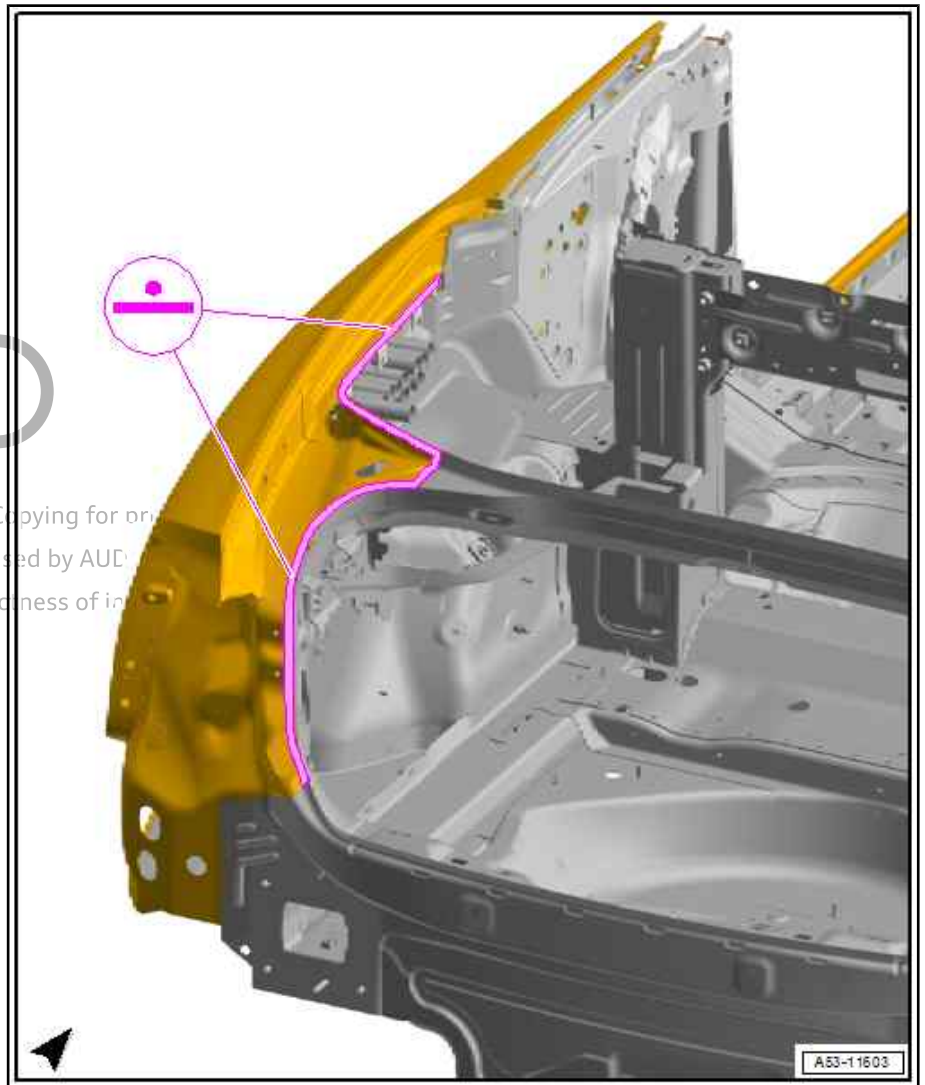


- Weld side panel using resistance spot welder : RP spot weld seam.

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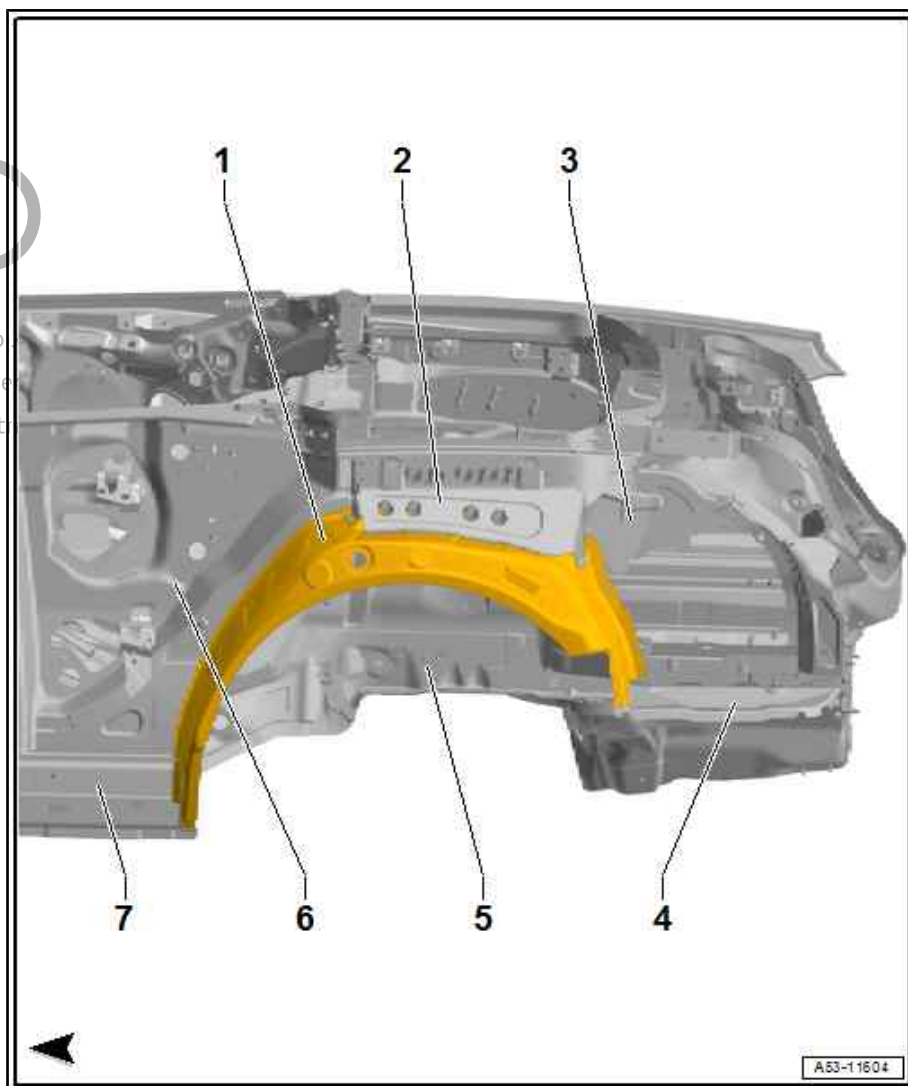




RO: 53 69 55 52

5 Rear wheel housing - Partial renewal

- 1 - Outer wheel housing
- 2 - Reinforcing element for convertible roof compartment
- 3 - Side panel (inner, rear)
- 4 - Outer floor panel
- 5 - Inner wheel housing
- 6 - Side panel (inner, front)
- 7 - Side member reinforcement



5.1 Tools

Special tools and workshop equipment required

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

Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 38](#) .

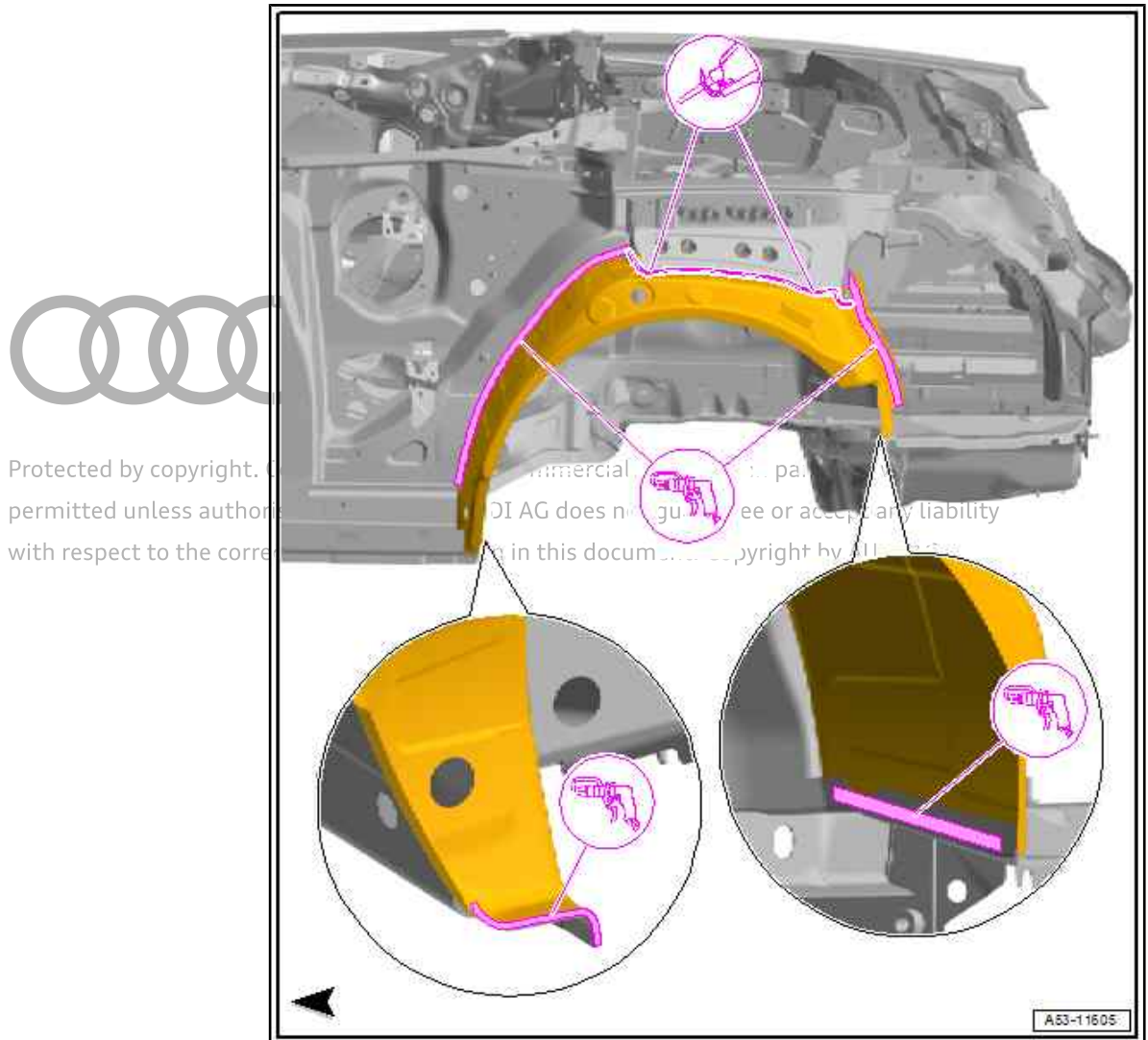
5.2 Procedure

- Side panel already removed ⇒ [page 176](#) .

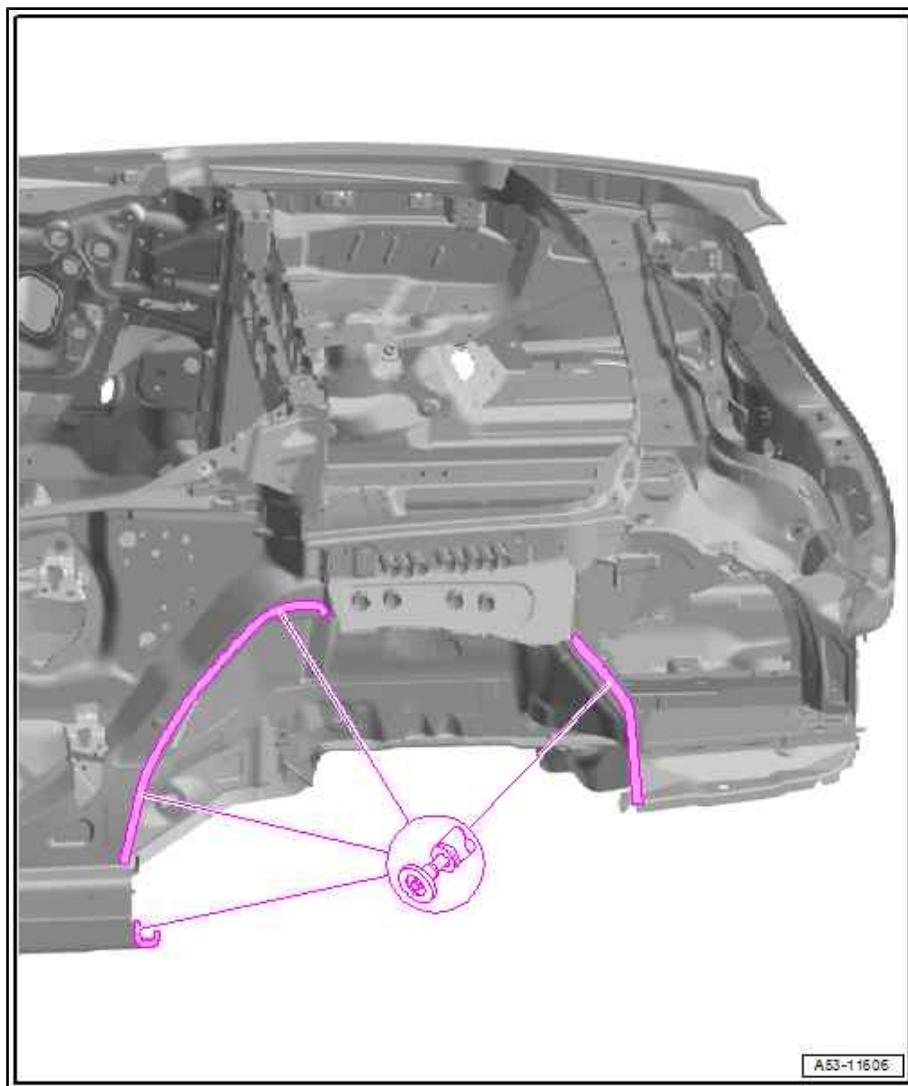


Cutting locations

- Mark off separating cut as shown and make cut using body saw .
- Drill out original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .



Replacement part

- ◆ Outer wheel housing

Preparing new part

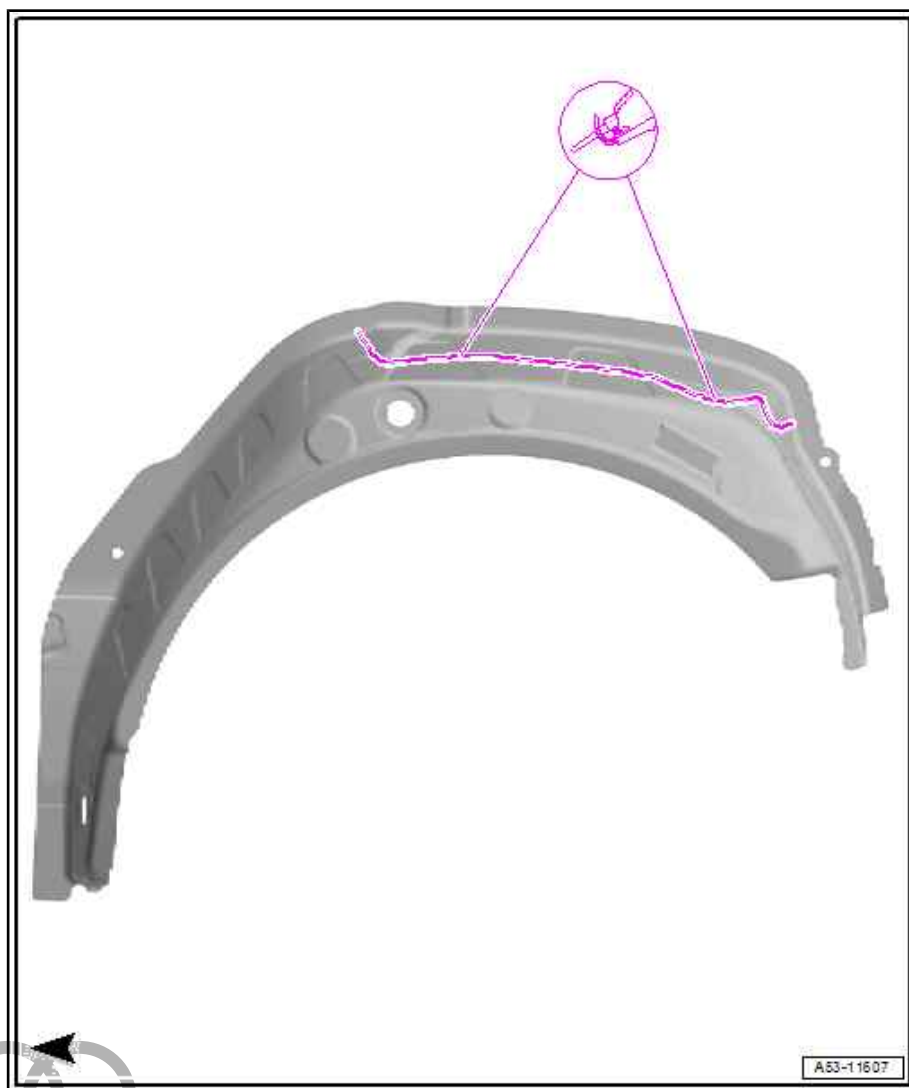


Note



When marking the separating cut, include a material allowance of 10 mm for overlapping.

- Transfer separating cut to new part and cut using body saw.
- Prepare separating cut on wheel housing for joggle-joining.

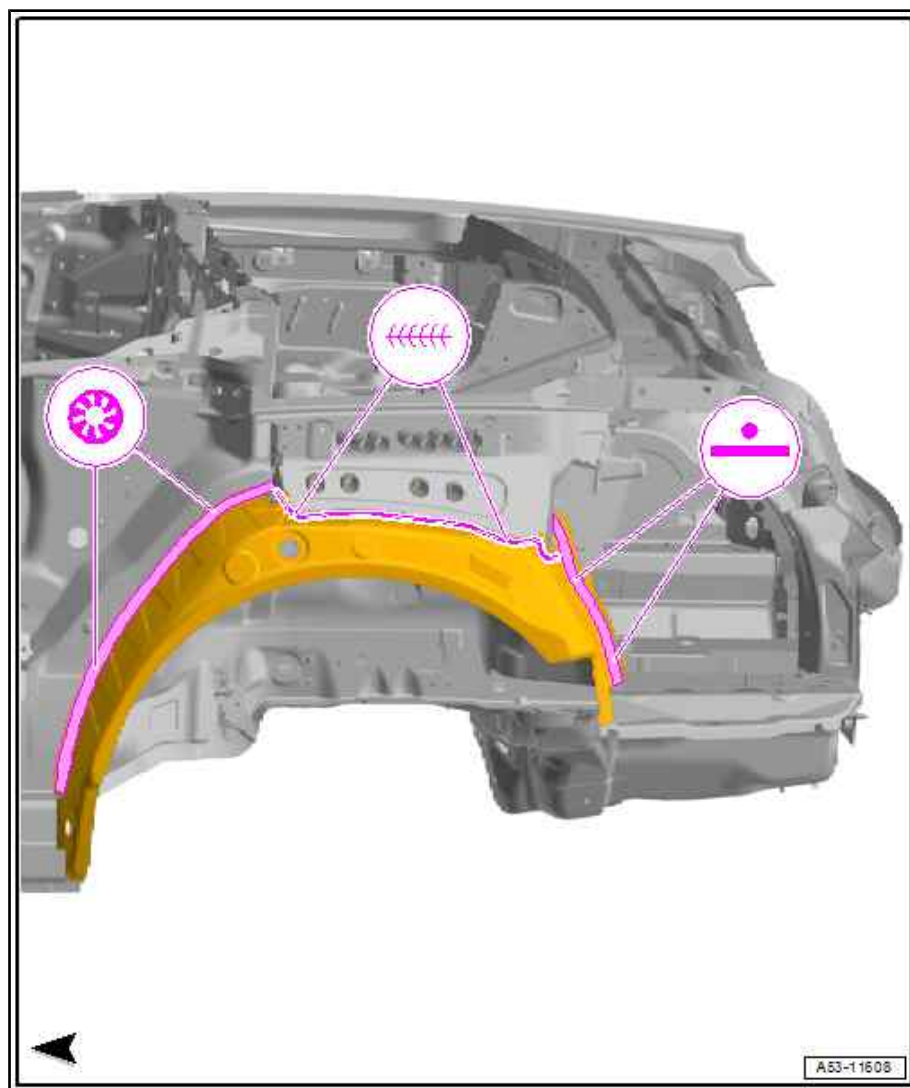


! NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" must be used to ensure correct results when spot welding.

Welding in

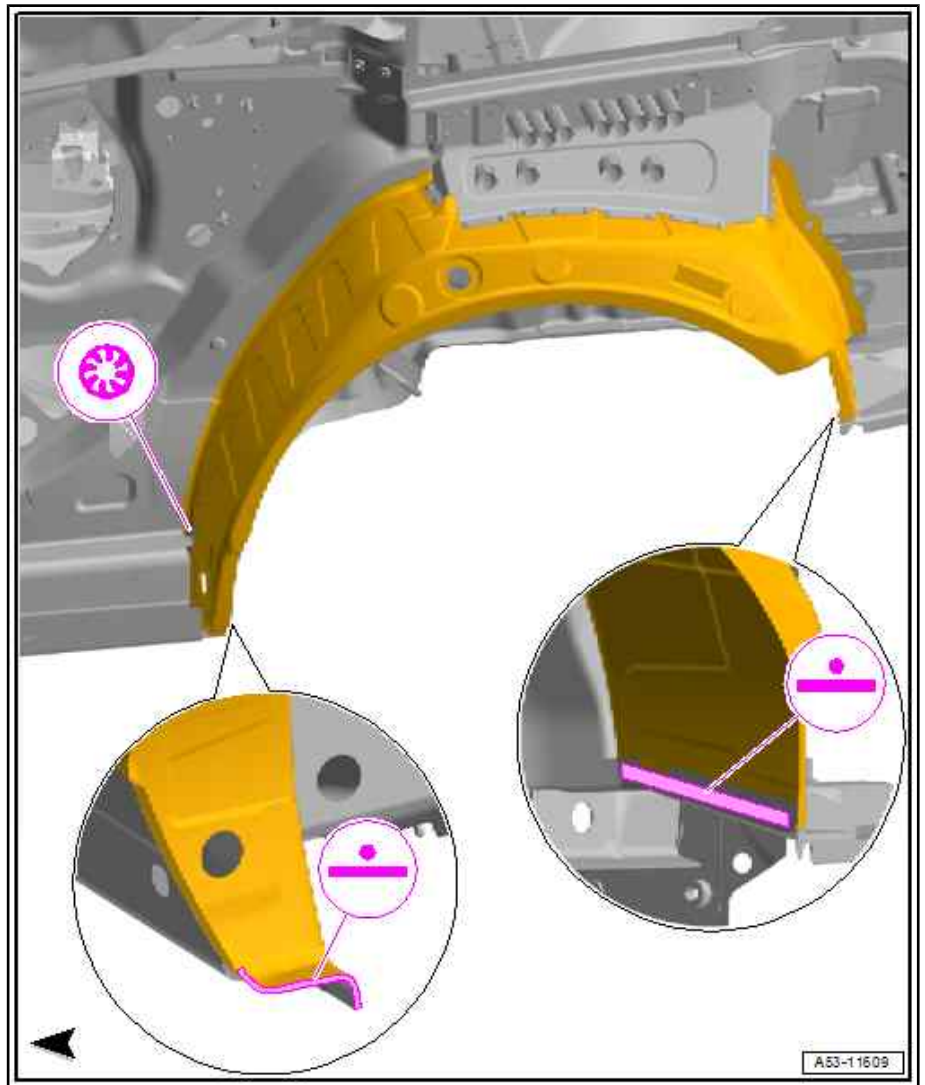
- Match up wheel housing and fix in position.
- Check fit relative to side panel.
- Weld in at separating cut using shielded arc welding equipment : SG continuous seam.
- Weld in wheel housing using resistance spot welder : RP spot weld seam.
- Weld wheel housing using shielded arc welding equipment : SG plug weld seam.



- Weld wheel housing using shielded arc welding equipment :
SG continuous seam.



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- Weld in side panel ➔ [page 176](#) .



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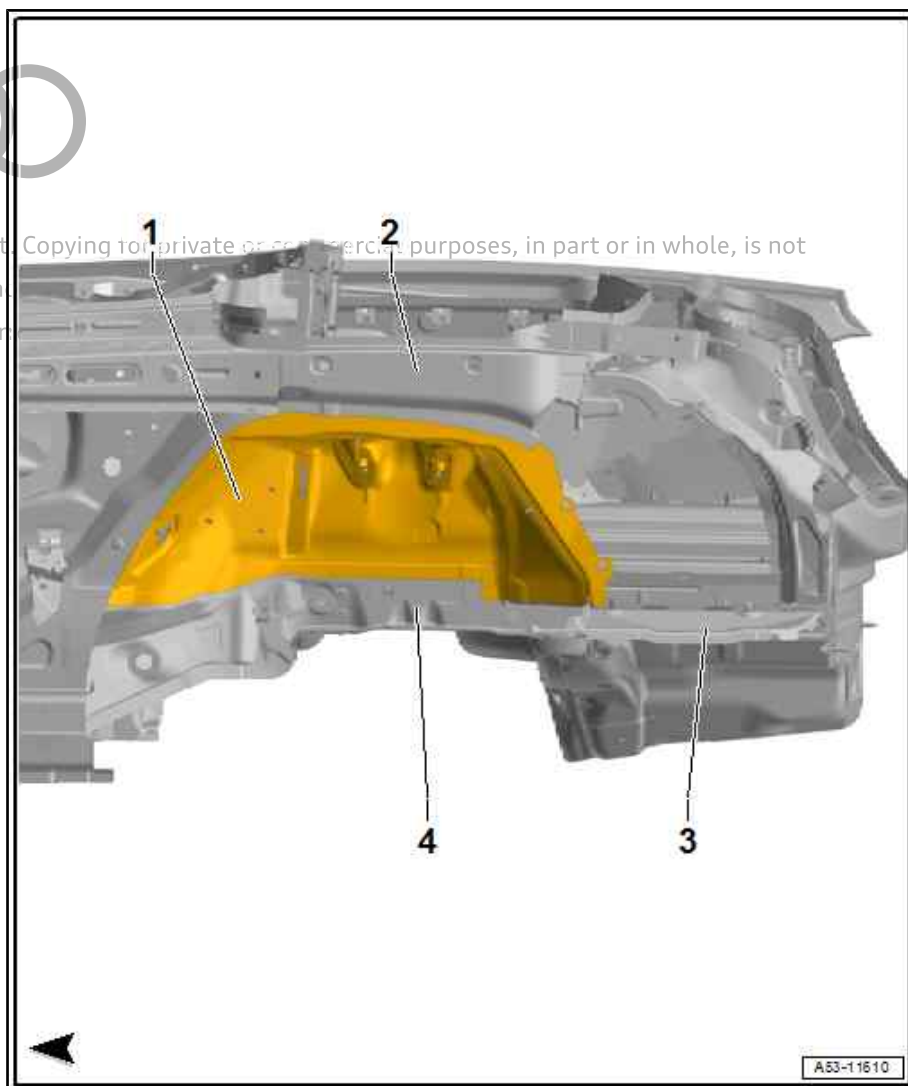


RO: 53 68 55 50

6 Inner rear wheel housing - Renewal

- 1 - Inner wheel housing
- 2 - Inner side panel
- 3 - Floor plate, side section
- 4 - Rear longitudinal member

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6.1 Tools

Special tools and workshop equipment required

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

Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 38](#) .

6.2 Procedure

- Side panel already removed ⇒ [page 176](#)
- Outer wheel housing already removed ⇒ [page 184](#) .

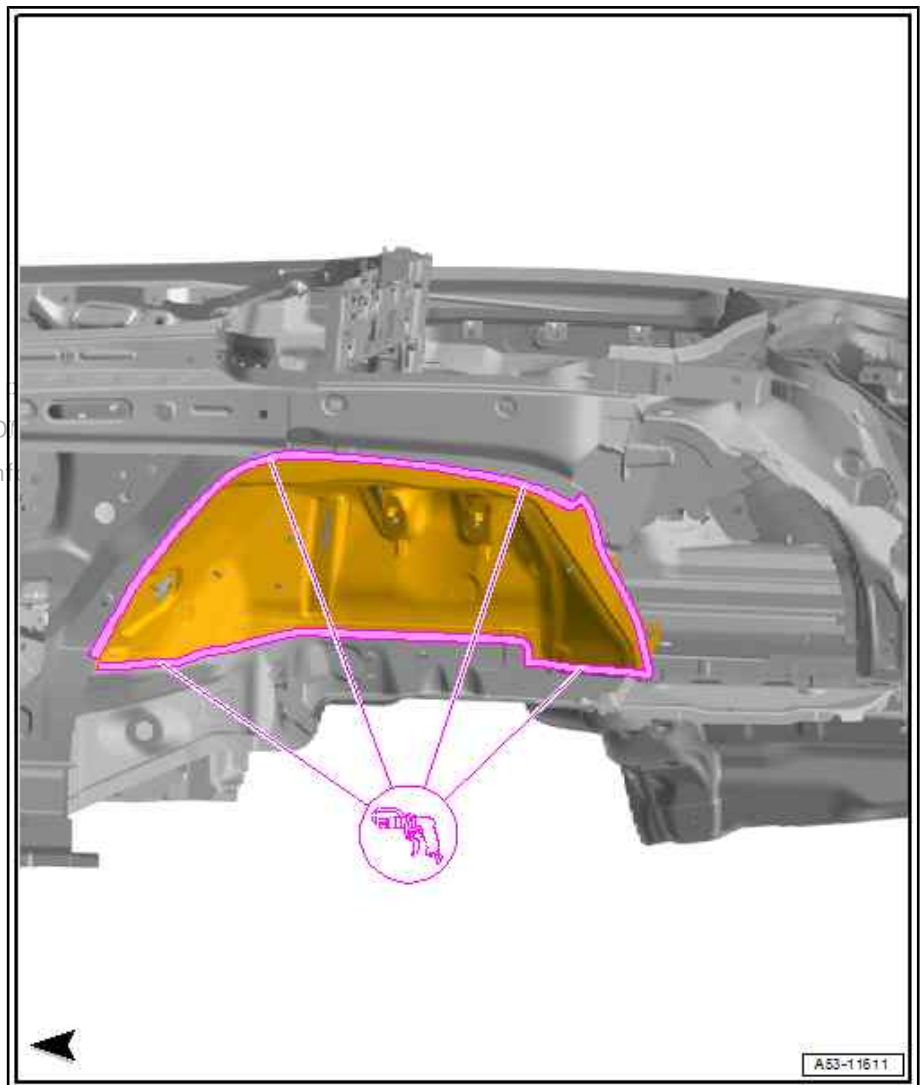


Cutting locations

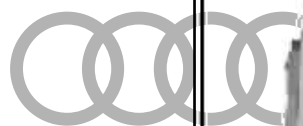
- Separate original joint using spot weld breaker .



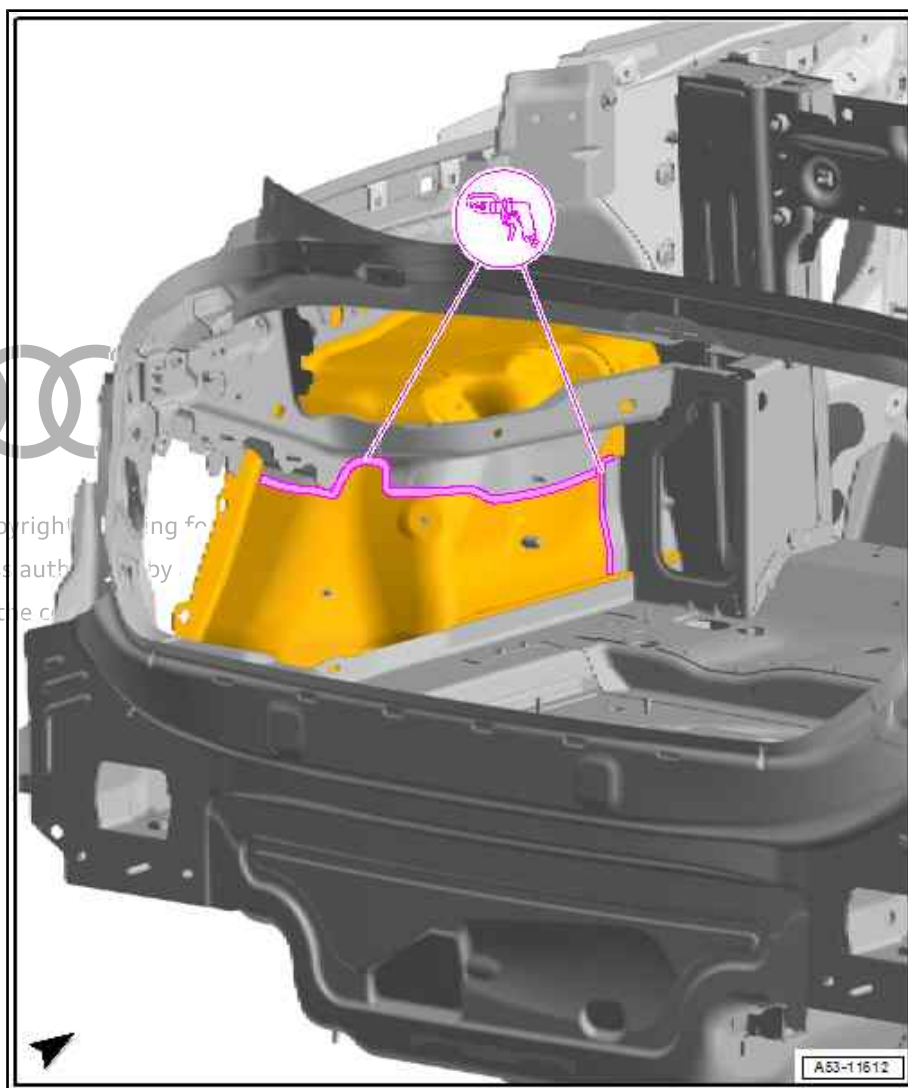
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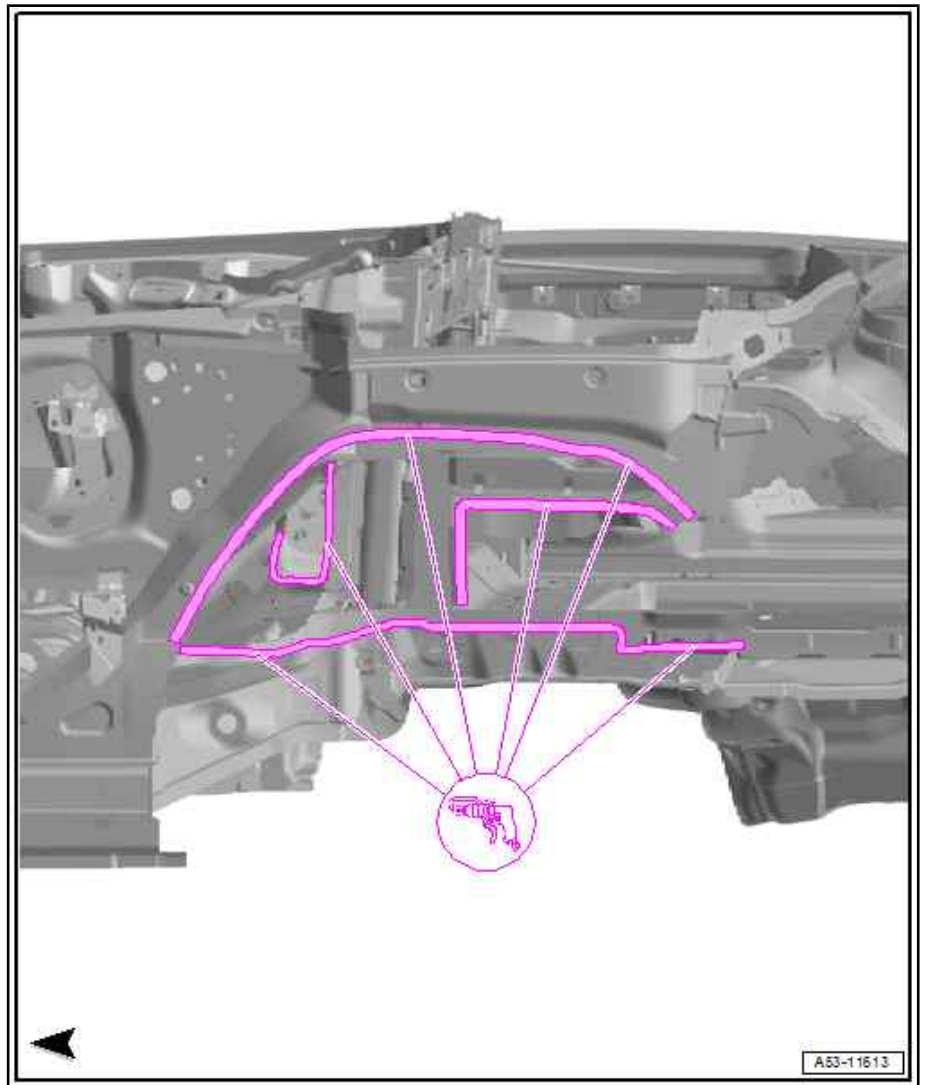
- Separate original joint using spot weld breaker .



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



Replacement part

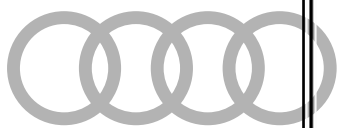
- ◆ Inner wheel housing

Preparing new part

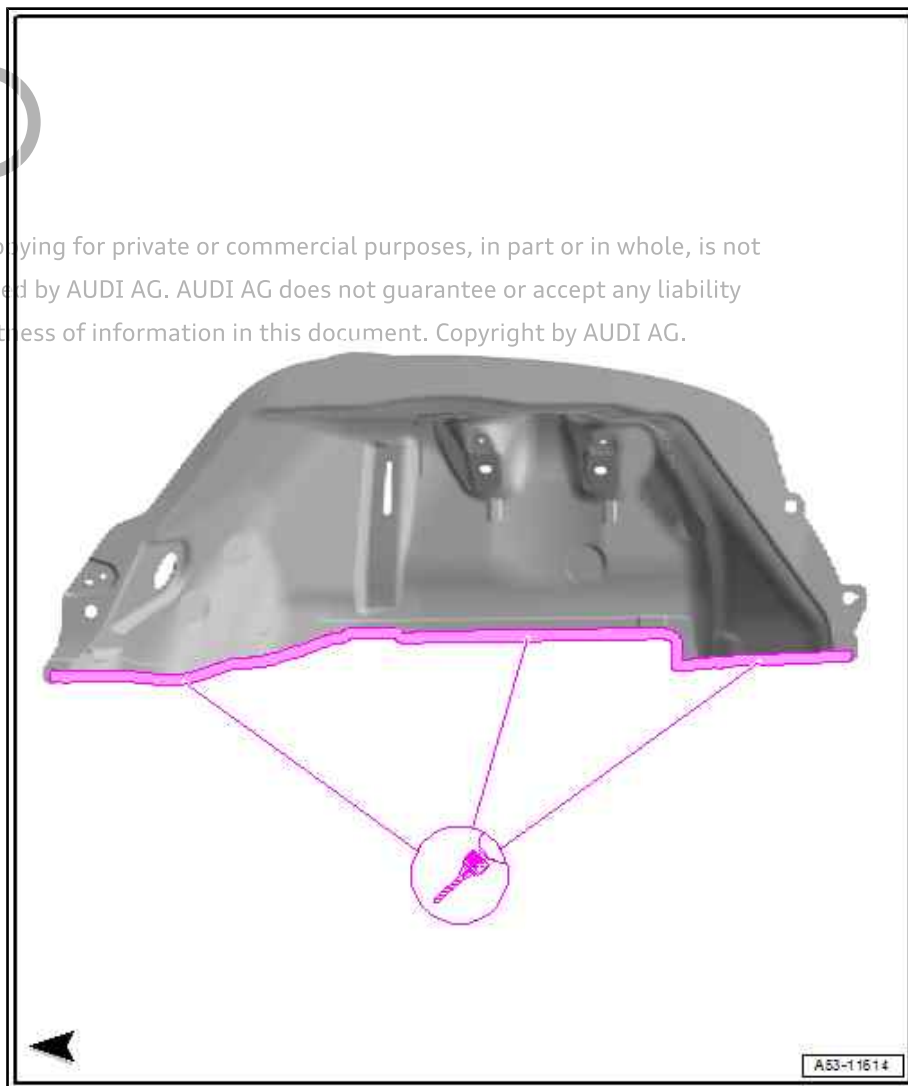
- Drill holes for SG plug weld seam, 8.0 mm Ø using drill .
- Grind welding areas down to bare metal.



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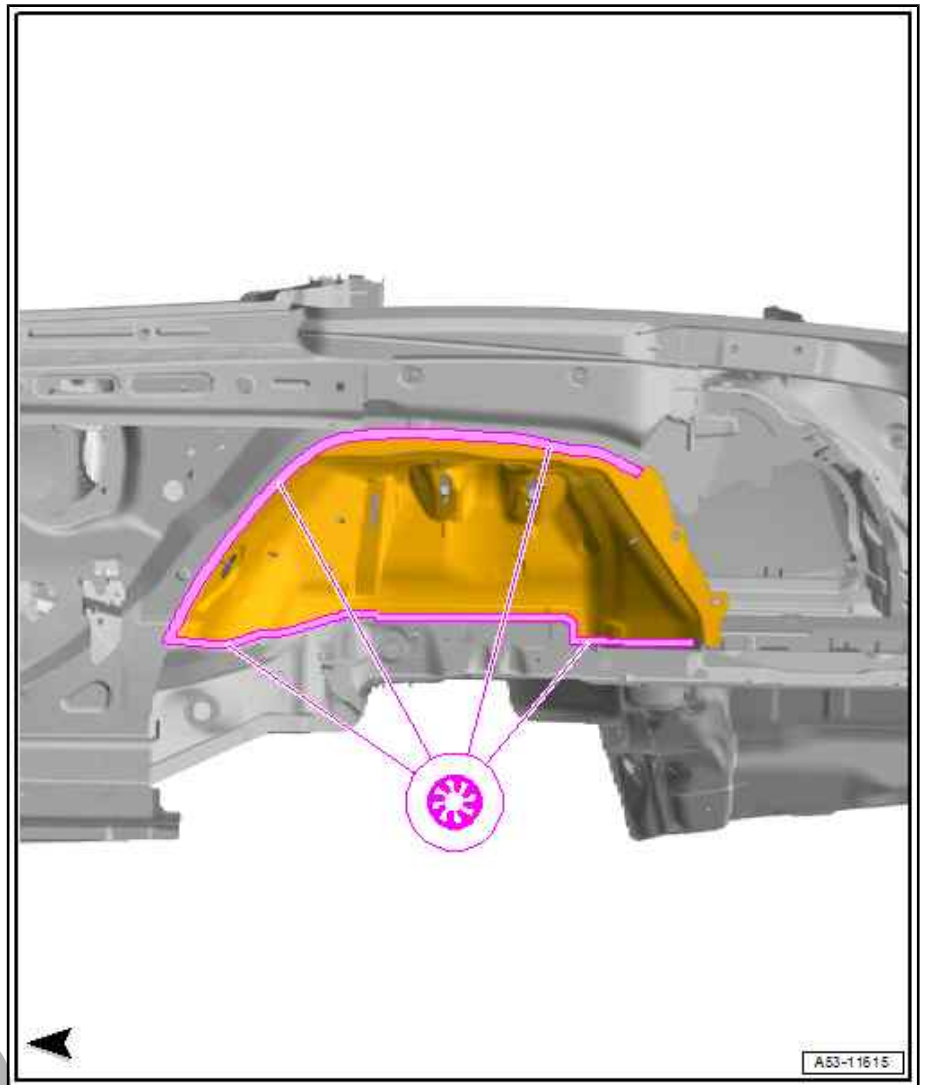


NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" must be used to ensure correct results when spot welding.

Welding in

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

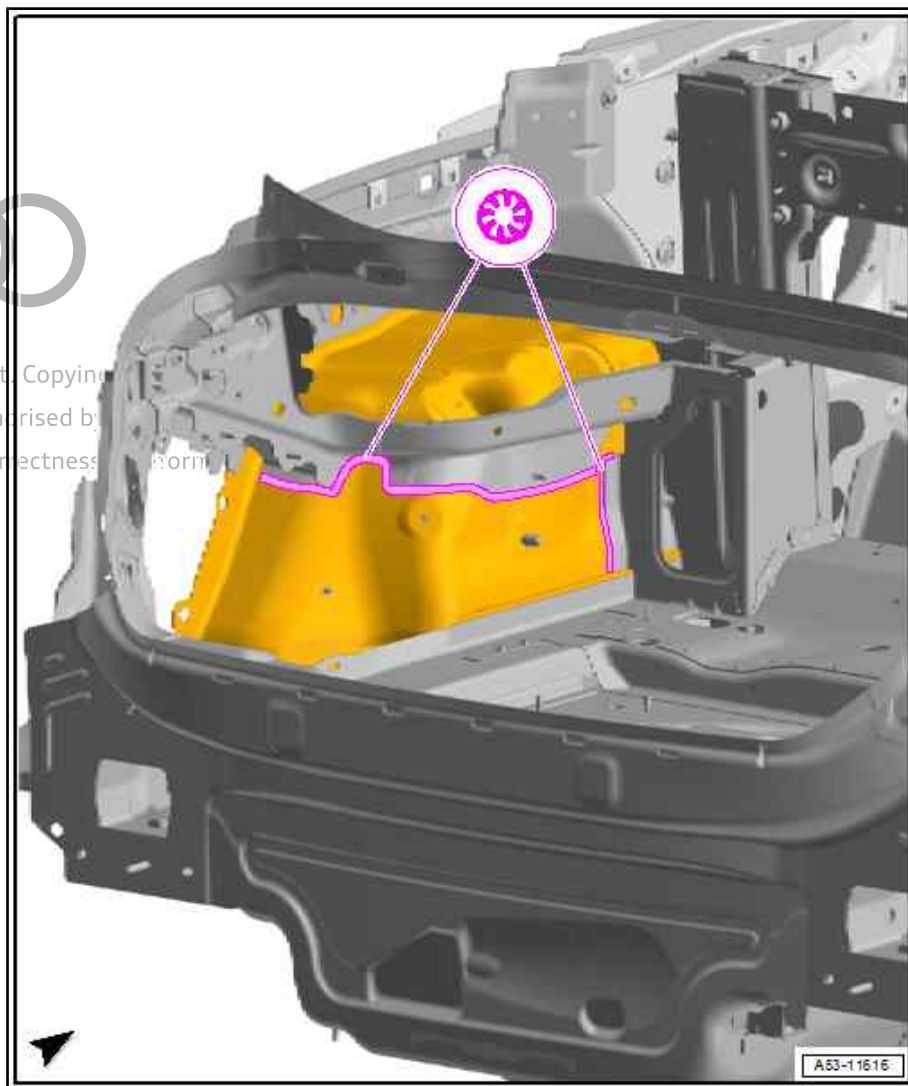


- Weld in new part using shielded arc welding equipment : SG
plug weld seam.

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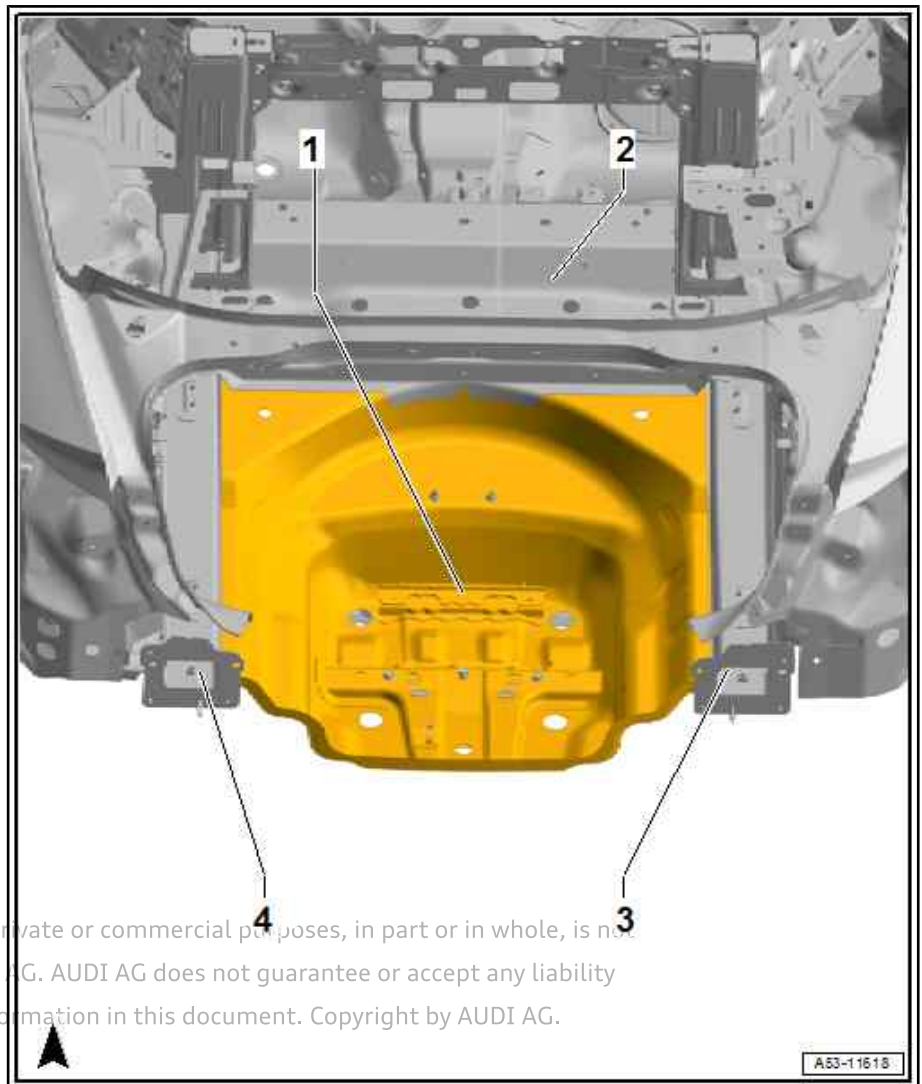
- Install outer wheel housing ⇒ [page 184](#) .
- Install side panel ⇒ [page 176](#) .



RO: 53 80 55 50

7 Luggage compartment floor - Renewal

- 1 - Spare wheel well
- 2 - Front floor panel
- 3 - Longitudinal member (right-side)
- 4 - Longitudinal member (left-side)



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7.1 Tools

Special tools and workshop equipment required

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

Tools approved by AUDI AG must be used to ensure correct results when carrying out repair work ⇒ [page 38](#) .

7.2 Procedure

- Rear cross member already removed ⇒ [page 159](#)

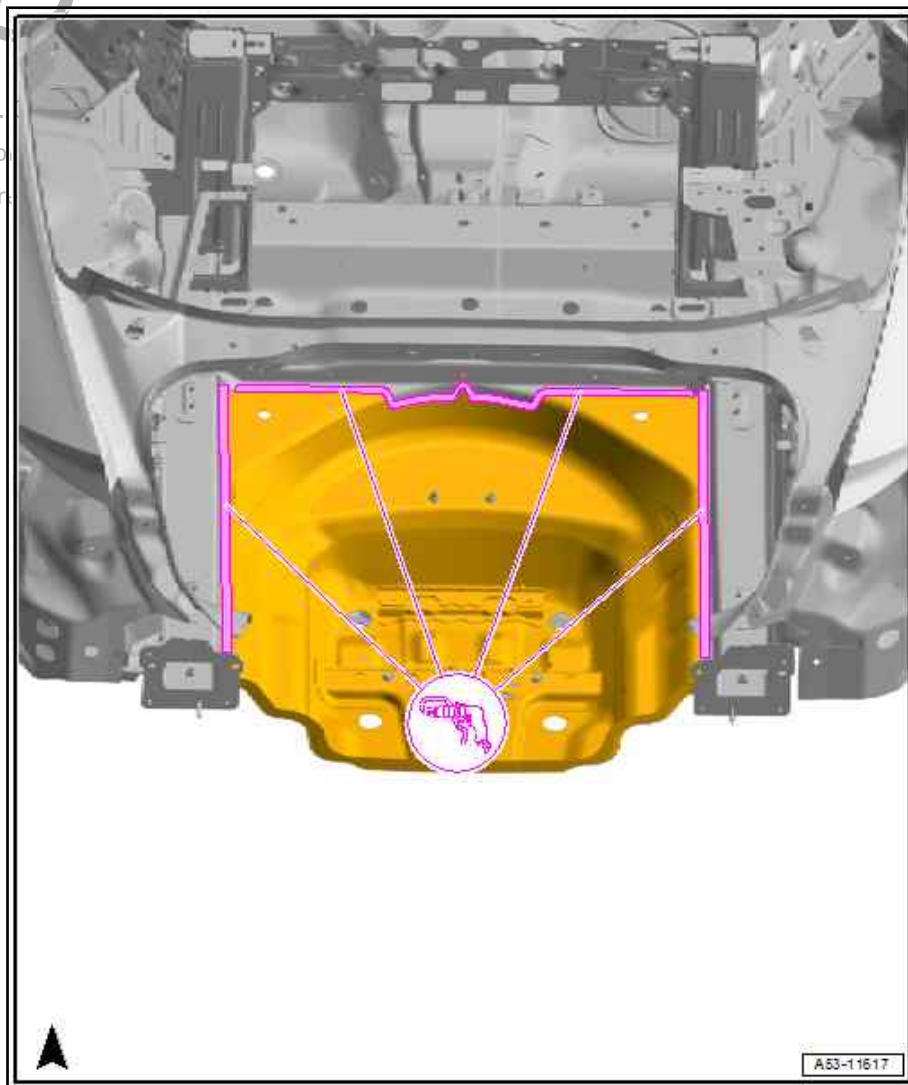


- Inner cross panel already removed ⇒ [page 163](#)

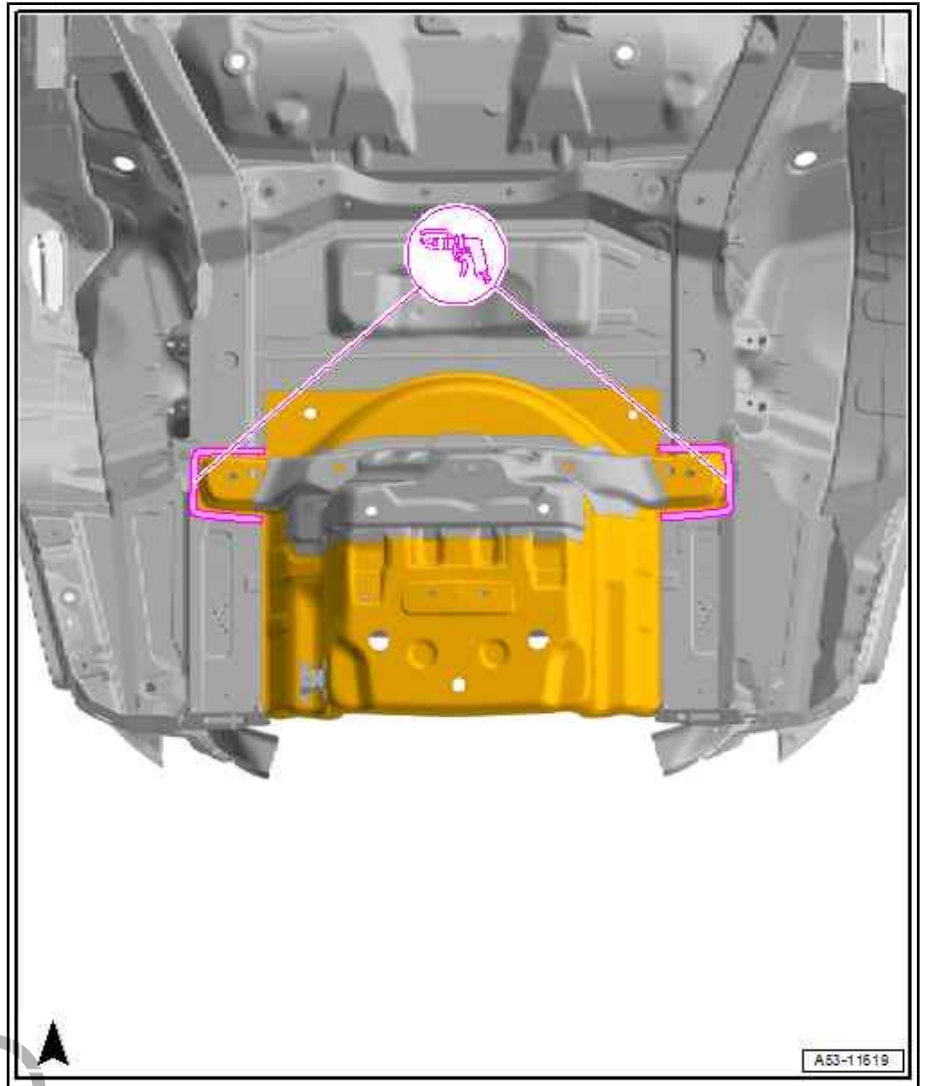
Cutting locations

- Drill out original joint using spot weld breaker .

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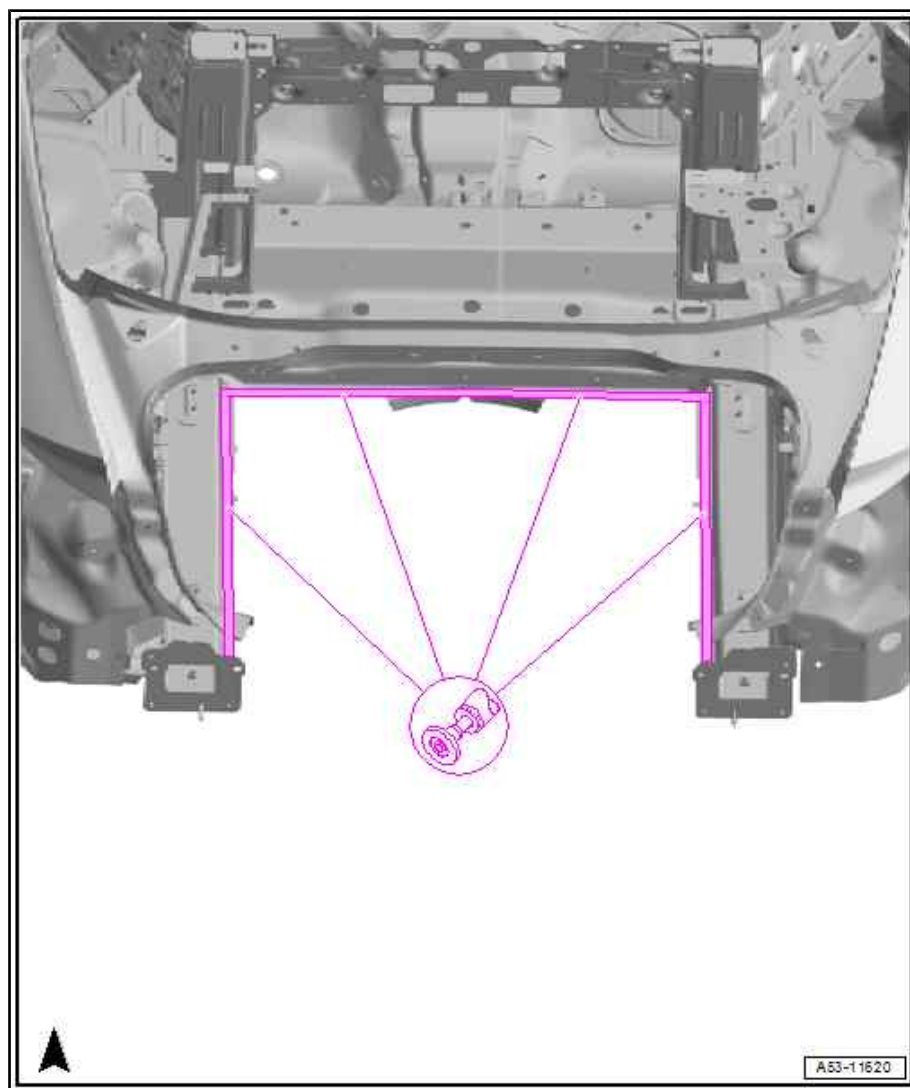


- Drill out original joint using spot weld breaker .



- Remove remaining material using compact angle grinder .

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Replacement part

- ◆ Luggage compartment floor

Preparing new part

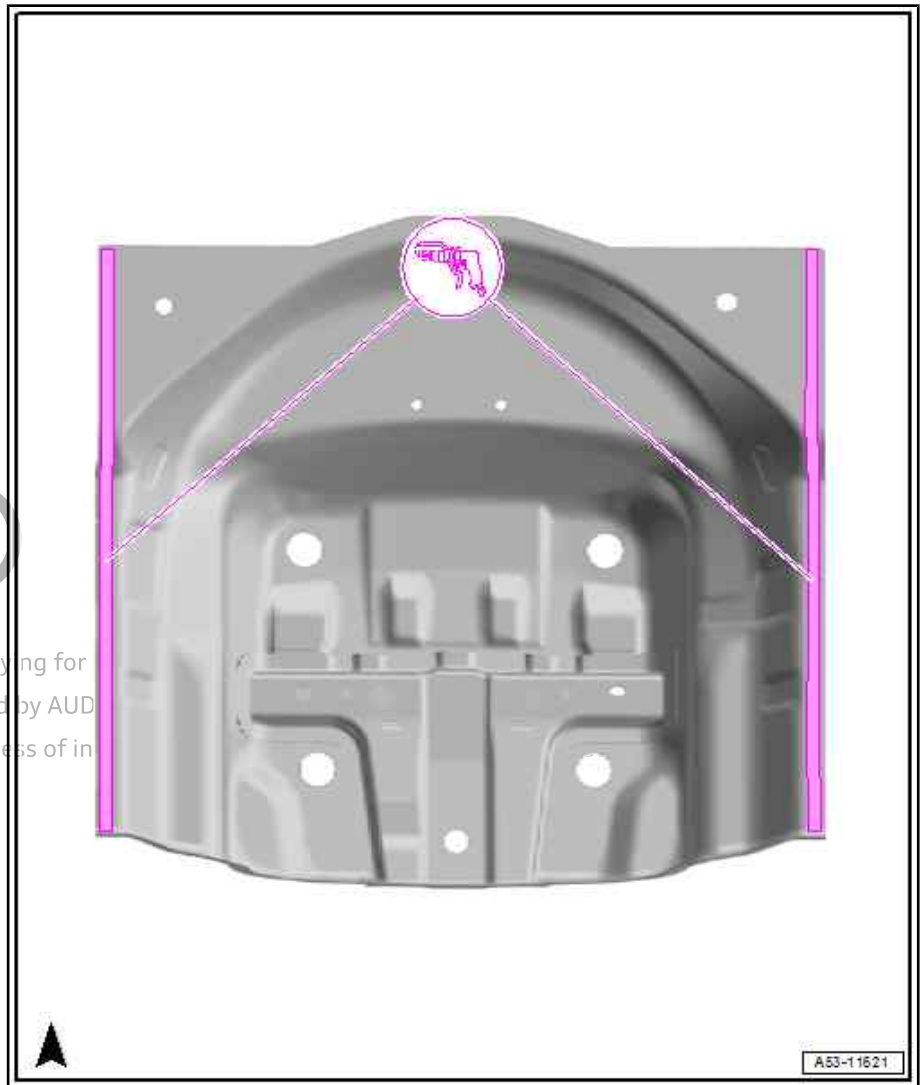
- Drill holes for SG plug weld seam, 7 mm Ø using drill .



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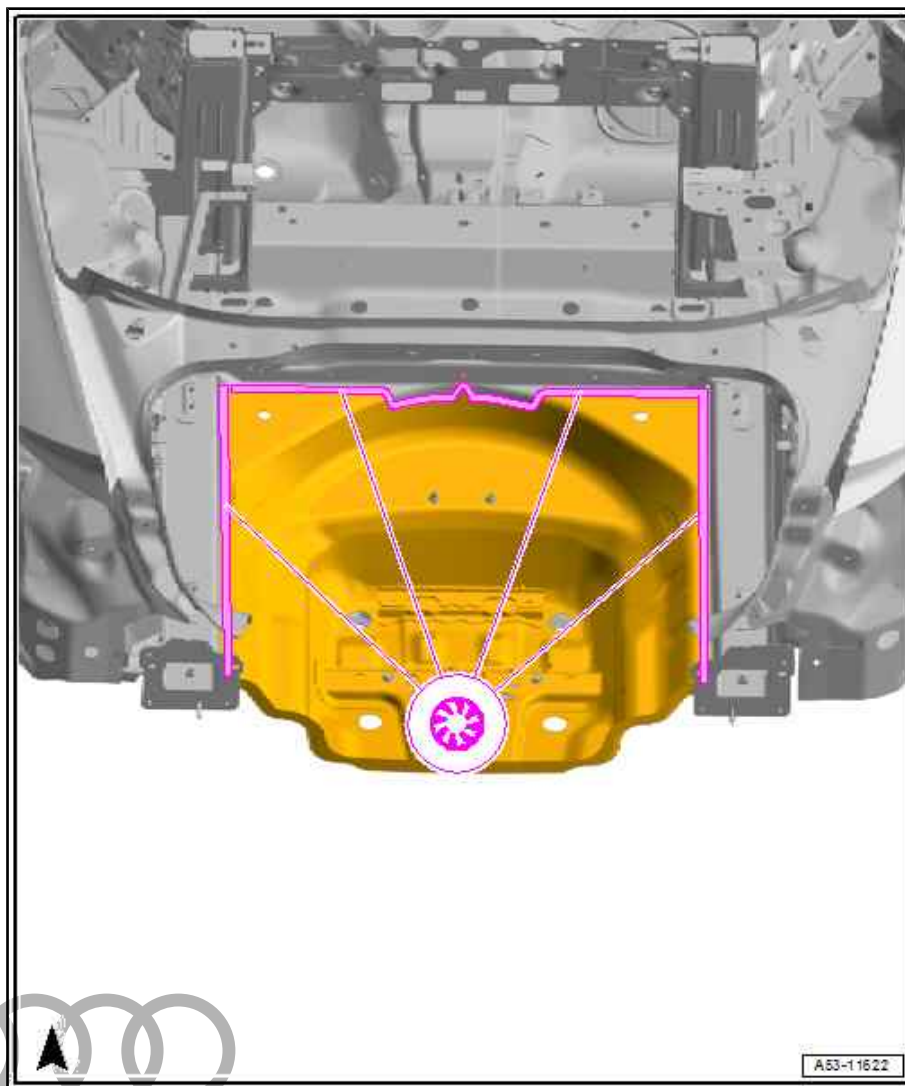


! NOTICE

Due to the different types of steel and panel thicknesses employed, one of the resistance spot welding units listed under "Tools" must be used to ensure correct results when spot welding.

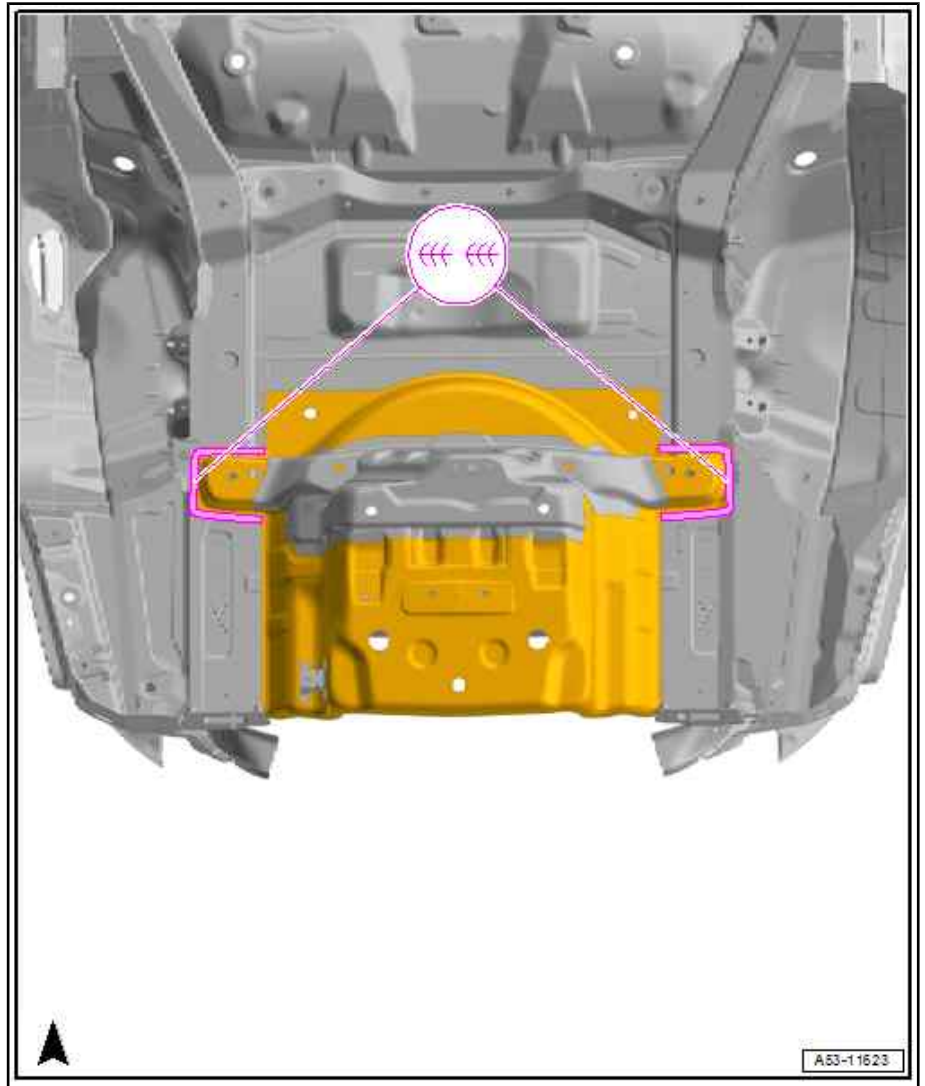
Welding in

- Weld luggage compartment floor using shielded arc welding equipment : SG plug weld seam.

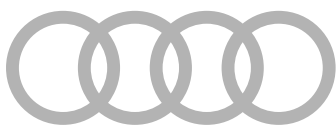


- Weld luggage compartment floor using shielded arc welding equipment : SG continuous seam (staggered - with gaps).

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- Welding in rear cross member ⇒ [page 159](#)
- Welding in inner cross panel ⇒ [page 163](#)



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