

Body repairs Audi A8 1994 ➤ Edition 10.1998





# 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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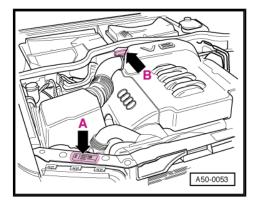
# 00 – Technical data

## 1 Vehicle identification data

# 1.1 Type plate and vehicle identification number

The type plate -A- is located on the lock carrier at the front right. Vehicles for certain export countries have no type plate.

The vehicle identification number -B- (chassis number) is stamped on the rear bulkhead in the engine compartment. Detach the seal in the area of the marking.



## 1.2 Vehicle data sticker

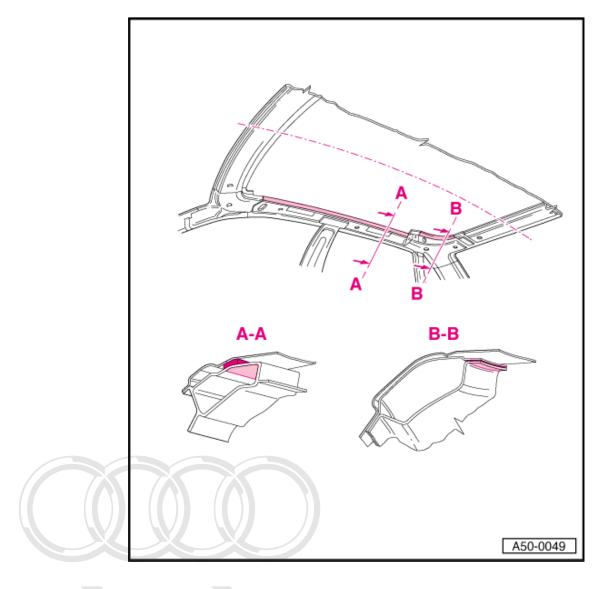
The vehicle data sticker is located in the spare wheel well at the rear of the vehicle.

FAHRZGIDENT-N VEHICLE-IDENT-N	
TYP/TYPE	
<u> </u>	
MOTORKB./GETR. ENG.CODE/TRANS	
LACKNR./INNENAI PAINT NO./INTERI	USST.
M-AUSST./ OPTIONS	
OPTIONS	



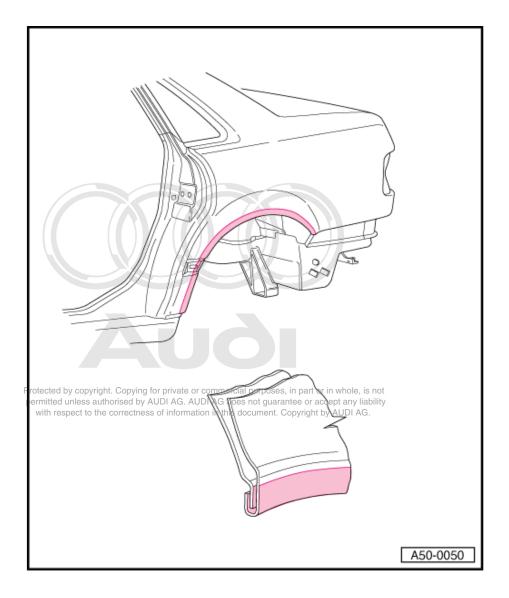
# 2 Body - Bonded joints

# 2.1 Body - centre



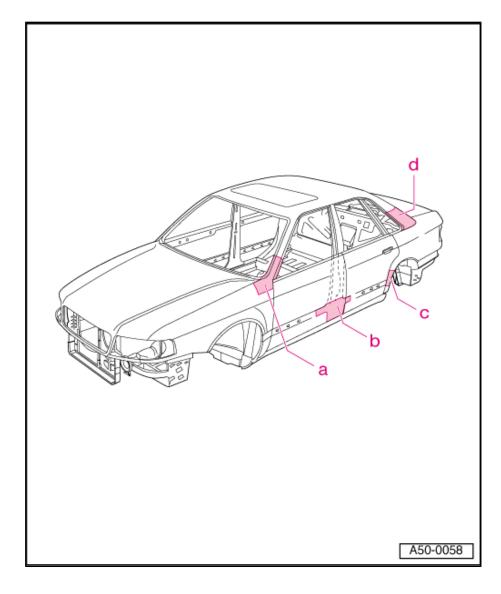
- · The following body areas are bonded
- Roof to roof frame
- Inner roof frame to outer roof frame

#### 2.2 Body - rear



- Rear wheel housing liner to rear wheel housing

## 3 Foam-filled cavities



The following areas of the body are foam-filled for acoustic reasons:

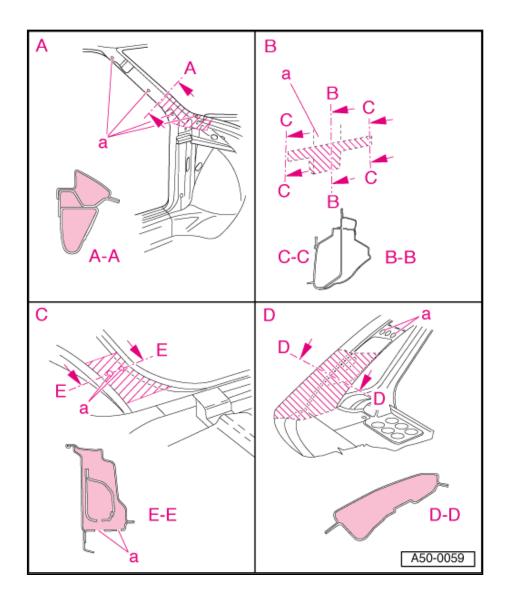
- a = A-pillar
- b = Inner B-pillar
- c = Outer side panel
- d = D-pillar

Use foam D-000-111-A 2.

Alternatively, use can also be made of a 2-component foam which does not absorb moisture.

a = Foam-filling hole





A = A-pillar

B = Inner B-pillar

C = Outer side panel

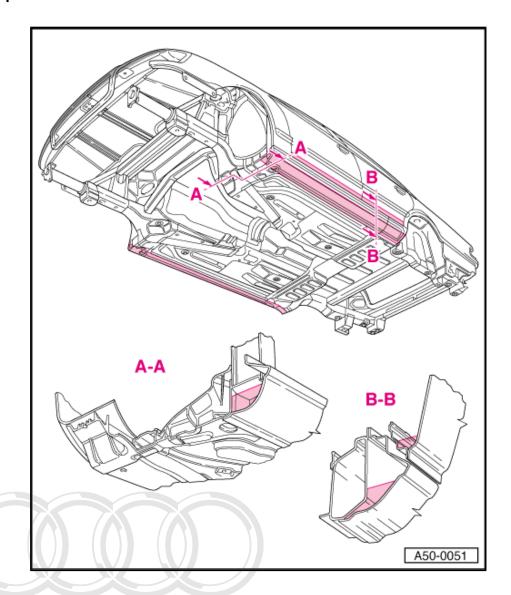
An aluminium wire mesh is inserted at the bottom to stop the foam running through.

D = D-pillar

Prior to foam filling, spray the pillar with wax from inside to stop the surface being damaged during the foam filling process.



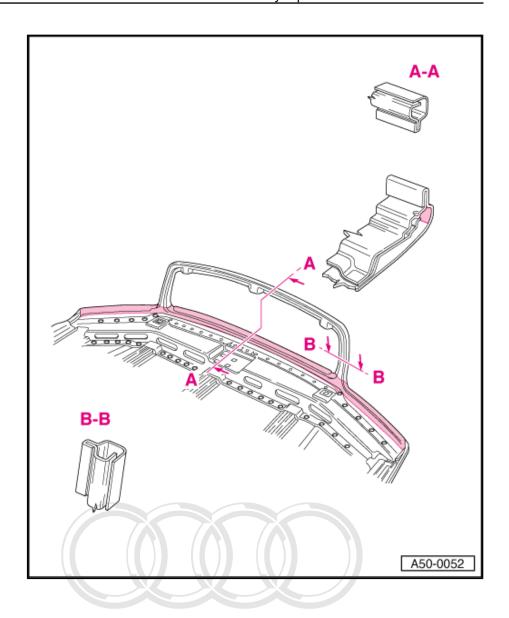
# 4 Corrosion protection



The following body areas are flooded with hot wax:

A = Outer side member.

B = Front and rear doors.



#### **Bonnet**

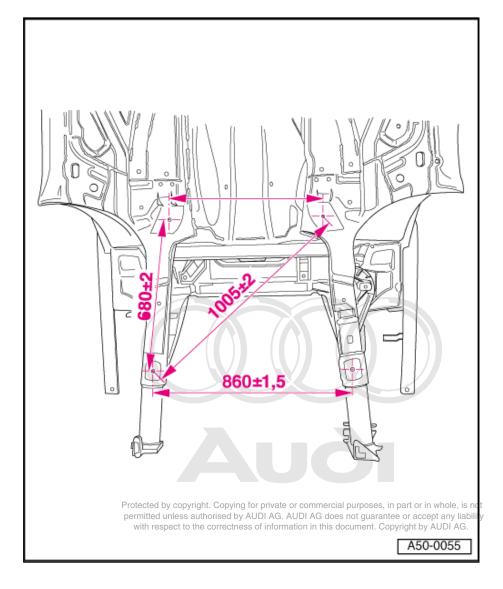
A = Front frame.

B = Front frame reinforcement.



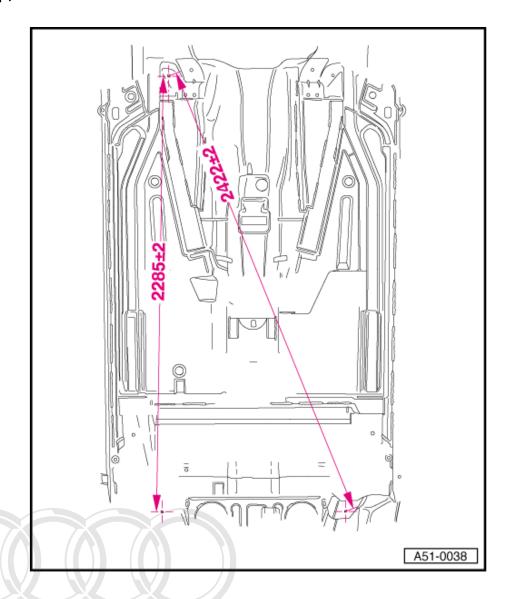
# 5 Body dimensions

## 5.1 Floor group, front



Distance between front attachment points of front axle
Distance between rear attachment points of front axle
Distance between front attachment points of front axle
Diagonal distance between attachment points of front axle

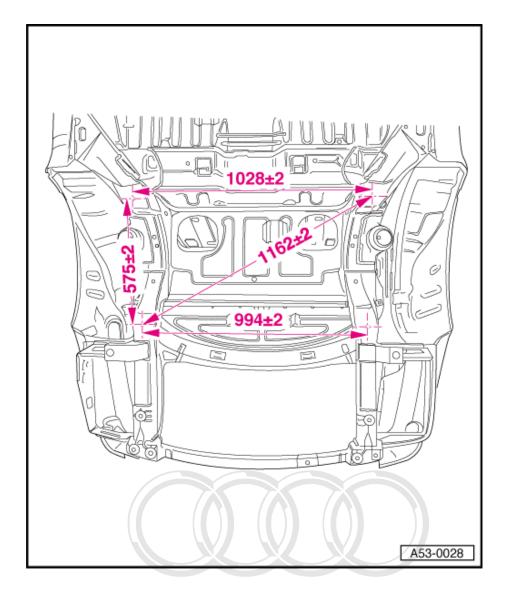
#### 5.2 Floor group, centre



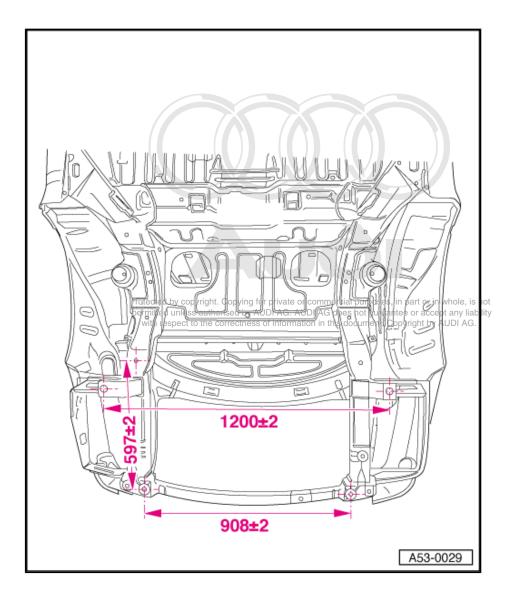
Distance between rear attachment points of front axle and rear axle mounting

Diagonal distance between rear attachment points of front axle and rear axle mounting

#### 5.3 Floor group, rear



Distance between front attachment points of rear axle Distance between rear attachment points of rear axle Distance between attachment points of rear axle

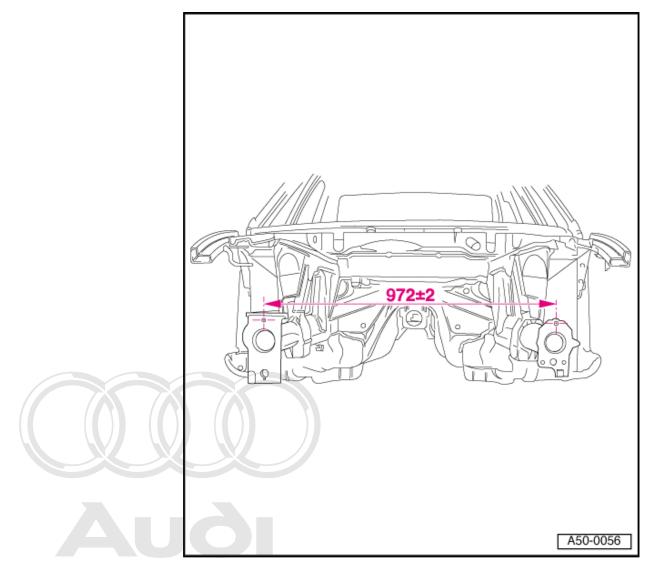


Distance between production mountings

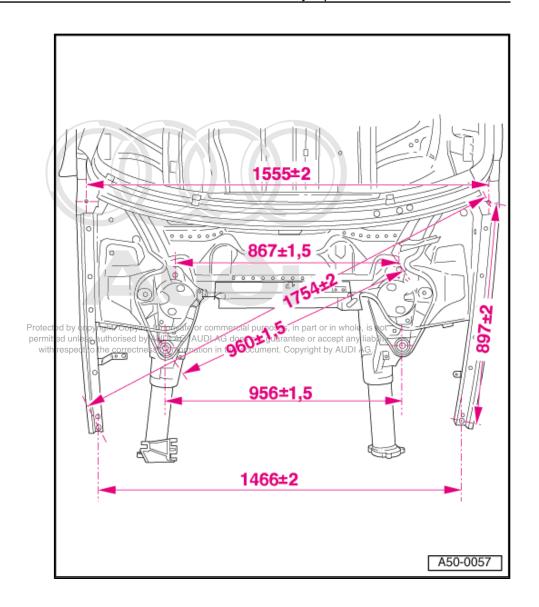
Distance between rear longitudinal members

Distance between rear axle rear attachment point and rear longitudinal member

#### Body - front 5.4



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Distance between wing panel mountings

Distance between front attachment points of strut holder

Distance between rear attachment points of strut holder

Distance between front hinge attachment points

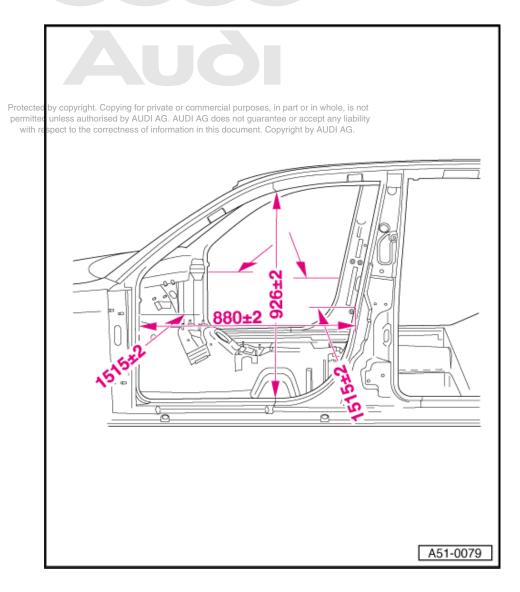
Diagonal distance between hinge attachment points and wing panel mounting

Diagonal distance between attachment points of strut holder

Distance between front hinge attachment points and wing panel mounting

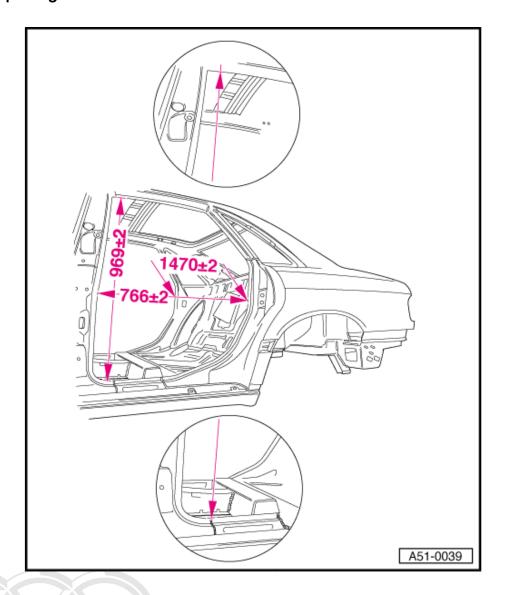
# 5.5 Body - centre

# 5.5.1 Front door opening



Height of door opening
Distance between A-pillars
Distance between B-pillars
Distance between A-pillar and B-pillar

# 5.5.2 Rear door opening



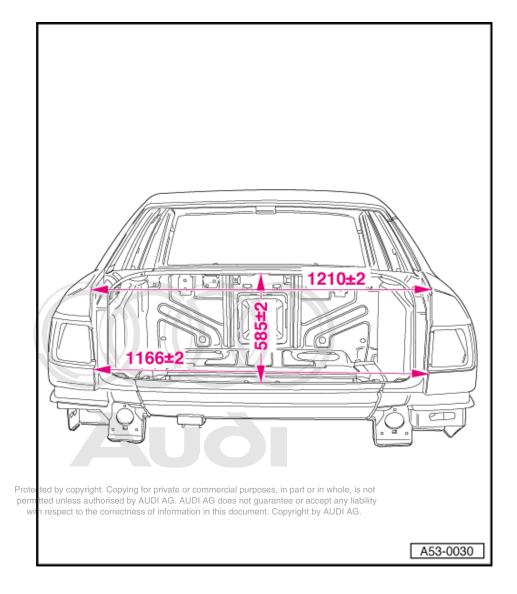
Distance between C-pillars

Distance between B-pillar and C-pillar

Height of door opening



# 5.6 Body - rear

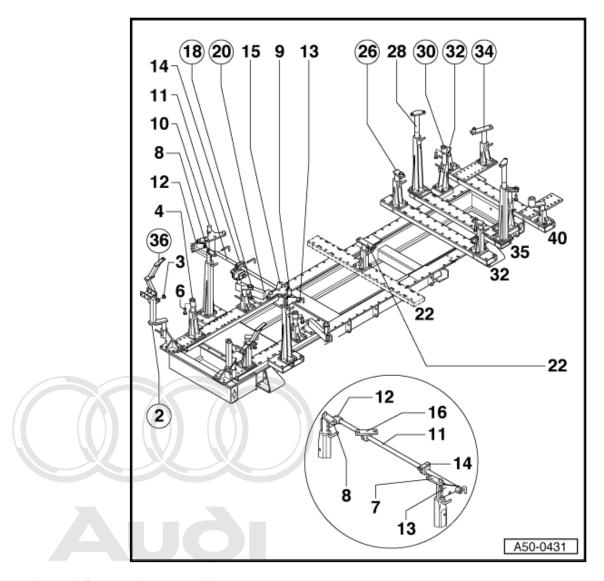


Distance between side panels (top)

Distance between side panels (bottom)

Distance between rear cross panel flange and window cross member flange

# 6 Straightening jig



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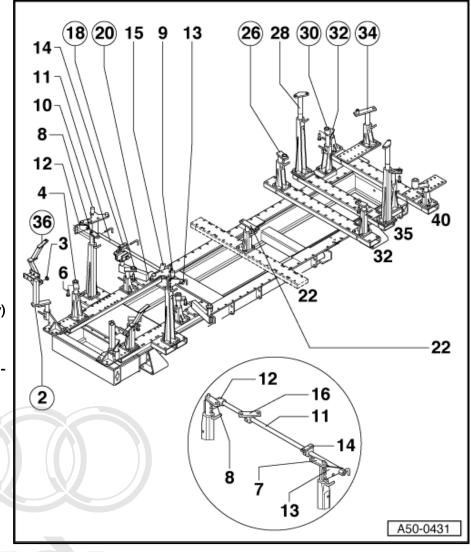


Note:

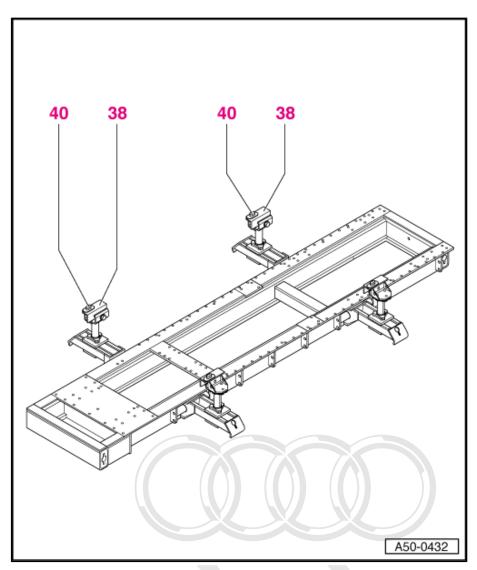
- ♦ The item numbers in the illustrations are identical with the end numbers on the alignment bracket mountings.
- ♦ The item numbers of the alignment bracket mountings for checking the body with and without mechanical units are marked with a circle.
- ♦ The required basic set size is given for the alignment bracket mountings.
- ♦ The following illustrations show the right side of the vehicle.

Alignment bracket set Audi A8 -V.A.G 2008- incl. quattro

- 2 MZ 142 and TV 400
- 3 Spacer
- 36 MZ 142, TV 400 and mounting -2-
- 4 MZ 260, TV 400
- 6 Spacer bolt
- 8 MZ 602
- 12 Mounting for bar
- 10 MZ 602 and alignment bracket mounting -8-
- 15 Bar in place of steering box
- 14 Mounting for steering
- 18 Mounting for steering
- 16 Mounting for steering (right-hand drive vehicles only)
- 18 MZ 140
- 20 Bracket without MZ and front production mounting -21-
- 22 MZ 200 (quattro only)
- 24 MZ 260 and TV 400. No longer to be used. Instead, make use of -VAS 5007- together with -VAS 5007/1-.
- 26 MZ 260
- 6 Spacer bolt
- 28 MZ 602 and attachment plate CD.25-.
- 30 MZ 260
- 32 MZ 140
- 34 MZ 200 and TV 400



- 10 Mounting for subframe
- 40 Sill panel mounting



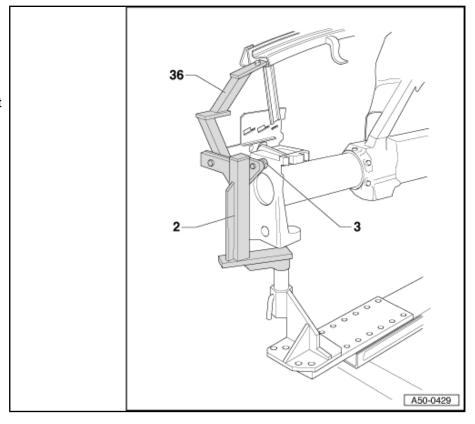
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## 2 - Front longitudinal member

When checking, bolt on MZ last, as the longitudinal position of the impact absorber mounting can vary by several mm due to production tolerances - if necessary do not bolt down.

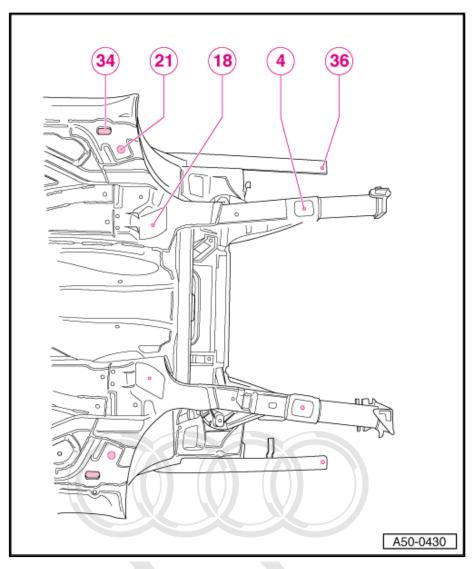
#### 3 - Spacer

36 - Front longitudinal member / top of wheel housing



#### Overview of front alignment brackets





## Overview of front alignment brackets

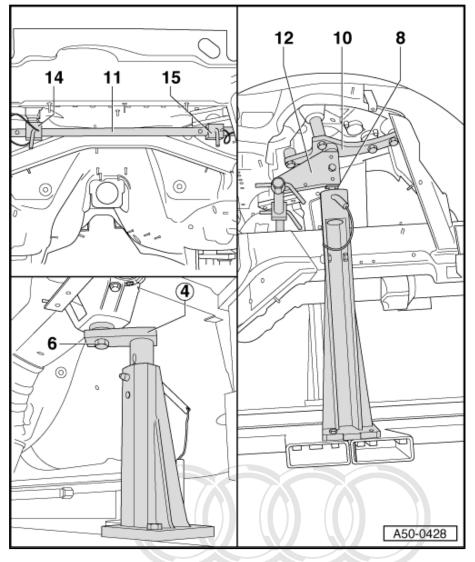
# 11 - Bar in place of steering box

Lubricate bar with oil and take care to avoid damage.

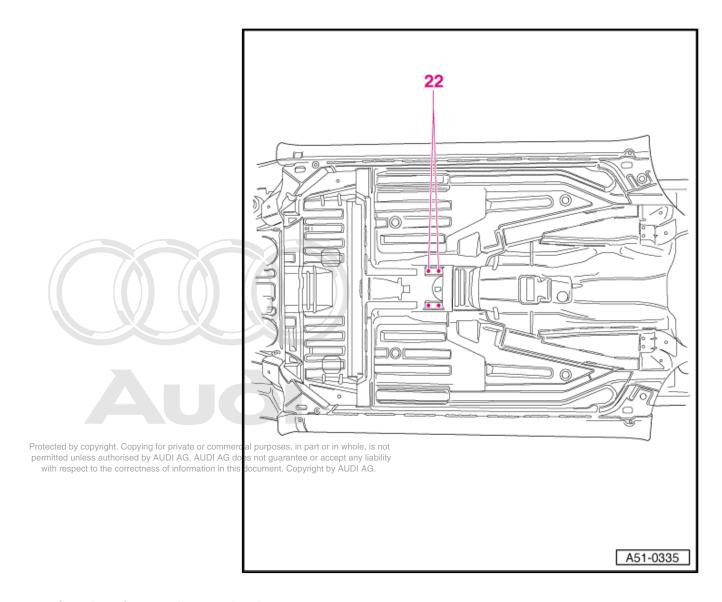
- 14 Mounting for steering
- 15 Mounting for steering
- 6 Mounting for subframe
- 6 Spacer bolt
- 8 Mounting for alignment brackets -10- and -12-

Do not insert pin until after fitting body on jig.

- 10 Strut holder
- 12 Mounting for bar







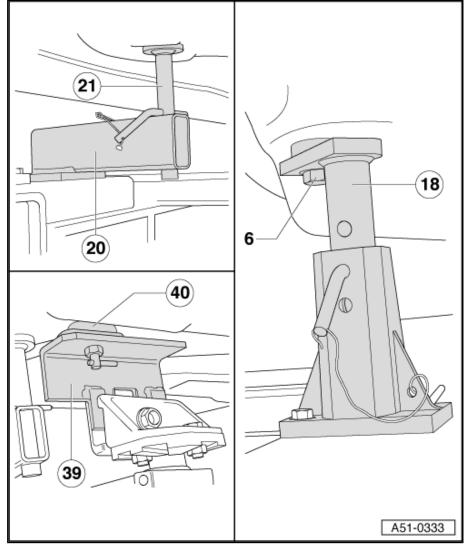
Overview of centre alignment brackets

#### 20 - Bracket

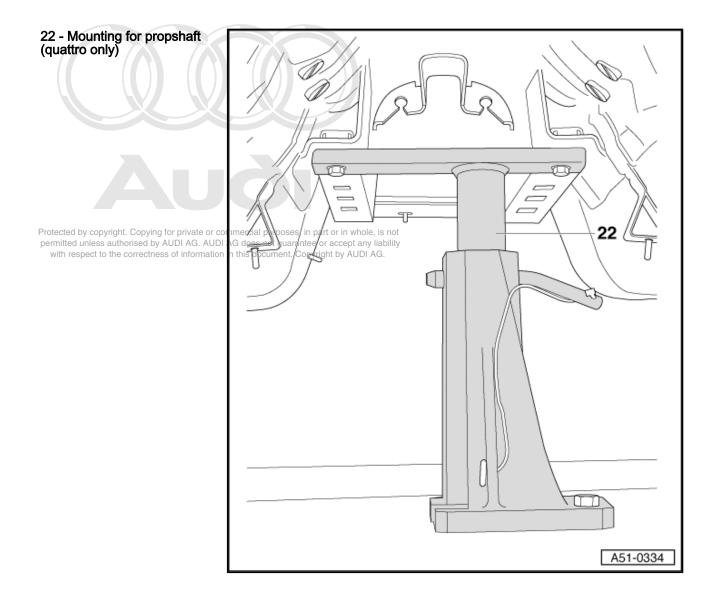
## 21 - Front production mounting

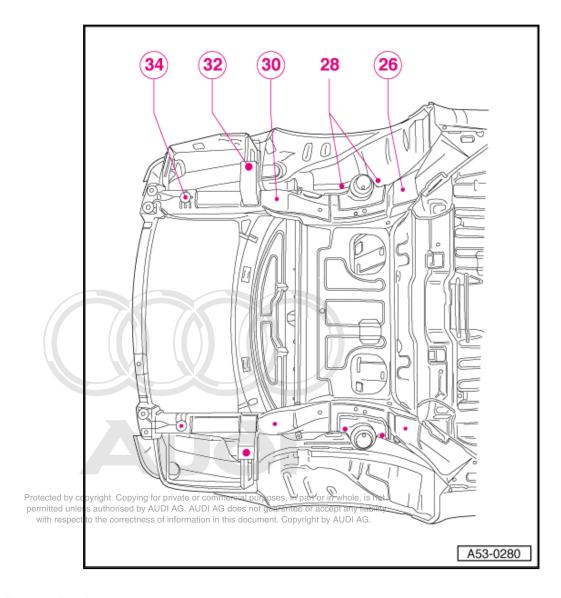
May have been forced upwards by handling vehicle in factory: when checking dimensions, pack with spacer up to 4 mm if necessary.

- 39 Drilling in sill panel
- 40 Drilling in sill panel
- 18 Mounting for subframe
- 6 Spacer bolt









## Overview of rear alignment brackets

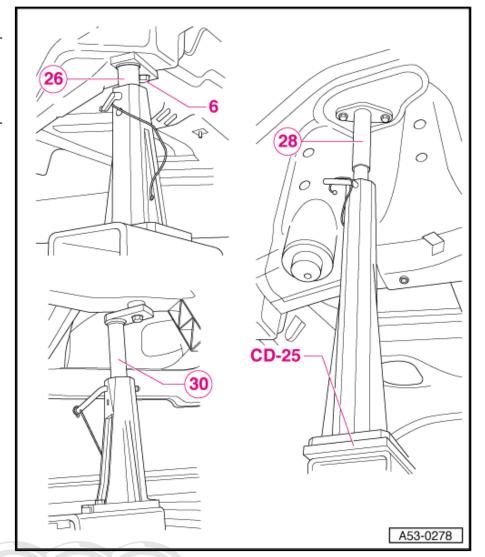
## 26 - Mounting for rear axle

Do not insert pin until after fitting body on jig.

- 6 Spacer bolt
- 28 Strut holder

Do not insert pin until after fitting body on jig.

- 25 Packing plate.
- 32 Drilling in longitudinal member
- 30 Mounting for rear axle
- 6 Spacer bolt

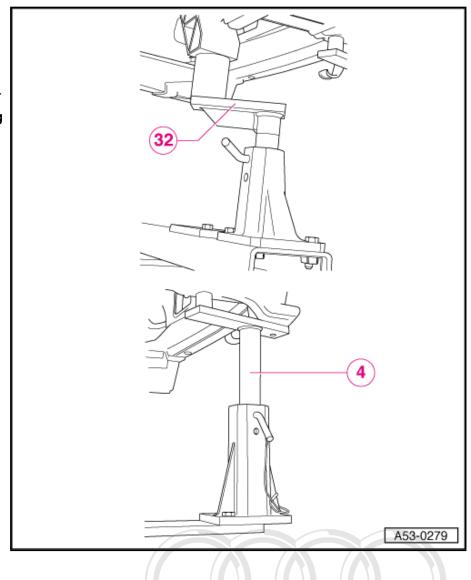




# 34 - Drilling in longitudinal member

The drilling is covered over with fabric-backed tape and sprayed over with underseal. Re-seal drilling after checking.

## 32 - Rear production mounting





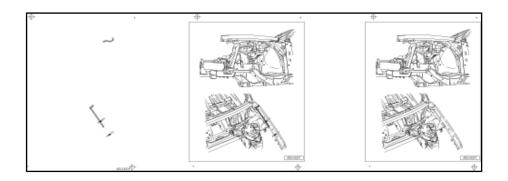
#### 50 – **Body - front**

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#### Wing mounting flange - Renewal 1

#### 1.1 **Procedure**

#### 1.1.1 **Cutting locations**



- Wing mounting flange to cast joint, welded seam.
- Wing mounting flange to support, welded seam.
- Wing mounting flange to plenum chamber, welded seam.
- Detach part.



#### Note:

- Partial replacement is possible with the separating cuts illustrated.
- Insert sleeve and weld in, SG continuous seam.



#### Caution:

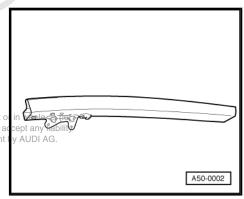
Take care not to damage cast joints and extruded sections on separation.

#### 1.1.2 Replacement part

Wing mounting strip



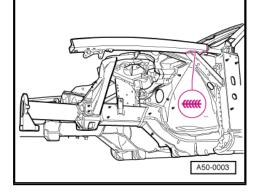
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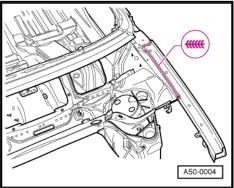
# 1.1.3 Welding in

## Preparing new parts

- Match up new parts.
- Prepare flanges on body and new parts for welding.
- Fix new part in position with alignment bracket.
- Weld wing mounting flange to cast joint, SG continuous seam.
- Weld wing mounting flange to support, SG continuous seam.



Weld wing mounting flange to plenum chamber, SG continuous seam.



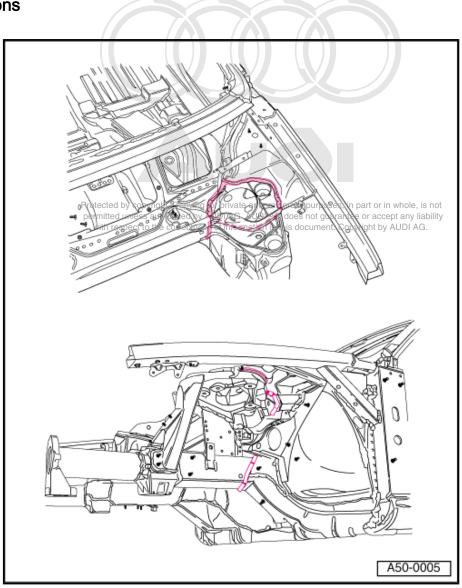


AP: 50 74 55 00

#### Front wheel housing - Renewal 2

#### **Procedure** 2.1

#### 2.1.1 **Cutting locations**



- Strut holder to plenum chamber, welded seam.
- Strut holder to cross member, welded seam.
- Separating cut, strut holder in front of mount.
- Separating cut, longitudinal member in front of cast joint.
- Detach wheel housing.
- Remove remaining material from cast joints.



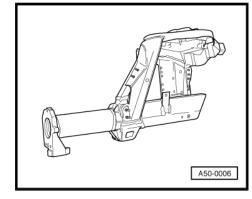
#### Caution:

Take care not to damage cast joints and extruded sections on separation.

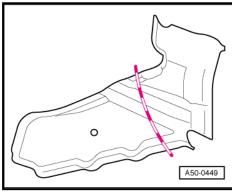
## 2.1.2 Replacement part

♦ Wheel housing - front section

Preparing new parts

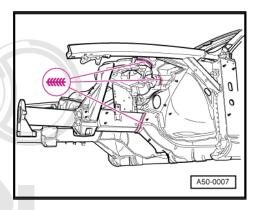


 Transfer separating cut to longitudinal member and cut off hatched area.

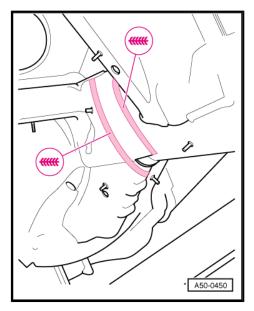


## 2.1.3 Welding in

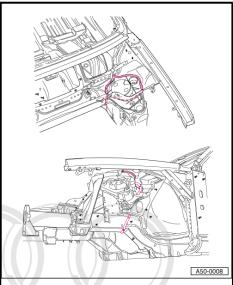
- Prepare flanges on body and new parts for welding.
- Fix new part in position with alignment bracket.
- Weld front longitudinal member to cast joint: SG continuous seam.
- Weld strut holder to mount, SG continuous seam.
- Weld strut holder to plenum chamber, SG continuous seam.



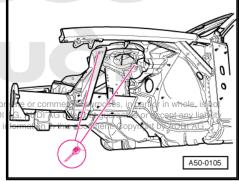
- Butt weld reinforcement plate, SG continuous seam.
- Butt weld longitudinal member, SG continuous seam.
- Match up and fix new part in position.



- Weld strut holder to plenum chamber, SG continuous seam.
- Weld strut holder to cross member, SG continuous seam.



Use drill gauges from alignment bracket set to drill holes in strut holder.



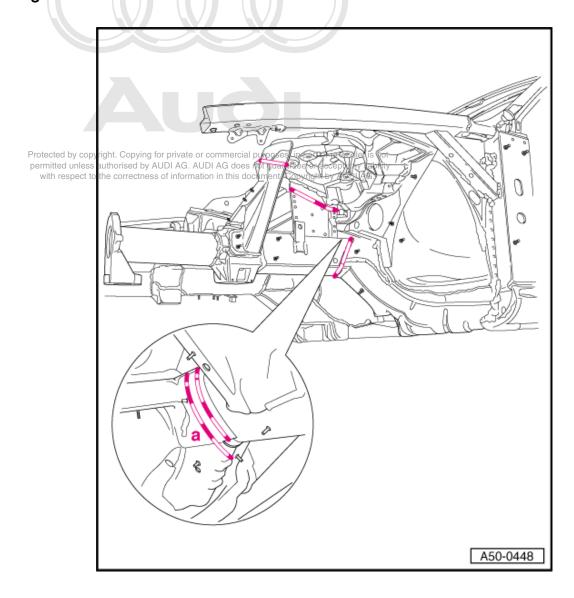
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AP: 50 79 55 03

## 3 Front longitudinal member - Renewal

### 3.1 Procedure

## 3.1.1 Cutting locations



- Separating cut at strut holder support plate.
- Separating cut at longitudinal member in front of cast joint.
- Make separating cut through reinforcement as well if applicable.
- Separating cut at support plate and support.
- Detach longitudinal member.
- Shorten reinforcement plate with separating cut -a-.
- Remove remaining material from cast joints.

Remove remaining material.



### Caution:

Take care not to damage cast joints and extruded sections on separation.

#### 3.1.2 Replacement parts

- Longitudinal member with reinforcement sections
- Support plate with reinforcement sections
- Support
- Support plate
- ◆ Longitudinal member reinforcement

### Preparing new parts

- Match up new parts to body.
- Transfer separating cut to longitudinal member and cut off hatched area.
- Prepare flanges on body and new parts for welding.
- Fix longitudinal member in position on alignment bracket.

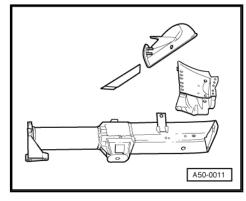
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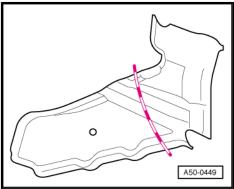
Before doing so, insert strut holder support plate between longitudinal member and strut holder.

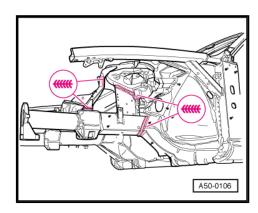
Clamp support to strut holder and longitudinal member.

#### 3.1.3 Welding in

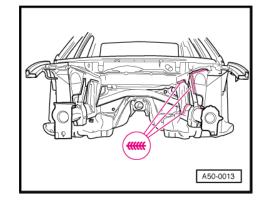
- Weld longitudinal member to cast joint, SG continuous seam.
- Weld strut holder support plate to strut holder, SG continuous
- Weld support to longitudinal member, SG continuous seam.
- Weld support to strut holder, SG continuous seam.
- Remove alignment bracket set and weld remaining seams.



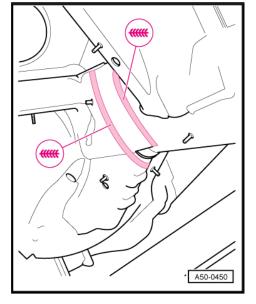




- Fix support plate in position at strut holder and longitudinal member.
- Weld support plate to longitudinal member and strut holder, SG continuous seam.
- Weld strut holder support to longitudinal member, SG continuous seam all round.



- Butt weld longitudinal member, SG continuous seam.
- Butt weld longitudinal member, SG continuous seam.





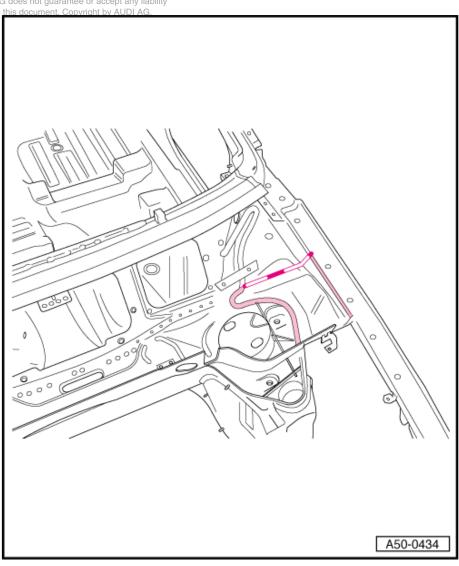
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#### Closure plate for strut holder 4

#### **Procedure** 4.1

4.1.1 Cutting locations

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- Separating cut, strut holder in front of cast joint.
- Separating cut, closure plate behind strut holder.
- Separating cut, closure plate at wing mounting flange.



Caution:

Take care not to damage cast joints.

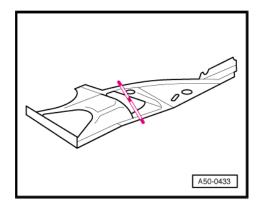
Take off part.

- Remove remaining material from cast joints.

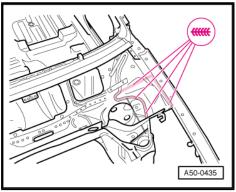
## 4.1.2 Replacement parts

Closure plate for wheel housing

Preparing new parts



Transfer separating cut to new part and cut to size.



## 4.1.3 Welding in

- Match up and fix new part in position.
- Place an additional thickness of the same material behind the separating cut.
- Weld separating cut, SG continuous seam.
- Weld in remaining joint, SG continuous seam.

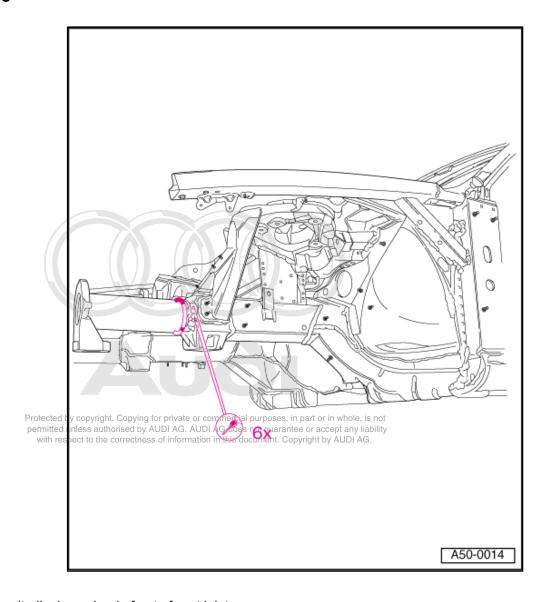


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### Longitudinal member front section -5 Renewal

#### 5.1 **Procedure**

#### 5.1.1 **Cutting locations**



Separating cut, longitudinal member in front of cast joint.



Caution:

Take care not to damage cast joints.

- Detach part.
- Remove remaining material from cast joints.

- Enlarge given hole at top and bottom of cast joint, Ø 9 mm.
- Insert drill gauge in cast joint and centre over holes.
- Drill, 4 x Ø 9 mm.

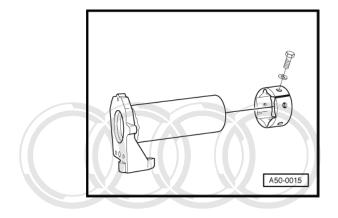


### Note:

Unfasten bolted joint of longitudinal member if applicable.

## 5.1.2 Replacement parts

- ◆ Front longitudinal member
- ♦ Banjo union with bolts





## 5.1.3 Bolting on

### Preparing new parts

- Adapt length if necessary. Distance from cast joint at least 1 mm.
- Transfer bolt holes from cast joint to longitudinal member, Ø 9 mm.



### Note:

Threads must be free of paint and grease.

Insert threaded ring -A- in longitudinal member -B-.



### Caution:

Slot -a- must face downwards (condensate drain).

Insert longitudinal member with threaded ring in cast joint
 C-.
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### Note:

Align longitudinal member with bolted-on parts.

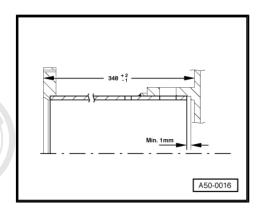
- Hand-tighten bolts.
- Tighten bolts 1-6 (tightening torque 24 Nm).



### Caution:

Heed tightening sequence.

- Seal joint between longitudinal member and cast joint.



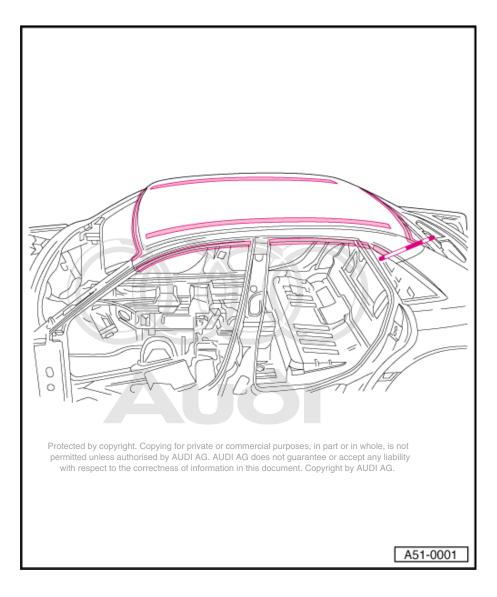
# 51 – Body - centre

AP: 51 03 55 50

1 Roof - Renewal

### 1.1 Procedure

## 1.1.1 Cutting locations



- · Left and right A-pillar trim already removed.
- Separating cut, D-pillar 30 mm above original welded seam.



Note:

D-pillar is foam-filled.

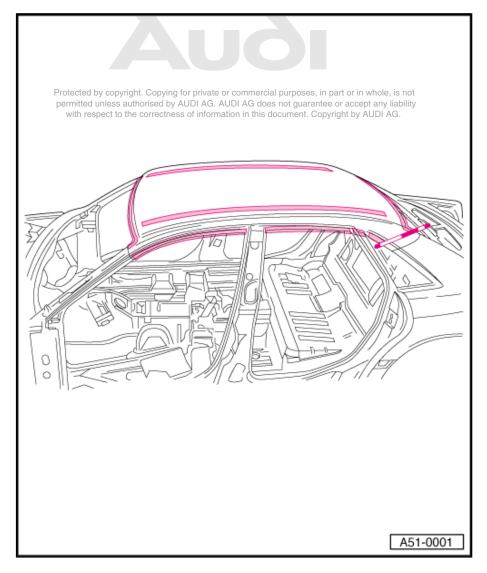
- C-pillar, welded seam.
- Window opening, punch rivets.
- Door frame, punch rivets.



### Note:

The roof is bonded to the roof frame.





- Heat adhesive bead with hot-air blower and detach roof.
- Remove remaining material at side panel, grind down original welded seam if applicable.



## Caution:

Take care not to damage the shoulder at the side panels. New part is riveted to original flange.

## 1.1.2 Replacement parts

- ♦ Roof
- ♦ Pop rivets
- ♦ Body adhesive
- ♦ Solid rivets
- ♦ Roof adhesive

### 1.1.3 Riveting in

### Preparing new parts

- Fit roof and fix in place.



### Note:

Check panel gaps with A-pillar trim and doors fitted.

- Drill overlap area, 8 x Ø 2.5 mm.
- Drill C-pillar, 1 x Ø 2.5 and countersink (as substitute for welded seam).
- Detach part.
- Enlarge hole in C-pillar, Ø 4.8 mm .
- Countersink holes in all parts.
- Trim back adhesive bead on roof frame to 2 mm.
- Prepare joints for adhesive application.



### Note:

Refer to General notes on bonding.

- Apply adhesive to residual bead on side of roof frame.
- Apply adhesive to flanges.
- Fit roof and fix in place.
- Punch flanges.



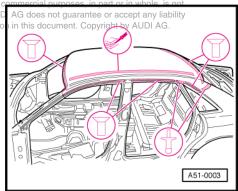
### Note:

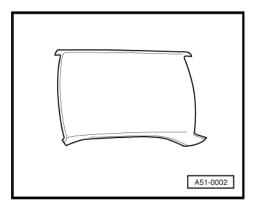
Use clamps.

- Fit solid rivets in flanges.
- Set pop rivets in overlap area.
- Set pop rivets in C-pillar.



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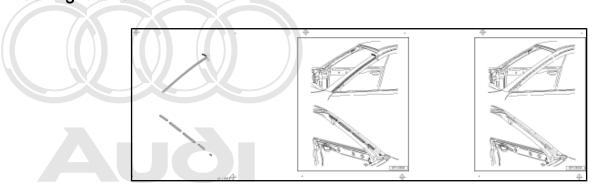


AP: 51 37 55 02

#### A-pillar trim - Renewal 2

#### 2.1 **Procedure**

#### 2.1.1 **Cutting locations**



- Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not Separating cut 30 mm beneath original welded seam coept any liability
- Door frame, punch rivets.
- A-pillar, welded seams.
- Detach part.



Note:

A-pillar trim is foam-filled.

Remove remaining material at roof, grind down original welded seam if applicable.



Caution:

Take care not to damage shoulder at roof. New part is riveted to original flange.

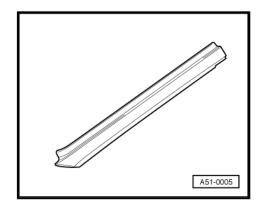
#### 2.1.2 Replacement parts

A-pillar trim

Solid rivets

Pop rivets

Body - adhesive



## 2.1.3 Riveting in

### Preparing new parts

- Fit new part and fix in place.



### Note:

Pay attention to opening for windscreen and door panel gap.

- Drill overlap area, 3 x Ø 2.5 mm.
- Drill A-pillar, 5 x Ø 2.5 mm and countersink (as substitute for welded seam).



### Caution:

Always heed dimensions for rivet holes. Rivet head must be flush with panel on account of adhesive bead for windscreen.

- Detach part.
- Enlarge hole in A-pillar, Ø 4.8 mm.
- Countersink holes in all parts.
- Apply sealing compound at bottom of cast joint.
- Prepare joints for adhesive application.



### Note:

Refer to General notes on bonding.

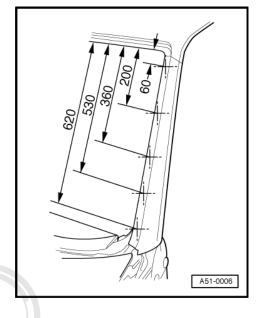
- Apply adhesive.
- Fit part and fix in place.
- Punch flanges.

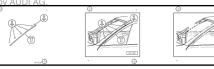


### Note:

Use clamps.

- Fit solid rivets in door frame.
- Set pop rivets in overlap area.
- Set pop rivets in A-pillar.





AP: 51 37 55 01

A-pillar - Renewal 3

3.1 **Procedure** 

3.1.1 **Cutting locations** 

3.1.2 Replacement parts

3.1.3 **Bolting** on

Preparing new parts



Note:

Threads must be free of paint and grease.

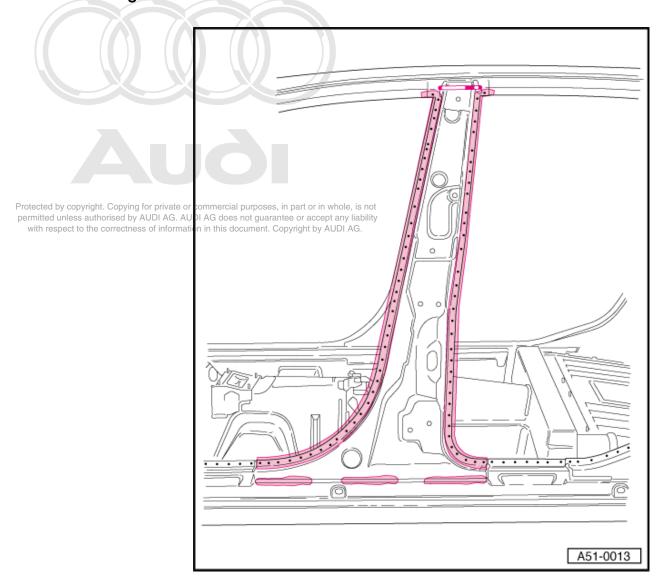


AP: 51 41 55 02

## 4 Outer B-pillar - Renewal

## 4.1 Procedure

## 4.1.1 Cutting locations



- Separating cut at top, at edge.
- Weld outer B-pillar to outer side member, welded seam.
- Door frame, punch rivets.
- Detach part.



### Note:

Outer B-pillar is foam-filled at bottom.



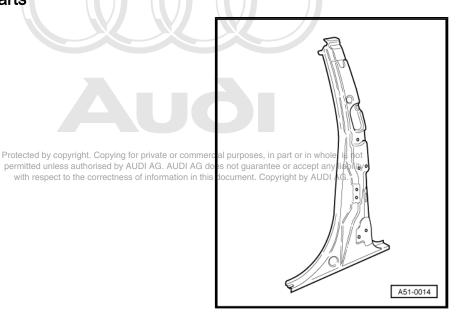
#### 4.1.2 Replacement parts

Outer B-pillar

Solid rivets

Pop rivets

Body - adhesive



#### 4.1.3 Welding in

### Preparing new parts

- Transfer separating cuts to new parts.
- Joddle-join on body side.
- Fit outer B-pillar and fix in position.



### Note:

Screw on hinges and striker plate for better positioning.

- Drill overlap area, 4 x Ø 2.5 mm.
- Detach part.
- Countersink holes in all parts.
- Prepare flanges on body and new parts for welding.
- Prepare joints for adhesive application.



### Note:

Refer to General notes on bonding.

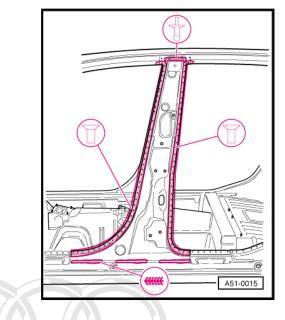
- Apply adhesive.
- Fit outer B-pillar and fix in position.
- Punch flanges.



Note:

Use clamps.

- Fit solid rivets in door frame.
- Set pop rivets in overlap area.
- Outer side member, SG continuous seam.



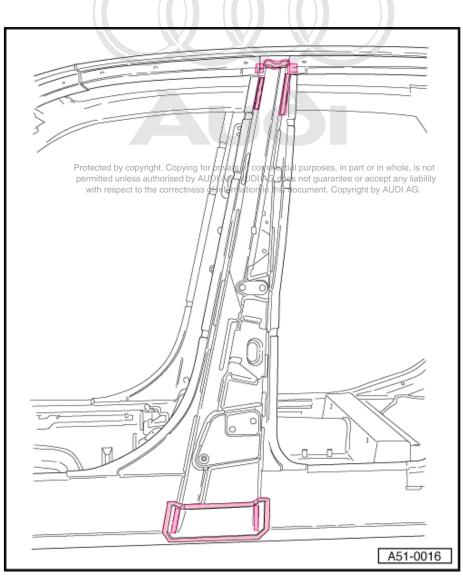


AP: 51 41 55 65

#### Inner B-pillar - Renewal 5

#### 5.1 **Procedure**

#### 5.1.1 **Cutting locations**



### Includes: Lower closure plate

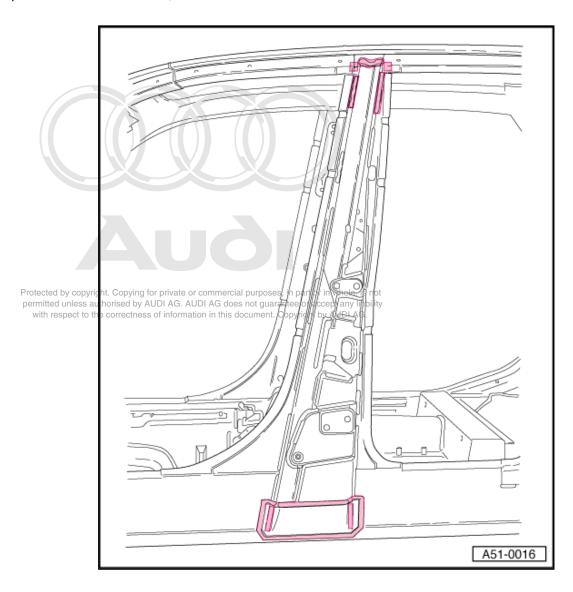
- Outer B-pillar and outer side member already removed
- Closure plate, welded seam
- Detach closure plate.



Note:

Closure plate is foam-filled.

Weld inner B-pillar to inner side member, welded seam.



- Make cut in and bend up outer B-pillar at top.



### Note:

Bend open B-pillar so as to provide access to side welded seam at extruded section.

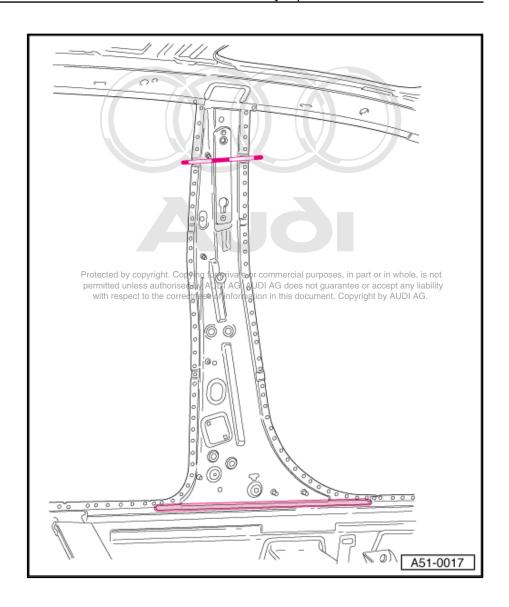
- Weld inner B-pillar to roof frame cast joint, welded seam.



### Caution:

Take care not to damage cast joints.

- Weld inner B-pillar extruded section to panel, welded seam.



Inner B-pillar separating cut.



## Note:

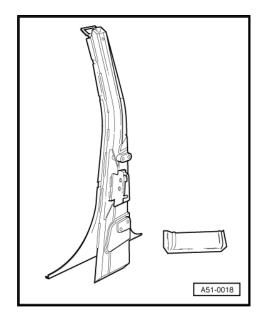
Once the roof trim has been removed, unfasten original joint at roof frame.

- Weld inner B-pillar to inner side member, welded seam.
- Detach part.

## 5.1.2 Replacement parts

Inner B-pillar

B-pillar closure plate



## 5.1.3 Welding in

## Preparing new parts

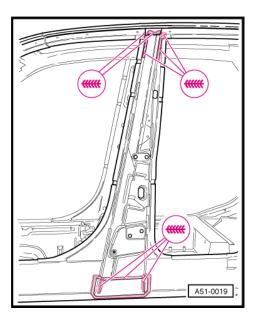
- Match up new parts.
- Prepare flanges on body and new parts for welding.
- Fix inner B-pillar in position on alignment bracket.



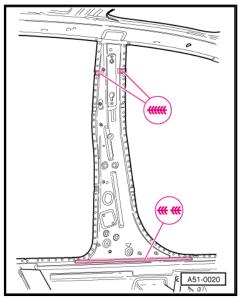
### Note:

Slide inner B-pillar from underneath onto cast joint.

- Weld inner B-pillar to cast joint, SG continuous seam.
- —ProWeld inner B-pillar to inner side member SG continuous not pessel and ness 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.
- Detach alignment bracket.
- Fit closure plate and fix in position.
- Weld closure plate to inner B-pillar, SG continuous seam.
- Bend down outer B-pillar.



- Weld inner B-pillar to inner side member, SG continuous seam.
- Separating cut, SG continuous seam.



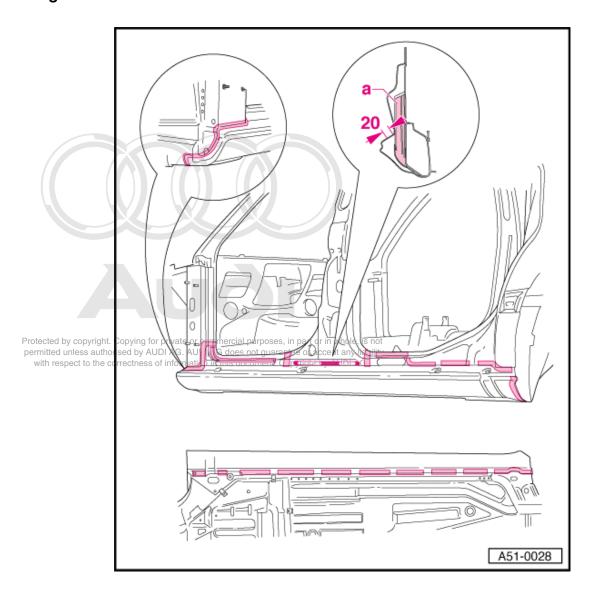


AP: 51 45 55 00

#### Outer side member - Renewal 6

#### 6.1 **Procedure**

#### 6.1.1 **Cutting locations**

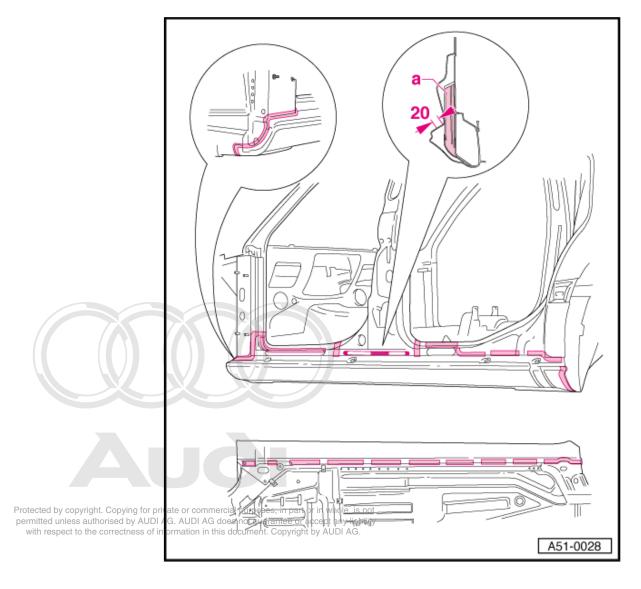


- Door frame, punch rivets.
- Side panel, welded seam.
- Wheel housing liner, punch rivets.
- A-pillar, welded seam.
- B-pillar, welded seam.
- Outer B-pillar separating cut.



## Note:

If the outer B-pillar has already been removed, unfasten welded seam -a- at inner B-pillar.



- Inner side member, welded seam.
- Detach part. If necessary, bend open outer B-pillar.



## Note:

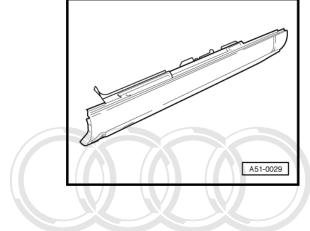
Partial repair is also possible using the separating cuts shown. Butt weld SG continuous seam in separation area.

#### 6.1.2 Replacement parts

Outer side member

Solid rivets

Body - adhesive



#### 6.1.3 Welding in

### Preparing new parts

- Match up new parts to body.
- Transfer separating cuts to new parts.
- Prepare flanges on body and new parts for welding.
- Prepare joints for adhesive application.



### Note:

Refer to General notes on bonding.

- Apply adhesive.
- Fit side member and fix in position.



### Caution:

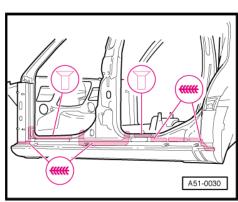
Fit side member with no load on body.

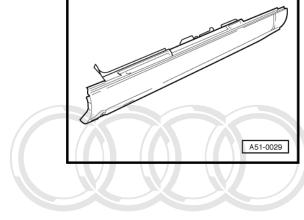


### Note:

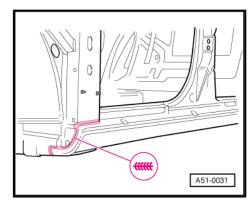
Check panel gaps with doors fitted.

- Punch flanges.
- Fit solid rivets in flanges.
- Fit solid rivets in wheel housing liner.
- A-pillar, SG continuous seam.
- B-pillar, SG continuous seam.
- Side panel, SG continuous seam.
- Separating cut, SG continuous seam.

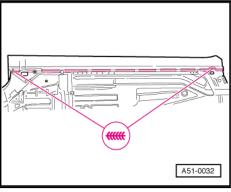




- A-pillar, SG continuous seam.



- Inner side member, SG continuous seam.



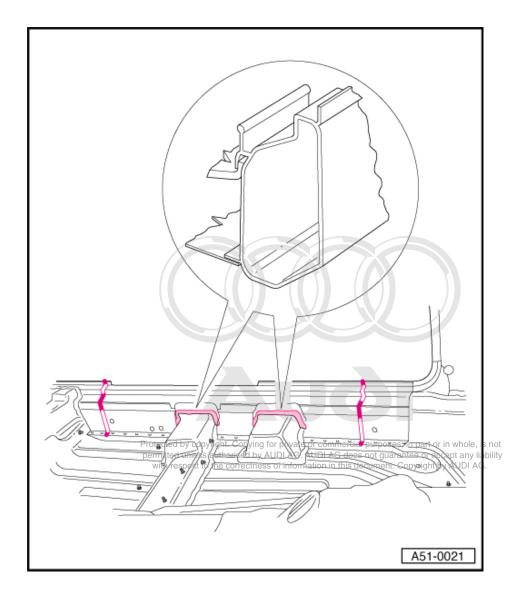


AP: 51 47 55 62

## 7 Inner side member - Partial renewal

## 7.1 Procedure

## 7.1.1 Cutting locations



- Outer side member, outer B-pillar and inner B-pillar already removed.
- Separating cut in front of and behind damaged area.



Caution:

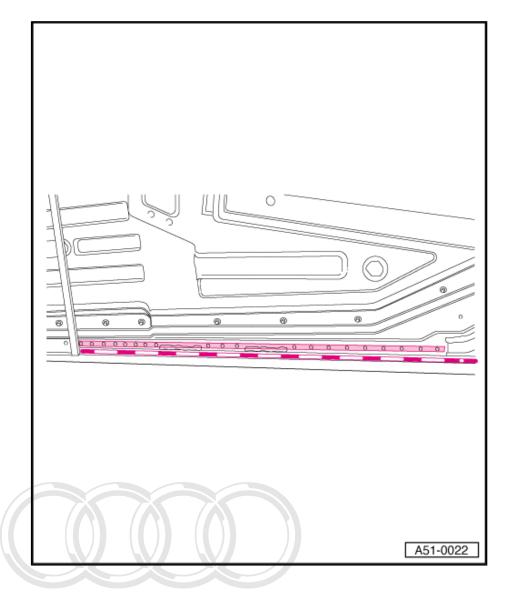
Separating cut min. 150 mm in front of cast joint.

Front and rear seat cross member, welded seam.



### Note:

Seat cross members are inserted at top in inner side member.



- Separating cut, inner side member at floor panel.
- Detach part.
- Press out punch rivets now accessible.
- Remove remaining material.
- Press punch rivets out of floor pane copying for private or commercial purposes, 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.



Note:

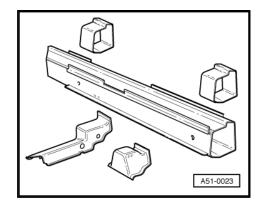
Also replace seat cross member if necessary.

## 7.1.2 Replacement parts

Inner side member

Sleeves

Front and rear seat cross member



## 7.1.3 Welding in

### Preparing new parts

- Transfer separating cuts to new parts.
- Produce punch rivet holes, Ø 8.5 mm.
- Prepare flanges on body and new parts for welding.
- Drill sleeves -A-, Ø 2.5 mm and draw in nylon threads (aluminium welding wire) -B-.
- Insert sleeves in body.

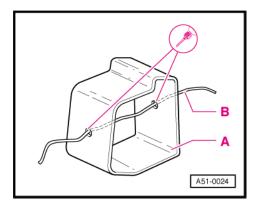


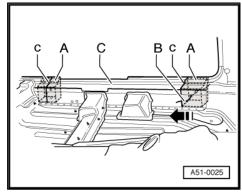
### Note:

Do not apply oil or grease to sleeves or side member to help the sleeves move more freely. Press sleeve approx. 1 mm to create clearance for nylon thread.

- Insert inner side member.
- Use nylon threads -B- to pull sleeves -A- into new part. Sleeves must be centred with separating cut -c-.
- Remove nylon threads -B-.

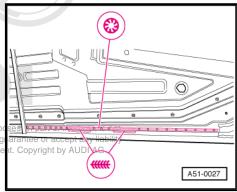






- Inner side member separating cut, SG continuous seam.
- Weld inner side member to front and rear seat cross member, SG continuous seam.
- Weld inner side member to floor panel, SG continuous seam (staggered).
- A51-0026
- Weld inner side member to floor panel, SG plug weld seam (as substitute for punch rivets).
- Weld inner side member to floor panel, SG continuous seam.



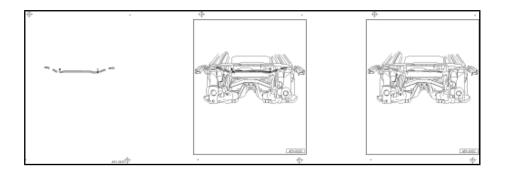


AP: 51 55 55 00

## 8 Top part of cross panel - Renewal

### 8.1 Procedure

## 8.1.1 Cutting locations



### Includes: Front cross panel

- Cross panel to strut holder and cross member, welded seam.



Caution:

Take care not to damage cast joints.

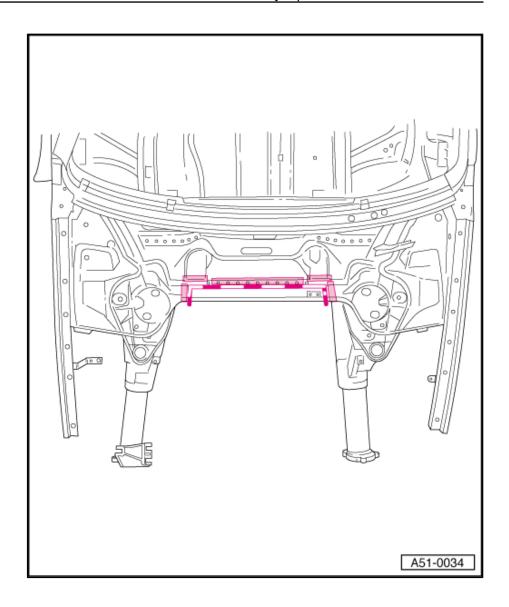
- Detach part.



Note:

The cross panel can be re-used if intact. Partial repair is also possible using the separating cuts shown. Separation area, SG continuous seam. Stamp on new chassis number if cross panel is replaced.





Separating cut, cross member in front of strut holder on left and right.



### Caution:

Take care not to damage cast joints.

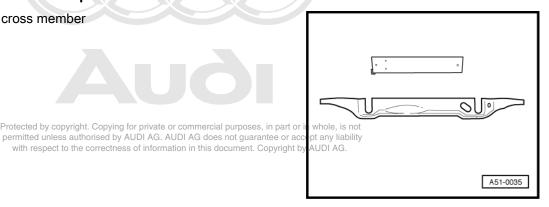
- Plenum chamber cross member, welded seam.
- Cross member separating cut, riveted flange.
- Detach part.
- Press out punch rivets now accessible.
- Remove remaining material.

#### 8.1.2 Replacement parts

Plenum chamber cross member

Front cross panel

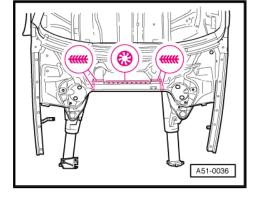
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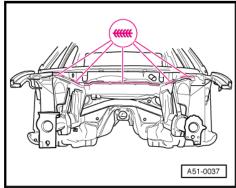
#### 8.1.3 Welding in

### Preparing new parts

- Produce punch rivet holes,  $\emptyset$  8.5 mm .
- Match up new parts to body.
- Prepare flanges on body and new parts for welding.
- Insert cross member.
- Weld cross member to strut holder on left and right, SG continuous seam.
- Weld cross member to plenum chamber, SG plug weld seam (as substitute for punch rivets).
- Weld cross member to plenum chamber, SG continuous seam.
- Fit cross panel.



- Weld cross panel to strut holder on left and right, SG continuous seam.
- Weld cross panel to cross member, SG continuous seam.



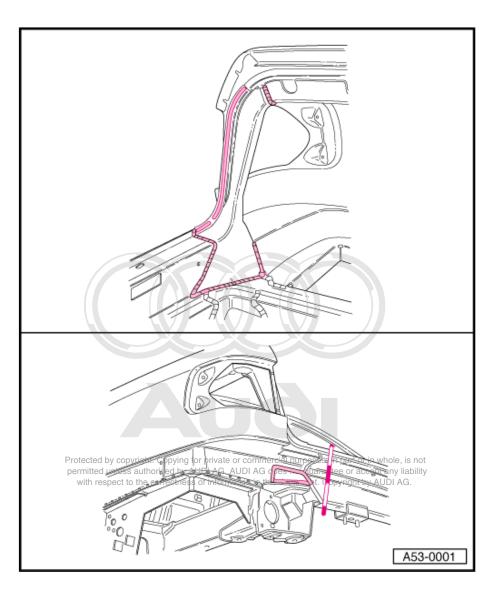
# Body - rear

AP: 53 05 55 00

#### 1 Rear cross panel - Renewal

#### 1.1 **Procedure**

#### **Cutting locations** 1.1.1



### Includes: Left and right reinforcement.

- Reinforcement, welded seam.
- Reinforcement, spot welds.
- Reinforcement, punch rivets.
- Detach reinforcement.
- Rear cross panel separating cut.

- Detach rear cross panel.
- Remove remaining rear cross panel material.



### Caution:

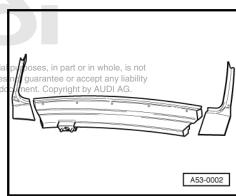
The longitudinal members must be supported at the rear on the straightening jig whilst performing work.

## 1.1.2 Replacement parts

Rear cross panel

Left and right reinforcement.

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## 1.1.3 Welding in

### Preparing new parts

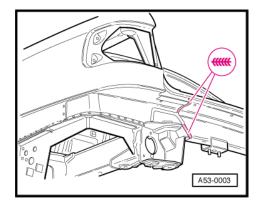
- Punch holes in left and right reinforcement, Ø 8.5 mm.
- Produce punch rivet holes, Ø 8.5 mm .
- Match up new parts.



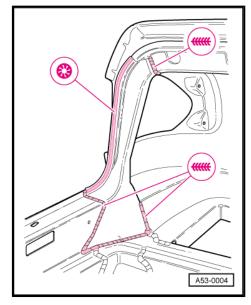
### Note:

Check dimensional accuracy with respect to rear lid.

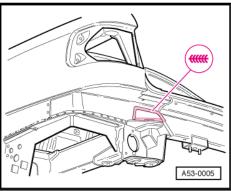
- Prepare flanges on body and new parts for welding.
- Insert rear cross panel.
- Weld rear cross panel to rain channel, SG continuous seam.
- Weld rear cross panel to longitudinal member, SG continuous seam.
- Insert left and right reinforcement.



- Weld left and right reinforcement to rain channel, SG continuous seam.
- Weld left and right reinforcement to rain channel, SG plug weld seam.
- Weld left and right reinforcement to rear cross panel and longitudinal member, SG continuous seam.



Weld left and right reinforcement to rear cross panel and longitudinal member, SG continuous seam.





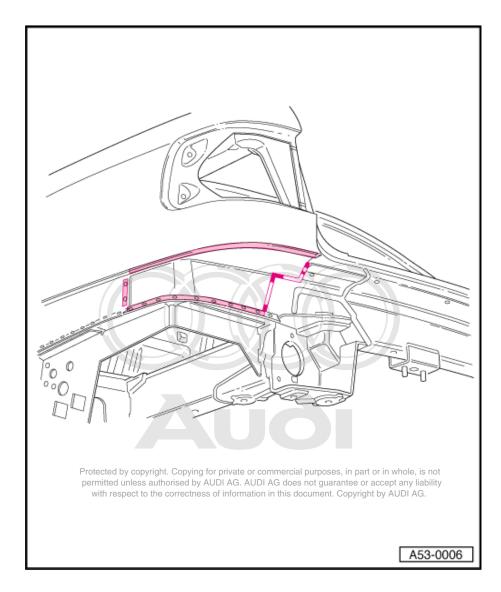
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AP: 53 06 55 12

# 2 Rear cross panel/side panel - Partial renewal

# 2.1 Procedure

# 2.1.1 Cutting locations



Separating cut.



Caution:

Position separating cut such that new part can be riveted on with 22 mm overlap.

- Rear cross panel to side panel, clinching points.

- Rear cross panel to luggage compartment floor, clinching points.
- Detach part.

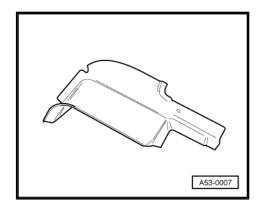
#### 2.1.2 Replacement parts

Rear cross panel/side panel

Solid rivets

Pop rivets

Body - adhesive



#### 2.1.3 Riveting in

### Preparing new parts

- Transfer separating cuts to new parts.
- Joddle-join new part.
- Fit rear cross panel and fix in place.
- Drill overlap area, 4 x Ø 2.5 mm.
- Drill rear cross panel with side panel, Ø 2.5 mm.
- Detach part.
- Countersink holes in all parts.
- Prepare joints for bonding.
- Apply adhesive.



Note:

Refer to General notes on bonding.

- Fit rear cross panel and fix in position.
- Punch holes in rear cross panel with luggage compartment panel.

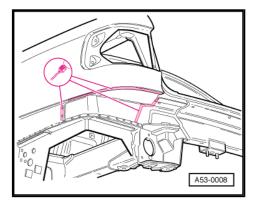


Note:

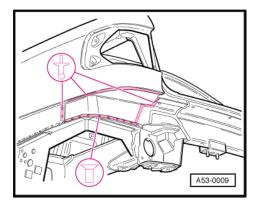
Use clamps.



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- Set pop rivets in overlap area.
- Set pop rivets in side panel.
- Fit solid rivets in luggage compartment floor.





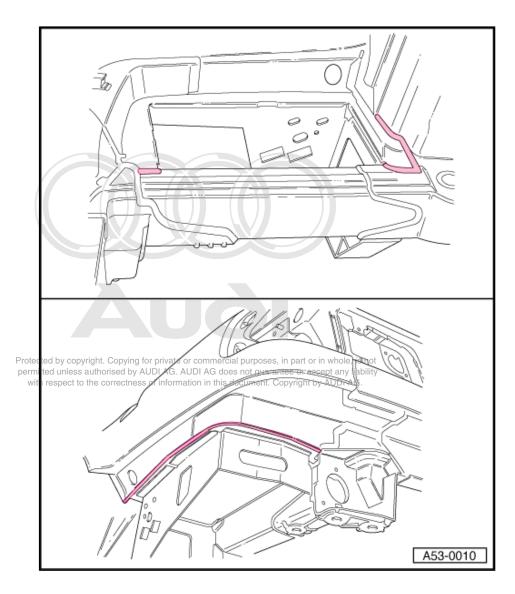
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AP: 53 24 55 03

### 3 Luggage compartment floor/side panel - Renewal

#### 3.1 **Procedure**

### 3.1.1 **Cutting locations**



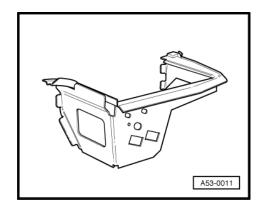
- Rear longitudinal member, welded seam.
- Wheel housing liner, welded seam.
- Side panel, clinching points.
- Rear cross panel/side panel, clinching points.
- Detach part.

# 3.1.2 Replacement parts

Luggage compartment panel/side panel Solid rivets

Body - adhesive





# 3.1.3 Welding in

# Preparing new parts

- Match up new parts to body.
- Prepare flanges on body and new parts for welding 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.



Check dimensional accuracy with bumper guide and recess.

- Prepare joints for adhesive application.



# Note:

Refer to General notes on bonding.

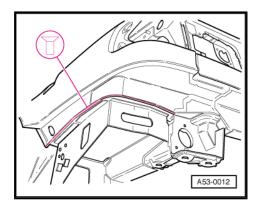
- Apply adhesive.
- Punch flanges.



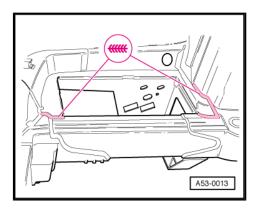
### Note:

Use clamps.

- Fit solid rivets in side panel and rear cross panel.



- Weld rear longitudinal member, SG continuous seam.
- Weld wheel housing liner, SG continuous seam.



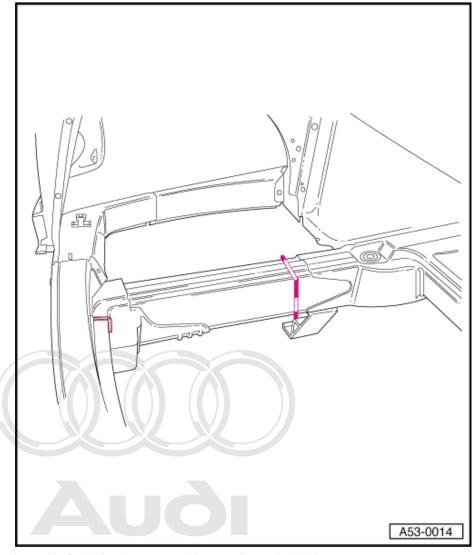


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- Rear longitudinal member Partial re-4 newal
- 4.1 **Procedure**

### **Cutting locations** 4.1.1



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- Separating cut in front of cast joint.



Caution:

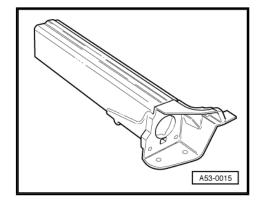
Take care not to damage cast joints.

Rear cross panel, welded seam.

- Detach part.
- Remove remaining material from cast joints.

#### 4.1.2 Replacement parts

Rear longitudinal member

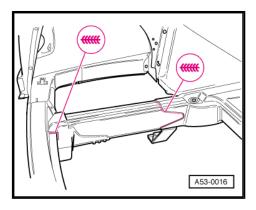


#### Welding in 4.1.3

# Preparing new parts

- Match up new parts.
- Prepare flanges on body and new parts for welding.
- Fix new parts in position on alignment bracket.
- Weld longitudinal member to cast joint, SG continuous seam.

Protected by Protected by copyright. Copying for private or commercial purposes, in part or in whole is not permitted unlaweld longitudinal member to rear cross panel a SG continuous with respe**Seam** correctness of information in this document. Copyright by AUDI AG.

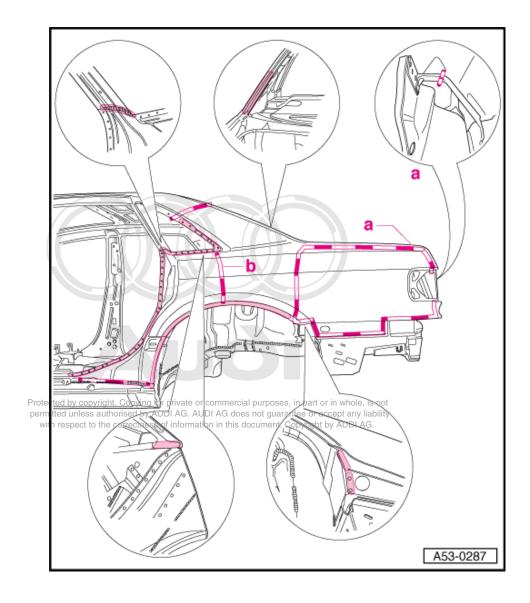


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# 5 Side panel - Renewal

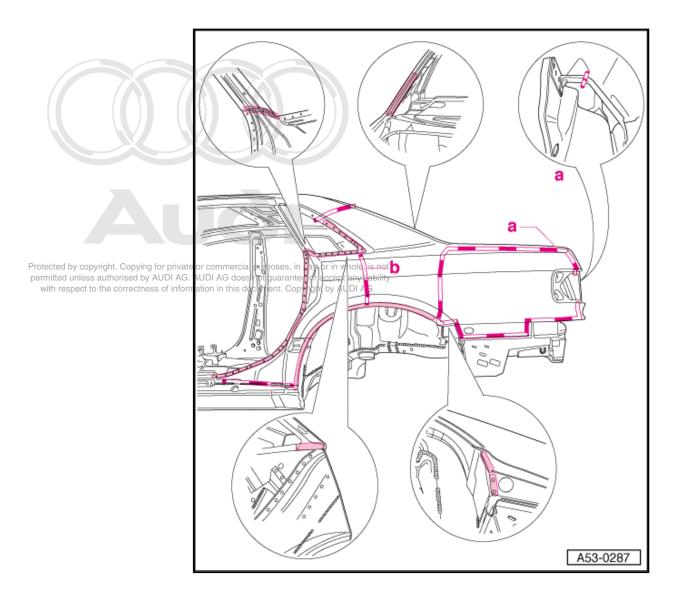
# 5.1 Procedure

# 5.1.1 Cutting locations

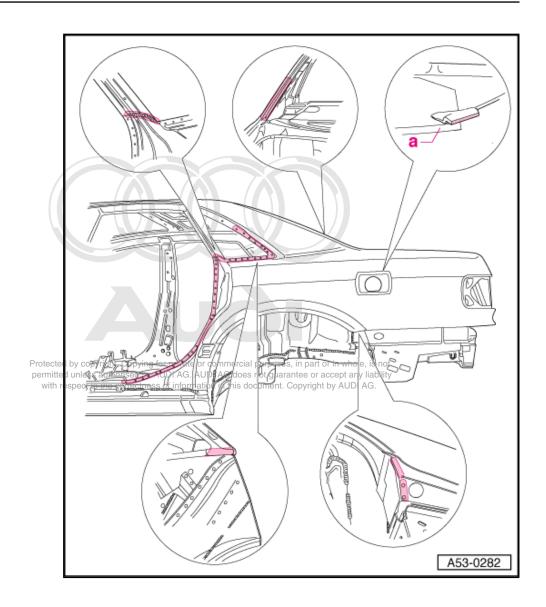




- Side panel is foam-filled in area of lower part and D-pillar.
- ♦ Partial renewal at the front or rear is possible with the given separating cut -b-.
- ♦ Max. cutting depth 3 mm.
- ♦ Take care not to damage inner reinforcement when cutting.
- Place an additional thickness of the same material behind the joint or overlap in the hatched area.



- Separating cut, D-pillar 60 mm below original joint.
- Separating cut at bottom, 30 mm above sill panel, inside recess for sill panel trim.
- Roughly cut out rear area with separating cut -a- and detach.
- Use body saw to separate filler neck compartment retaining bracket.
- Grind through outer edge of wheel housing.

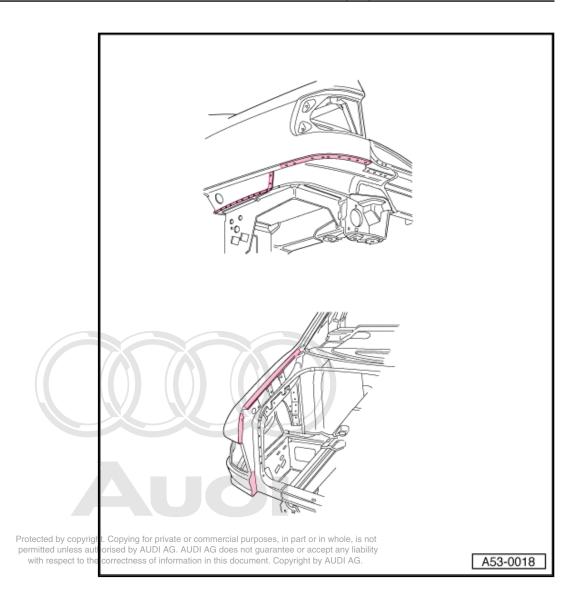


- Press out punch rivets in area of door frame and side window.
- Grind down C-pillar welded seam.
- Grind down wheel housing liner welded seam and press out punch rivets.
- Press out punch rivets in area of rear window.
- Detach part.
- Use Hazet 1967 milling cutter to cut round punch rivet -a-.



# Caution:

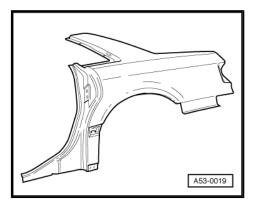
Rain channel can only be replaced in specialist workshop.



- Grind down rain channel welded seams and spot welds.
- Press back clinching points of rear cross panel with side panel.
- Press back clinching points of luggage compartment panel with side panel.
- Remove remaining material.

#### 5.1.2 Replacement parts

- Outer side panel
- Pop rivets
- Solid rivets
- Assembly adhesive D 190 MKD A3
- Aluminium wire mesh



# 5.1.3 Riveting in

### Preparing new parts

- Transfer separating cuts to new part and cut to shape.



## Note:

Allow 25 mm at bottom for overlap.

- Place an additional thickness of the same material behind the D-pillar on the body side.
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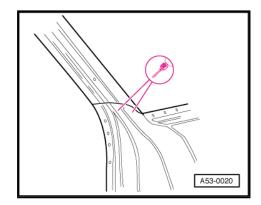
  Match up side panel and fix in position; less authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.



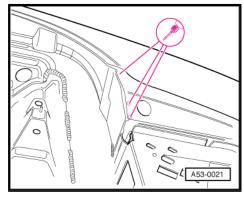
### Note:

Check panel gaps with door and rear lid fitted.

- Drill overlap area, 8 x at top, 12 x at bottom Ø 2.5 mm.
- Drill reinforcement,  $\varnothing$  2.5 mm and countersink (as substitute for spot weld).
- Drill rear cross panel/side panel, Ø 2.5 mm.
- Drill C-pillar, 2 x Ø 2.5 mm and countersink (as substitute for welded seam).



 Drill wheel housing liner, Ø 2.5 mm (as substitute for welded seam).



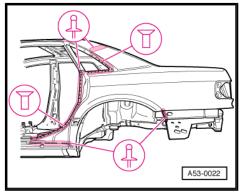
- Drill retaining bracket for filler neck compartment  $2x \varnothing 2.5$  mm.
- Detach part.
- Enlarge hole in C-pillar, Ø 4.8 mm.
- Countersink holes in all parts.
- Prepare joints for bonding.



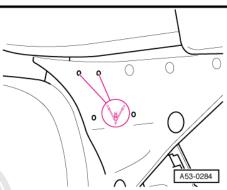
### Note:

Refer to General notes on bonding.

- Apply flange and wheel housing adhesive and insert aluminium wire mesh in side panel.
- Fit side panel and fix in position with expanding clips.
- Punch rivet holes in rear and side window.
- Punch rivet holes in door frame and wheel housing liner.
- Fit solid rivets in door frame and at side window.
- Set pop rivets in wheel housing liner.
- Set pop rivets in overlap area.
- Set pop rivet in C-pillar.

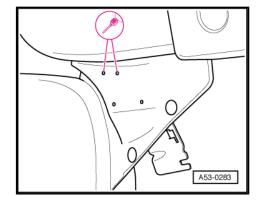


- Set pop rivets in retaining bracket for filler neck compartment.
- Fit solid rivets at rear window.





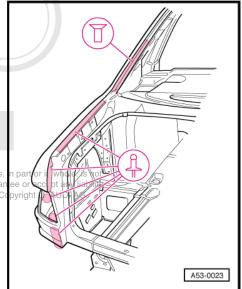
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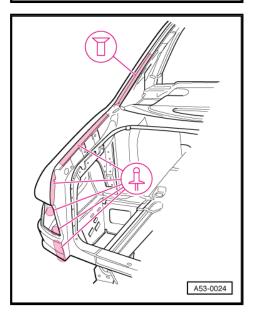
- Set pop rivets in reinforcement.
- Set pop rivets in rear cross panel.
- Bead over wheel housing flange with R = 2.5 mm.



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- Fit solid rivets in luggage compartment panel.

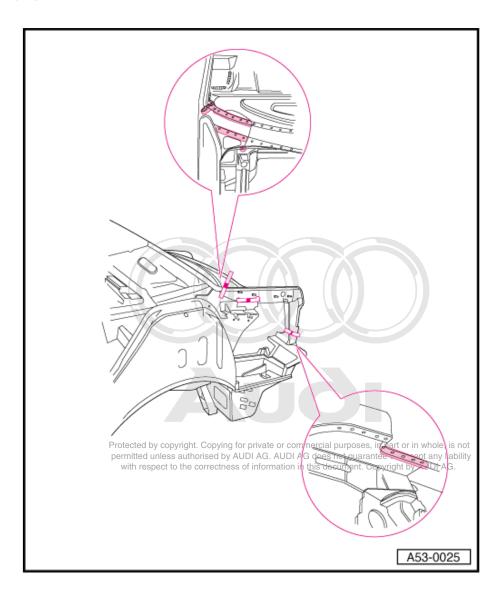


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#### Rain channel - Renewal 6

### **Procedure** 6.1

#### 6.1.1 **Cutting locations**



- Outer side panel and reinforcement (refer to rear cross panel  $53\ 05\ 55\ 00$ ) already removed.
- D-pillar separating cut, unfasten original joint.
- Roughly cut out rain channel.



## Caution:

Take care not to damage rear shelf and support plate.

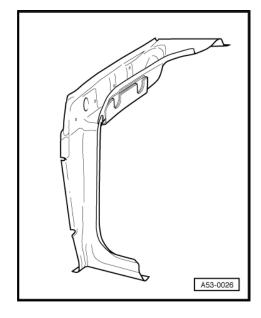
Detach part.

- Press out punch rivets now accessible or use milling cutter (e.g. Hazet 1967) to cut round from underneath.
- Separate rear cross panel original joint.
- Remove remaining material.

# 6.1.2 Replacement parts

- ♦ Rain channel
- ♦ Pop rivet
- ♦ Body adhesive

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# 6.1.3 Welding in

### Preparing new parts

- Produce punch rivet holes in rear shelf and support plate,  $\varnothing$  8.5 mm.
- Match up new parts.



# Note:

Check panel gaps with respect to outer side panel, rear cross panel/side panel and rear lid.

- Drill rain channel with rear cross panel/side panel, Ø 2.5 mm.
- Detach part.
- Countersink holes in all parts.
- Prepare flanges on body and new parts for welding.
- Prepare joints for bonding.

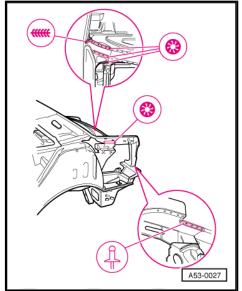


### Note:

Refer to General notes on bonding.

Apply adhesive before welding in.

- Weld rear shelf, SG continuous seam.
- Weld rear shelf, SG plug weld seam (as substitute for punch rivet).
- Weld support plate, SG plug weld seam (as substitute for punch rivet).
- Set pop rivets in rear cross panel/side panel.





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