

Body repairs Audi A3 1997 ➤

Edition 04.1999



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Repair Group overview for Body Repairs

Repair Group

00 - Technical data, materials

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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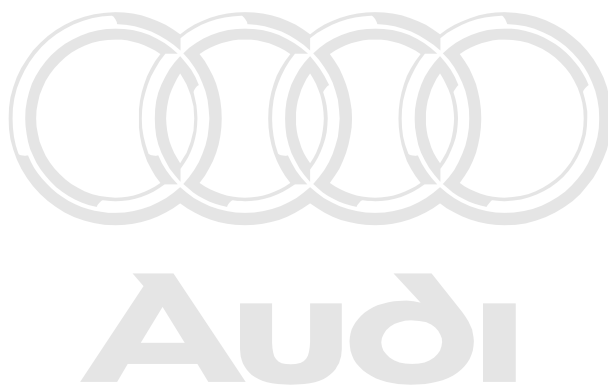
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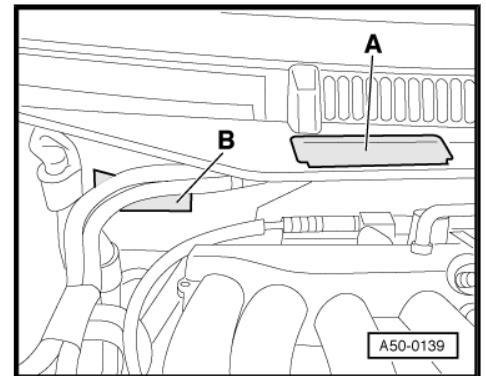
00 – Technical data, materials

1 Vehicle identification data

1.1 Type plate and vehicle identification number

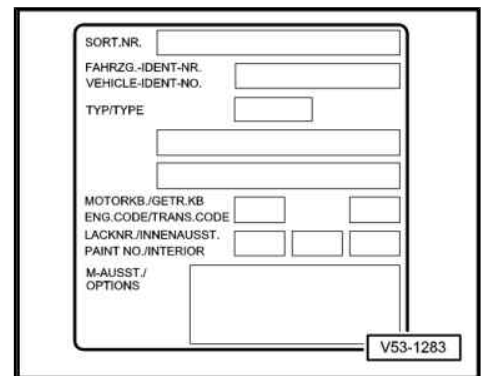
The vehicle identification number -A- (chassis number) is stamped on the rear bulkhead in the engine compartment. It can be seen through an opening in the plenum chamber cover.

The type plate -B- is attached to the plenum chamber behind the right suspension turret.



1.2 Vehicle data sticker

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



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2 Body dimensions

2.1 Floor group, front

a - $956 \pm 2\text{mm}$

Distance between front longitudinal members (front)

b - $949 \pm 2\text{mm}$

Diagonal distance between front longitudinal member and attachment points of front axle

c - $753 \pm 2\text{mm}$

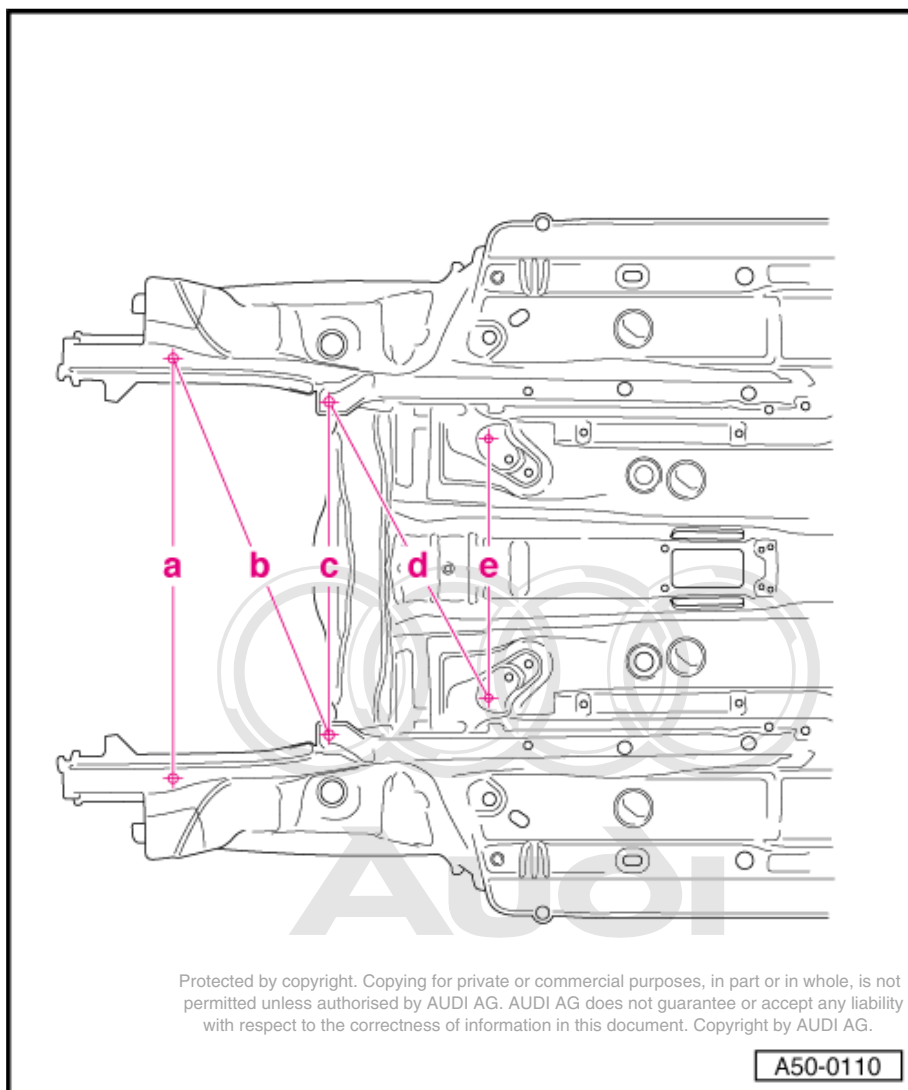
Distance between front attachment points of front axle

d - $777 \pm 2\text{mm}$

Diagonal distance between attachment points of front axle

e - $610 \pm 2\text{mm}$

Distance between rear attachment points of front axle



2.2 Floor group, centre

f - $1694 \pm 2\text{mm}$

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

g - $1447 \pm 2\text{mm}$

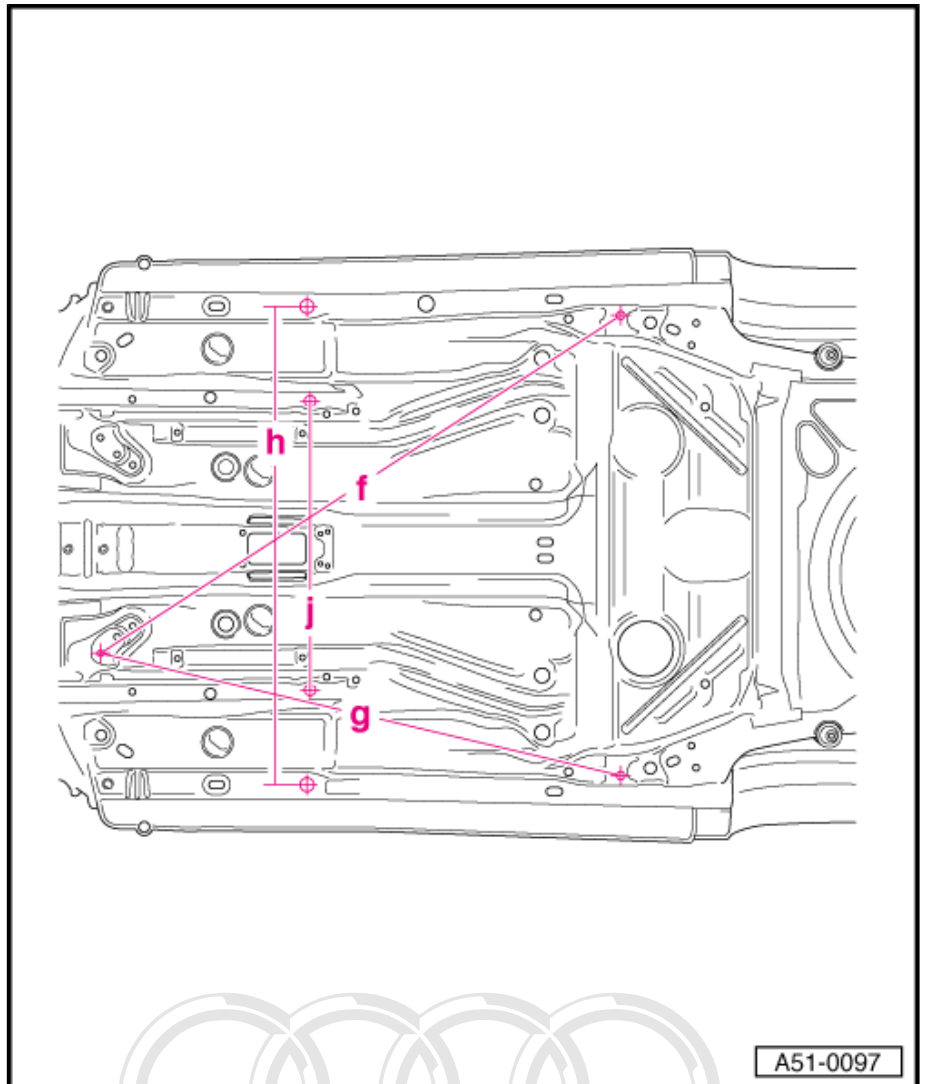
Diagonal distance between rear attachment points of front axle and rear axle mounting

h - $1360 \pm 2\text{mm}$

Distance between side members

j - $830 \pm 2\text{mm}$

Distance between front longitudinal members (rear)



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2.3 Floor group, rear

k - $1270 \pm 2\text{mm}$

Distance between axle mountings

l - $1753 \pm 2\text{mm}$

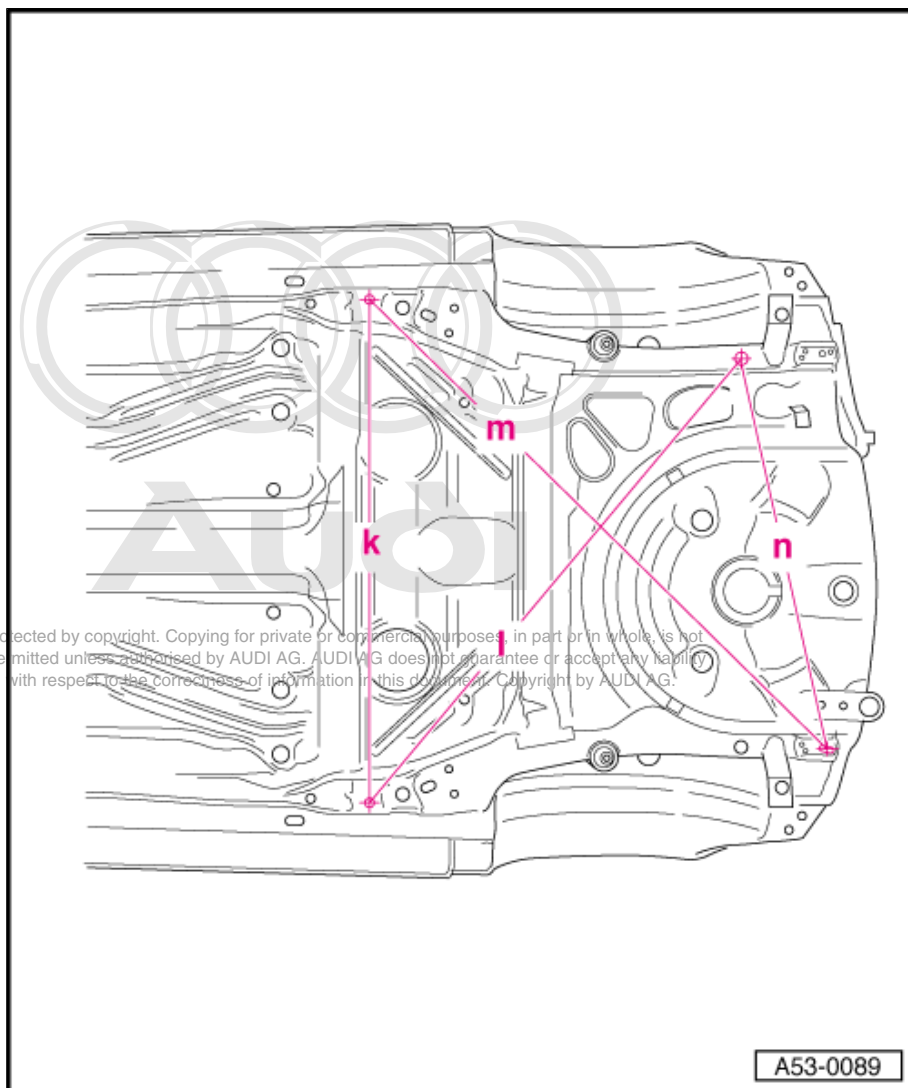
Diagonal distance between axle mounting and longitudinal member

m - $1853 \pm 2\text{mm}$

Diagonal distance between rear axle rear attachment point and rear longitudinal member

n - $962 \pm 2\text{mm}$

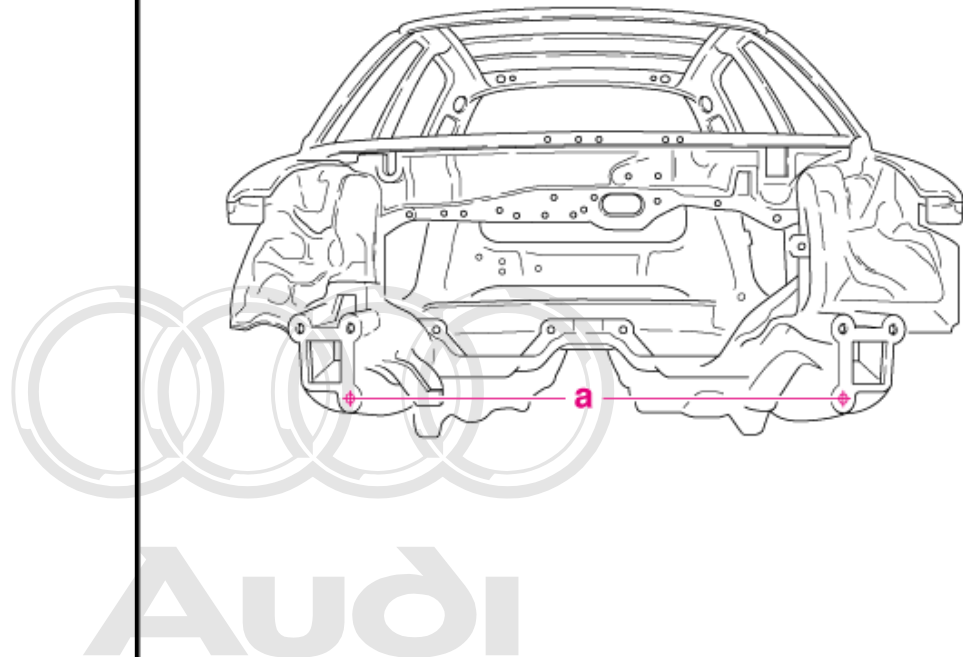
Distance between production mounting and longitudinal member



2.4 Body - front

a - $867 \pm 2\text{mm}$

Distance between front longitudinal members



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b - $1372 \pm 2\text{mm}$

Distance between front hinge attachment points

c - $1290 \pm 2\text{mm}$

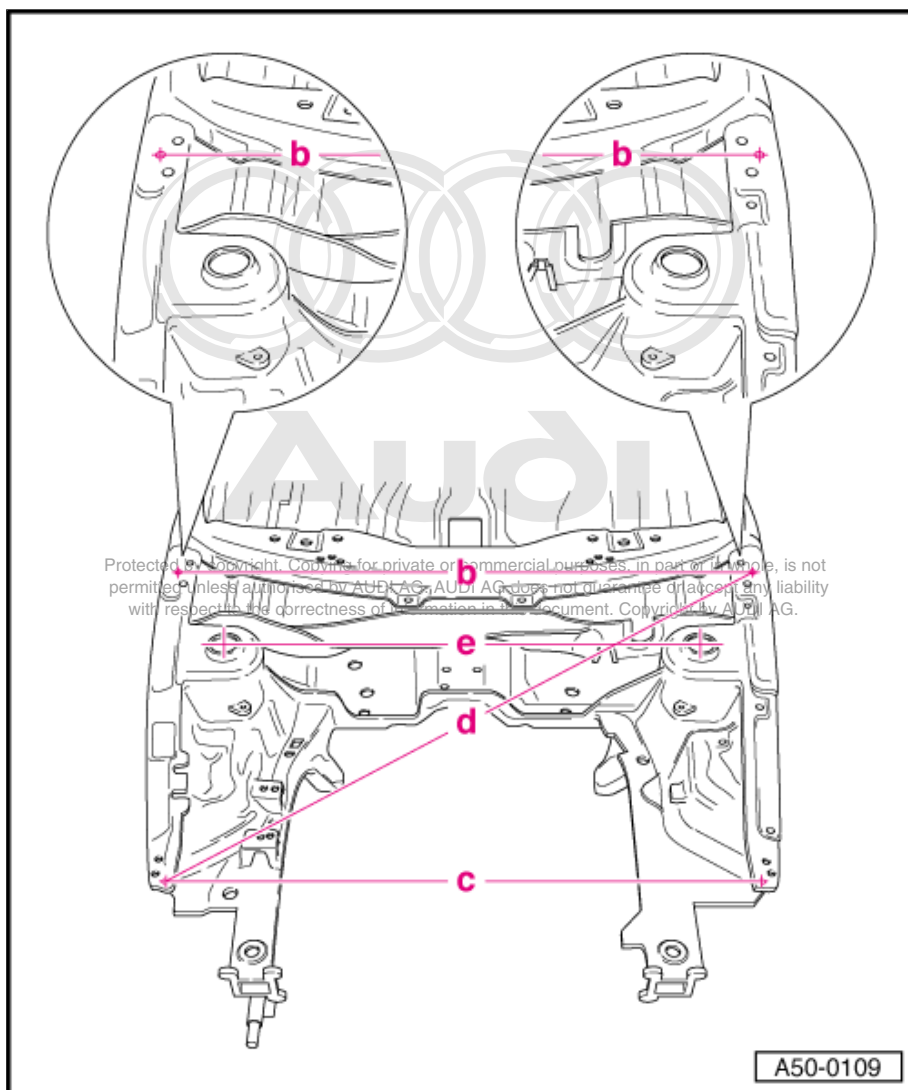
Distance between wing panel mountings

d - $1545 \pm 2\text{mm}$

Diagonal distance between hinge attachment points and wing panel mounting

e - $1130 \pm 2\text{mm}$

Distance between strut holders



2.5 Body - centre (3-door model)

f - $1066 \pm 2\text{mm}$

Distance between A-pillar and B-pillar

g - $965 \pm 2\text{mm}$

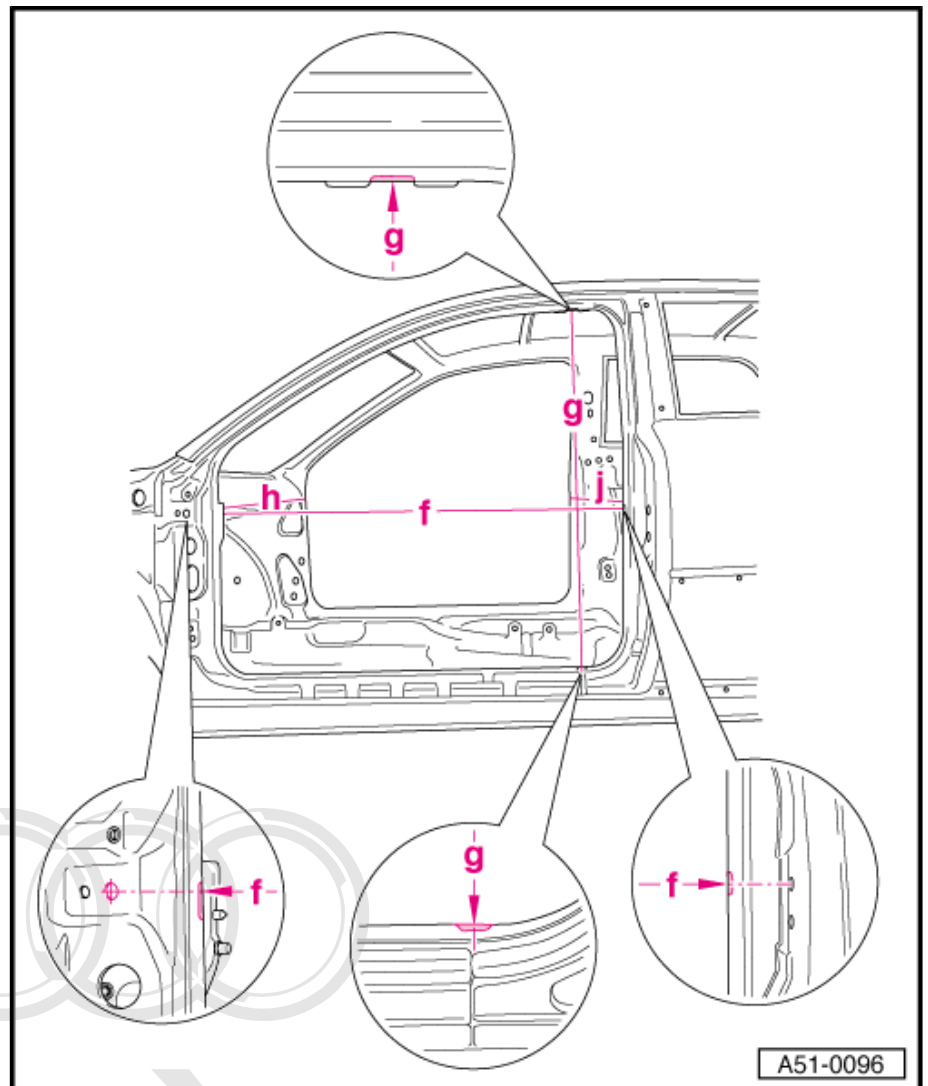
Height of door opening

h - $1386 \pm 2\text{mm}$

Distance between A-pillars

j - $1393 \pm 2\text{mm}$

Distance between B-pillars



A51-0096

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2.6 Body - centre (5-door model)

p - $922 \pm 2\text{mm}$

Distance between A-pillar and B-pillar

q - $1021 \pm 2\text{mm}$

Height of door opening, front

r - $1381 \pm 2\text{mm}$

Distance between A-pillars

s - $1412 \pm 2\text{mm}$

Distance between B-pillars

t - $1360 \pm 2\text{mm}$

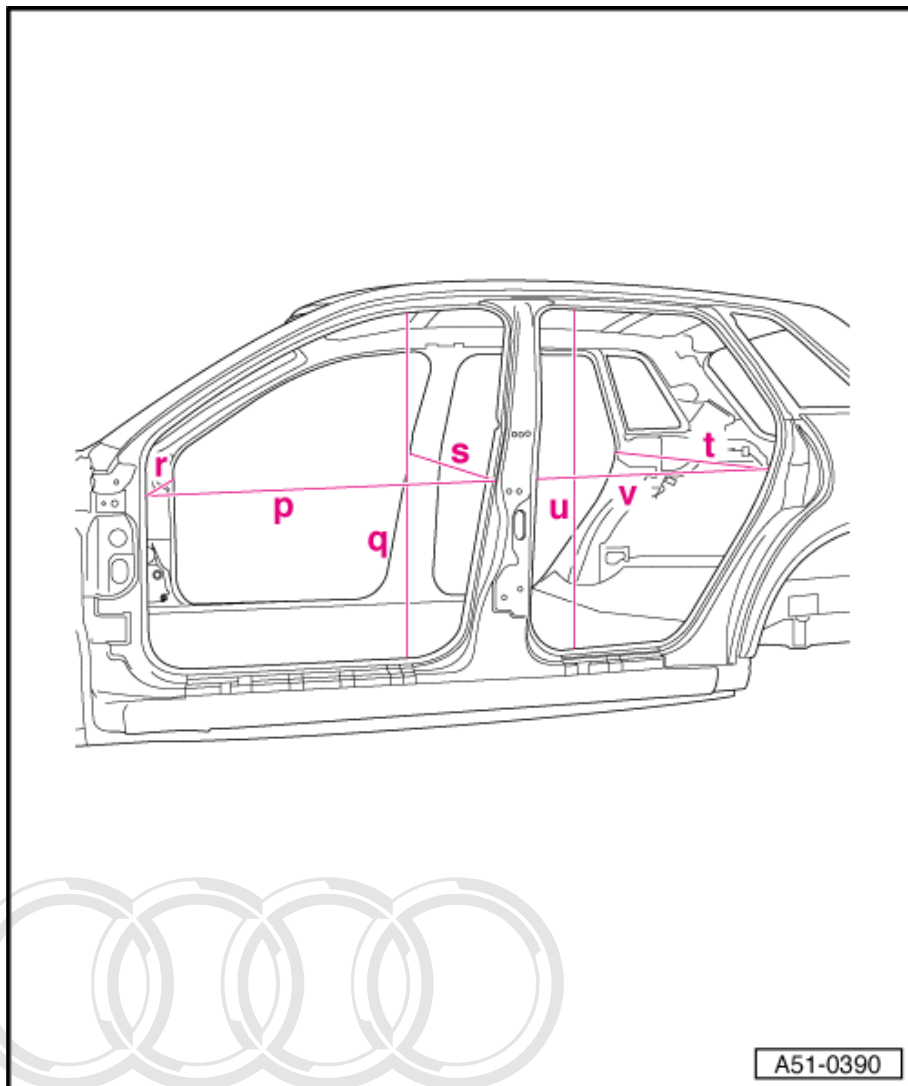
Distance between C-pillars

u - $1046 \pm 2\text{mm}$

Height of door opening, rear

v - $716 \pm 2\text{mm}$

Distance between B-pillar and C-pillar



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2.7 Body - rear

k - $1021 \pm 2\text{mm}$

Distance between side panels
(top)

l - $840 \pm 2\text{mm}$

Distance between rear cross
panel flange and roof flange

m - $1366 \pm 2\text{mm}$

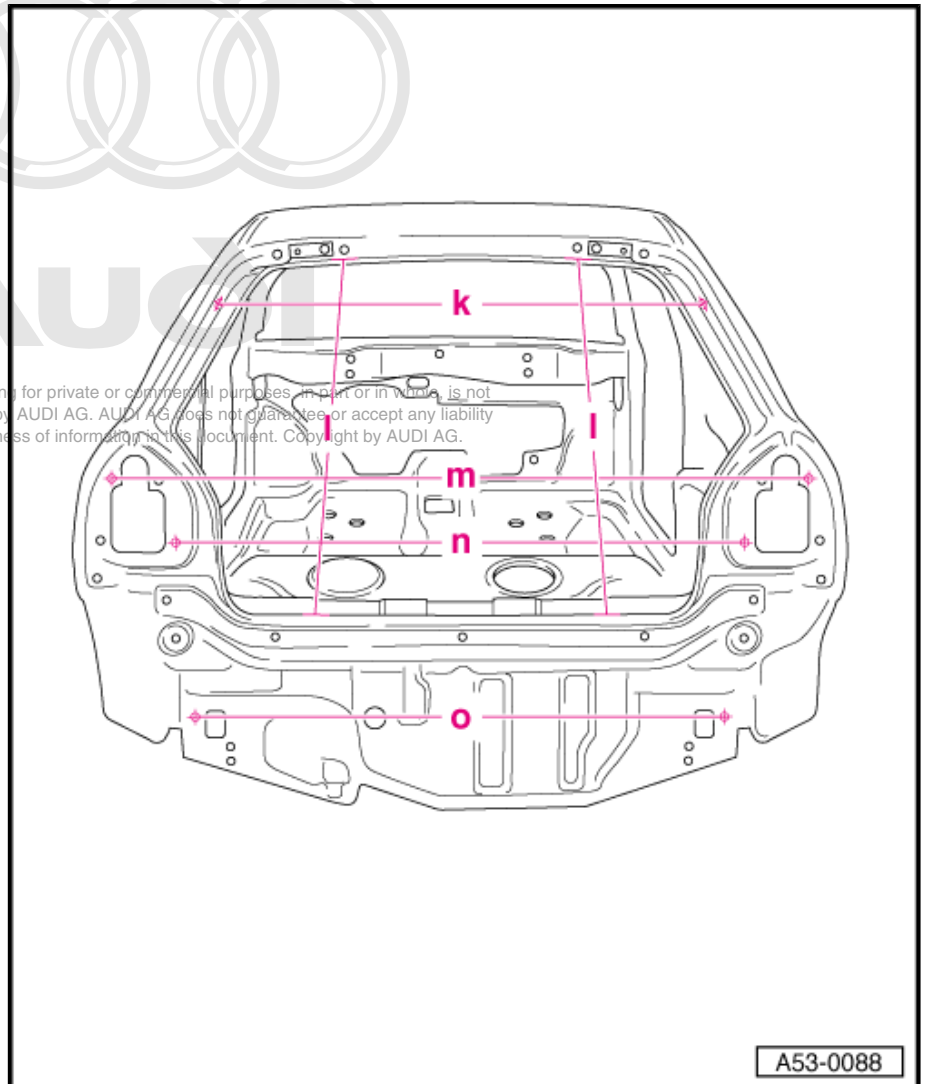
Distance between tail lights
(top)

n - $1124 \pm 2\text{mm}$

Distance between tail lights
(bottom)

o - $1044 \pm 2\text{mm}$

Distance between rear longitudinal
members



A53-0088

3 Body panel gaps/shut lines

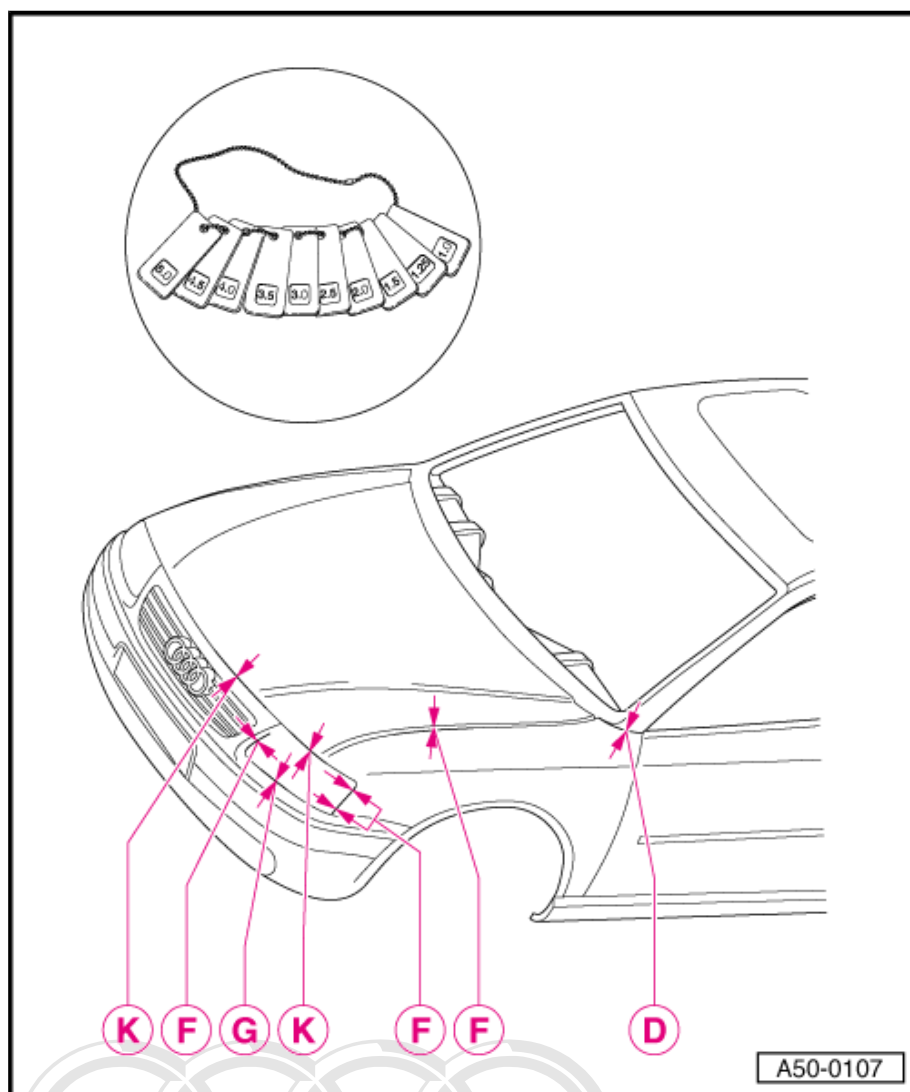
3.1 Body - front

D - 2.0 mm

F - 3.0 mm

G - 3.5 mm

K - 5.0 mm



Use special tool 3371 for checking or adjusting.

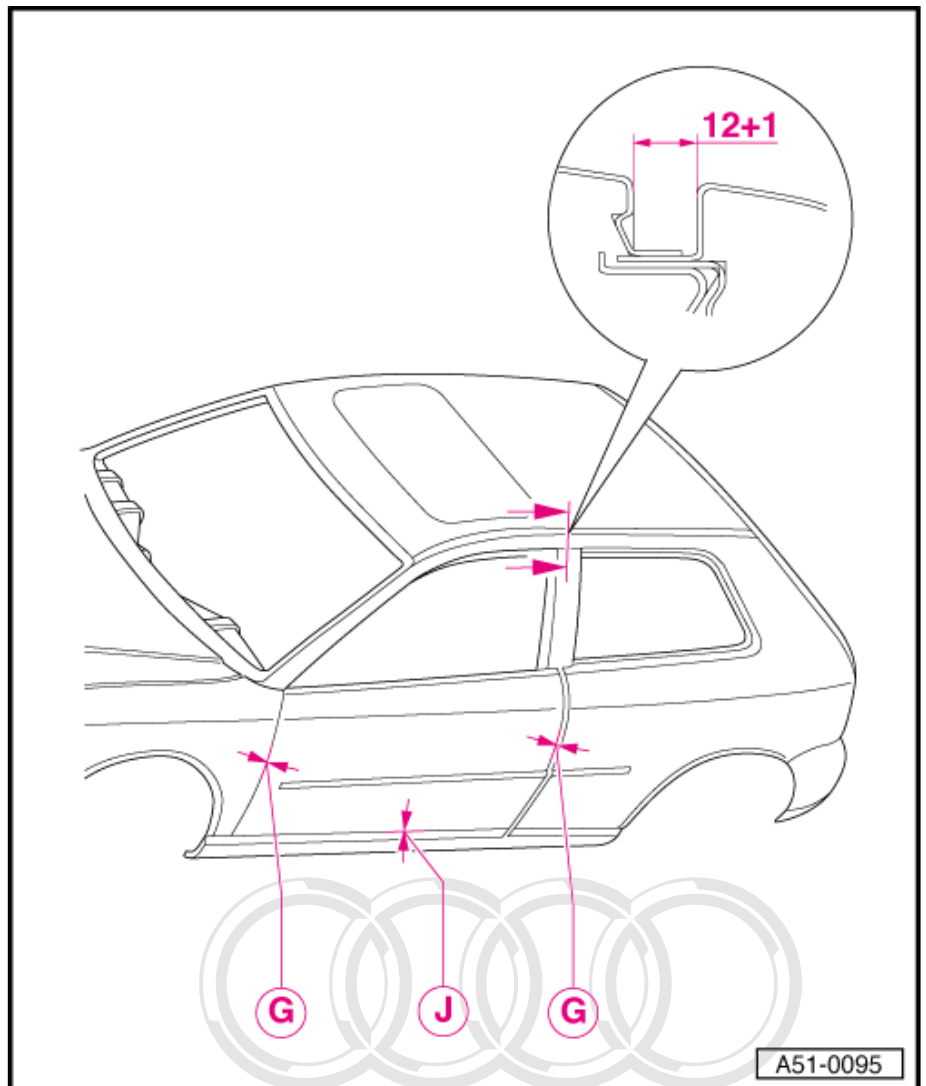
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3.2 Body - centre

J - 4.5 mm

G - 3.5 mm



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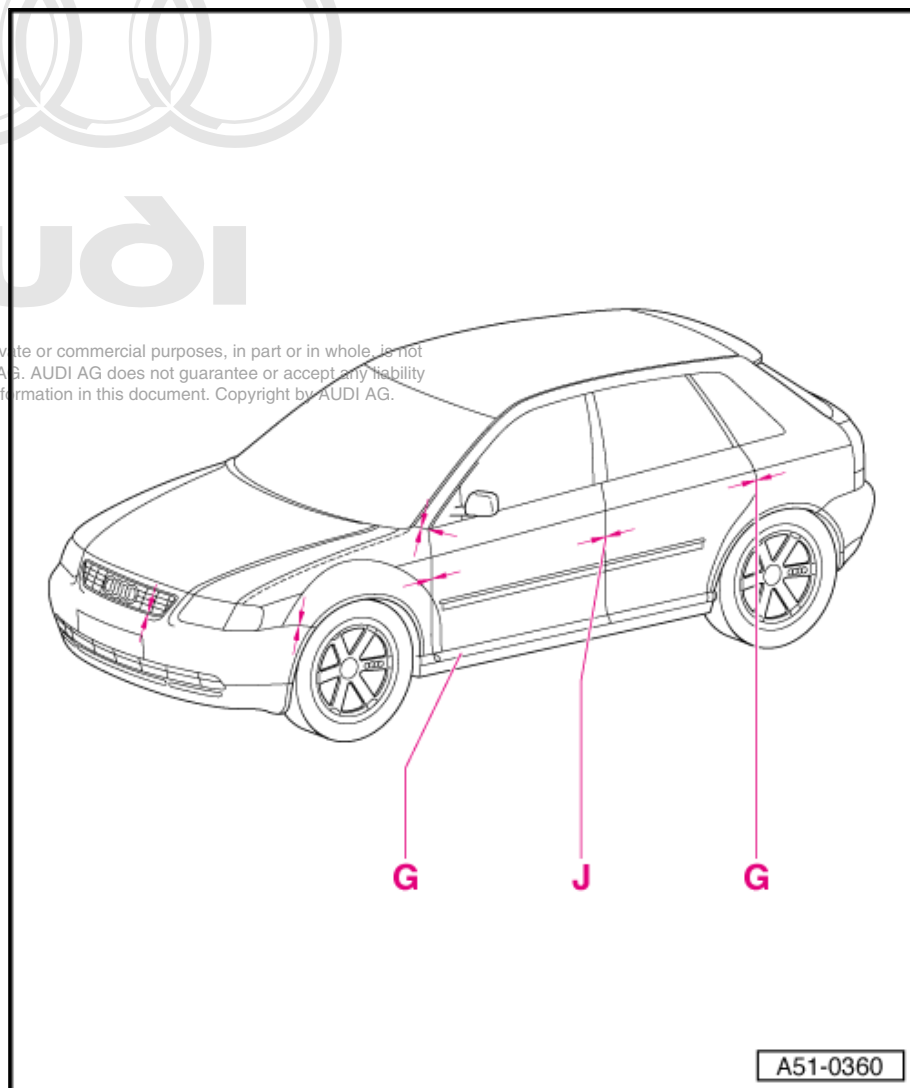
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3.3 Body - centre (5-door model)

J - 4.5 mm

G - 3.5 mm

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3.4 Body - rear

D - 2.0 mm

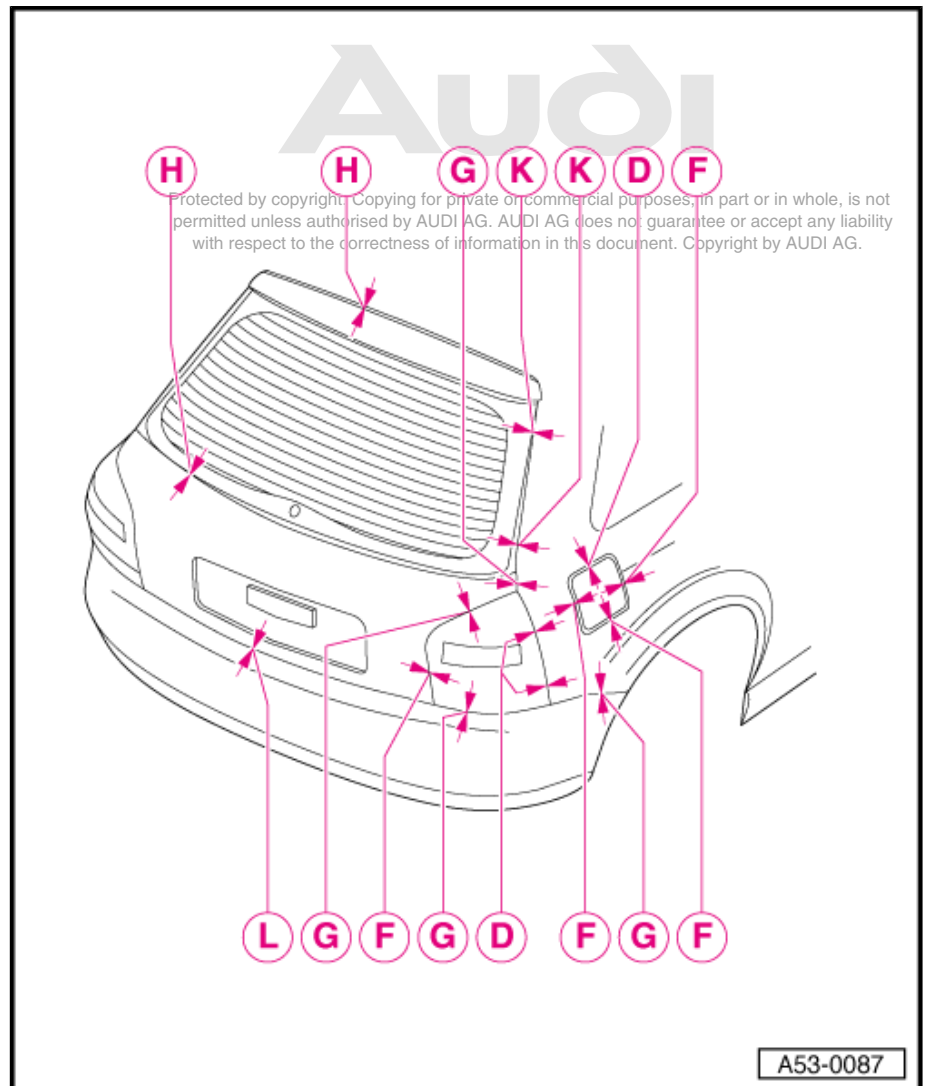
F - 3.0 mm

G - 3.5 mm

H - 4.0 mm

K - 5.0 mm

L - 6.0 mm



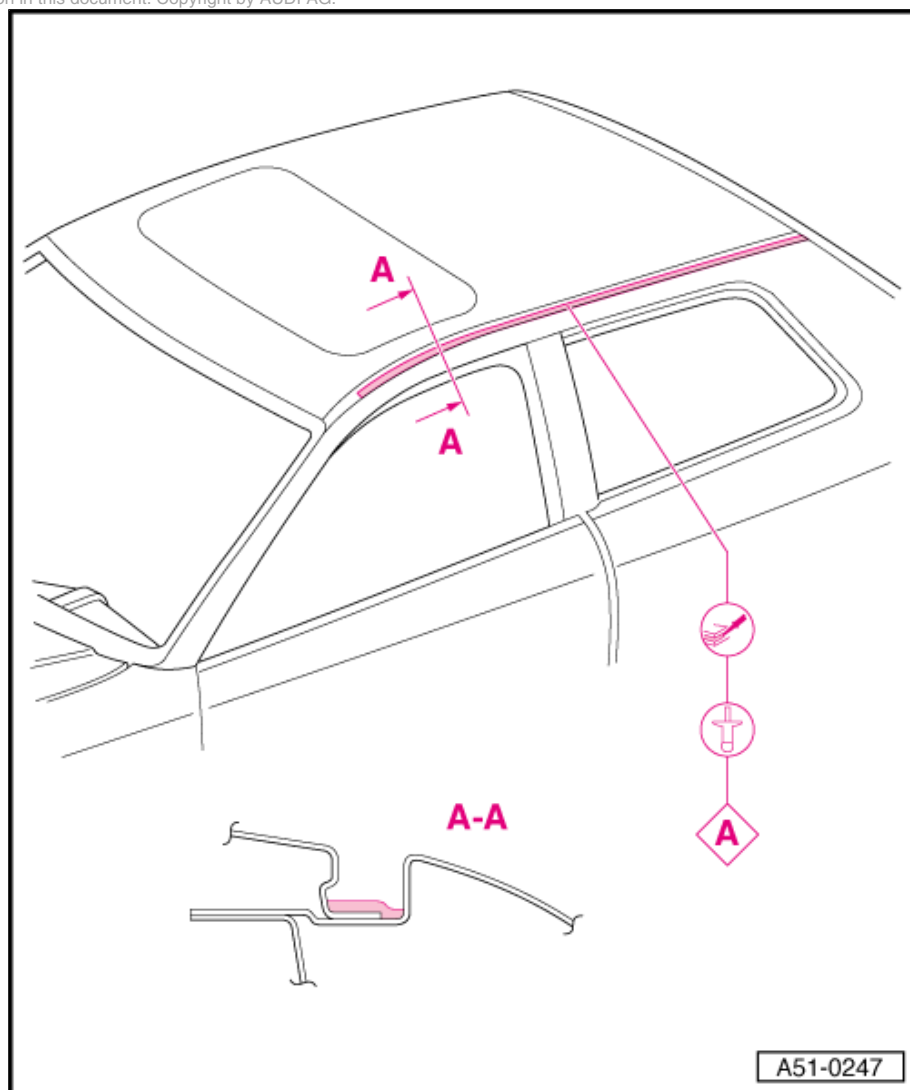
4 Laser welding (3 + 5-door model)

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

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

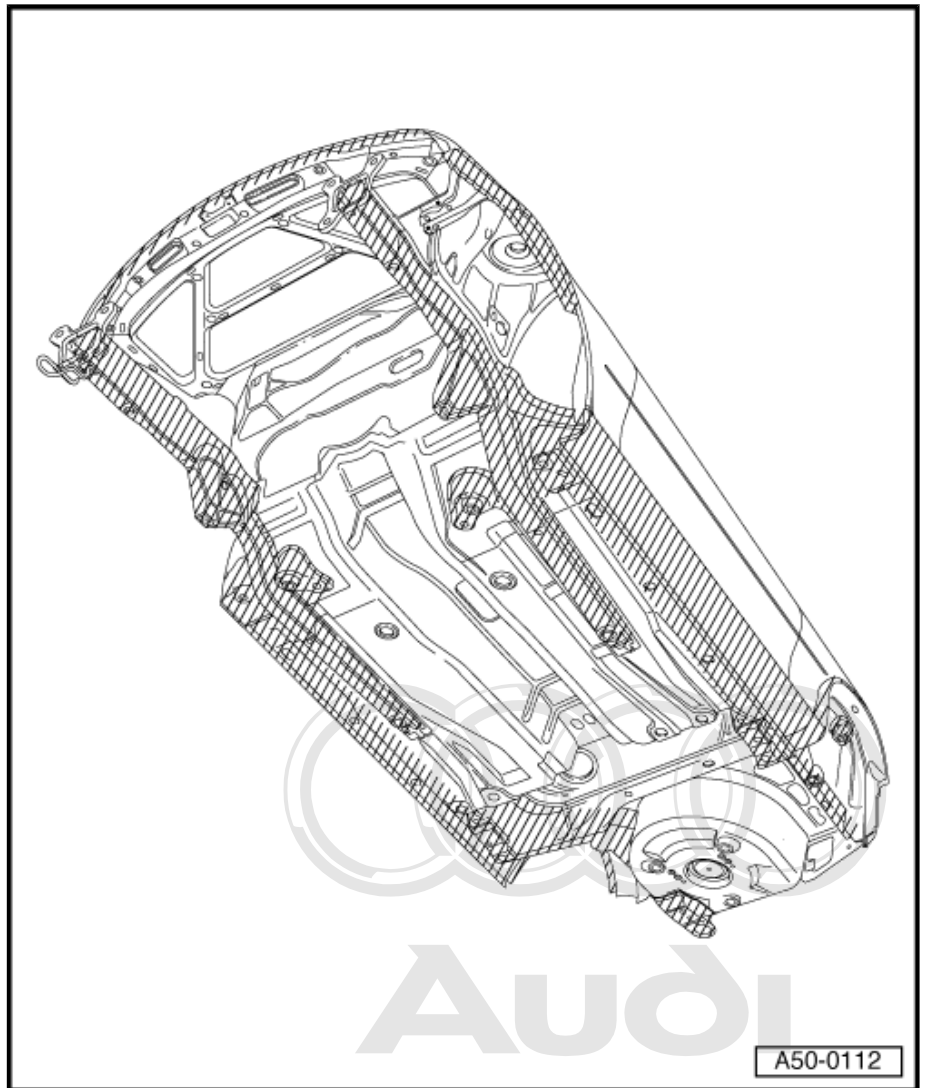
When performing repairs, laser weld seams are replaced by SG welds or pop rivets.

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- A = Roof laser-welded to outer roof frame. Roof is repaired by riveting and bonding or using an SG plug weld seam instead of laser welding.

5 Corrosion protection

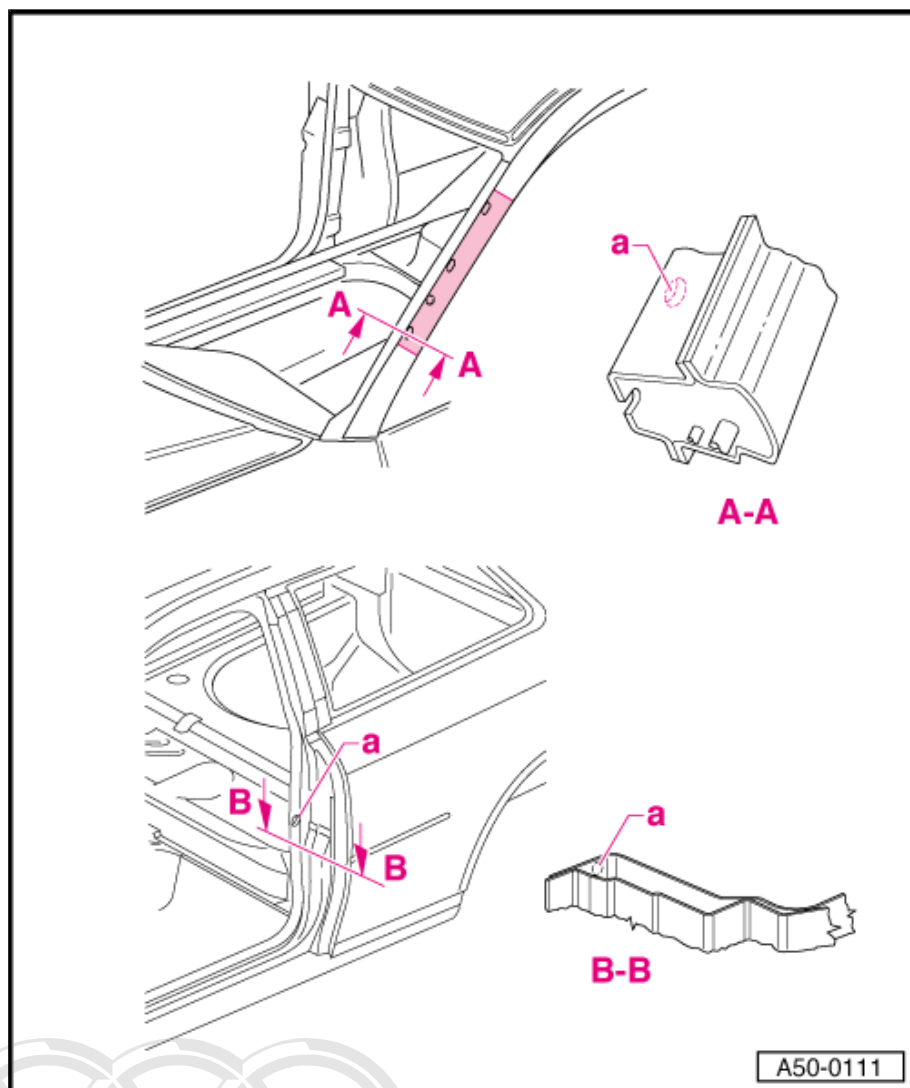


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The body is manufactured from panels galvanised on both sides.
Certain areas are cavity-sealed and have to be re-sealed after
completing repair work.

6 Foam-filled cavities

a - Foam-filling hole



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

A-pillar

B-pillar

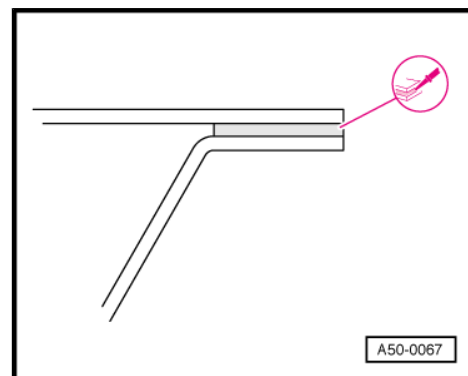
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7 Bonded joints

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

7.1 Bonded joints

In the case of bonded joints, the panel sections are only joined by the adhesive.

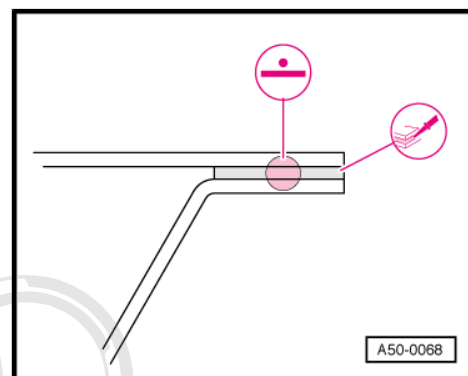


7.2 Spot-welded bonded joints

In spot welded bonded joints an electrically conductive adhesive is used between the panels, which allows good root penetration for spot welding.

The welding current must not be increased for spot-weld bonding operations. The pre-press period must be extended to about 30 - 50 cycles because of the displacement of the adhesive. Always use a fume extractor.

Spot-weld bonding is not carried out in the service sector.



7.3 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 damage or destroy 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 with pop rivets, SG seams must be used for repair. In this case the entire area of the joint must be re-welded, as the heat produced by welding destroys the adhesive in the bonded joint. The SG seams should be welded working from the thin to the thick panel. Always use a fume extractor.

7.4 Repair methods for replacing body parts

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

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

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

**Note:**

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

Ensure good root penetration at all joints.

Seal off repaired flanges and apply cavity sealing.



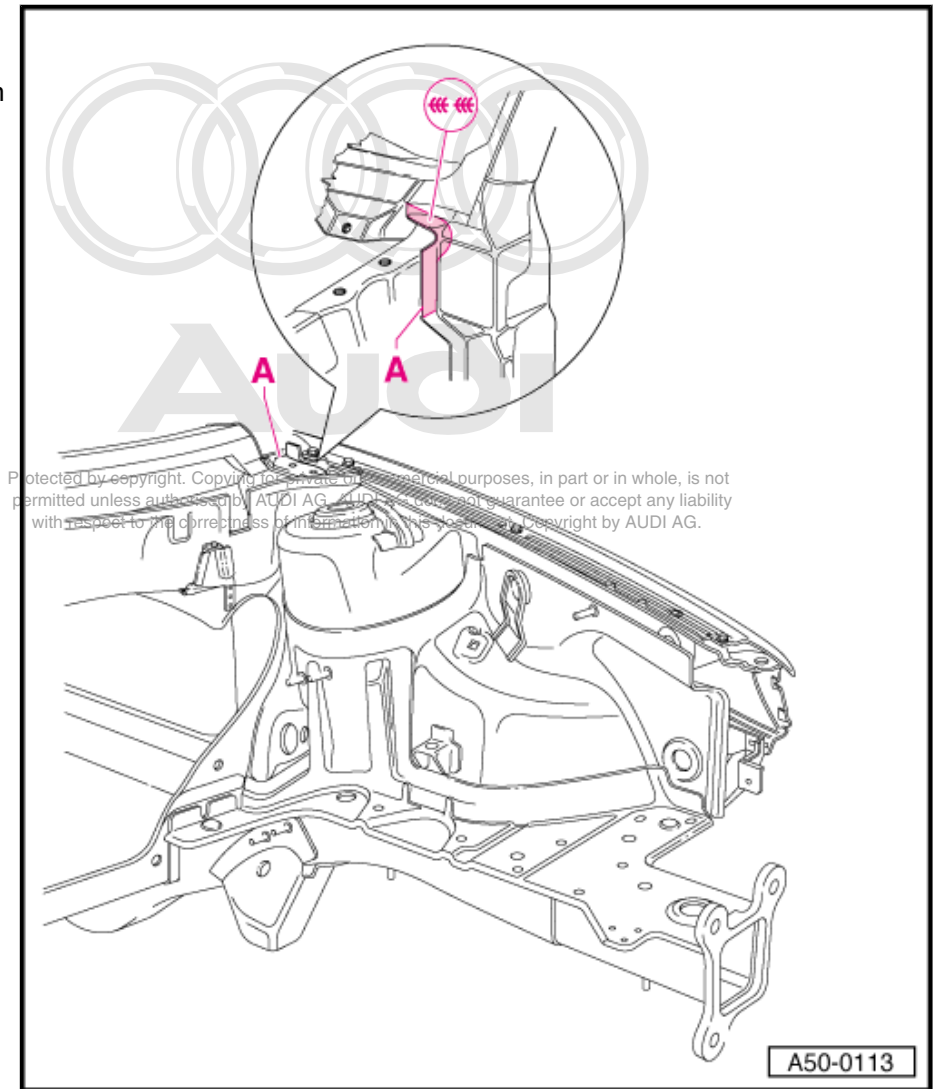
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8 Repair methods for bonded joints

8.1 Body - front

A - Bottom of inner A-pillar to cross member reinforcement

Additional 4 x 15 mm SG seam at flange.



8.2 Body - centre (3-door model)

A - Front inner roof frame to inner A-pillar

Additional 2 x 10 mm SG seam at flange

C - Outer side panel to roof reinforcement

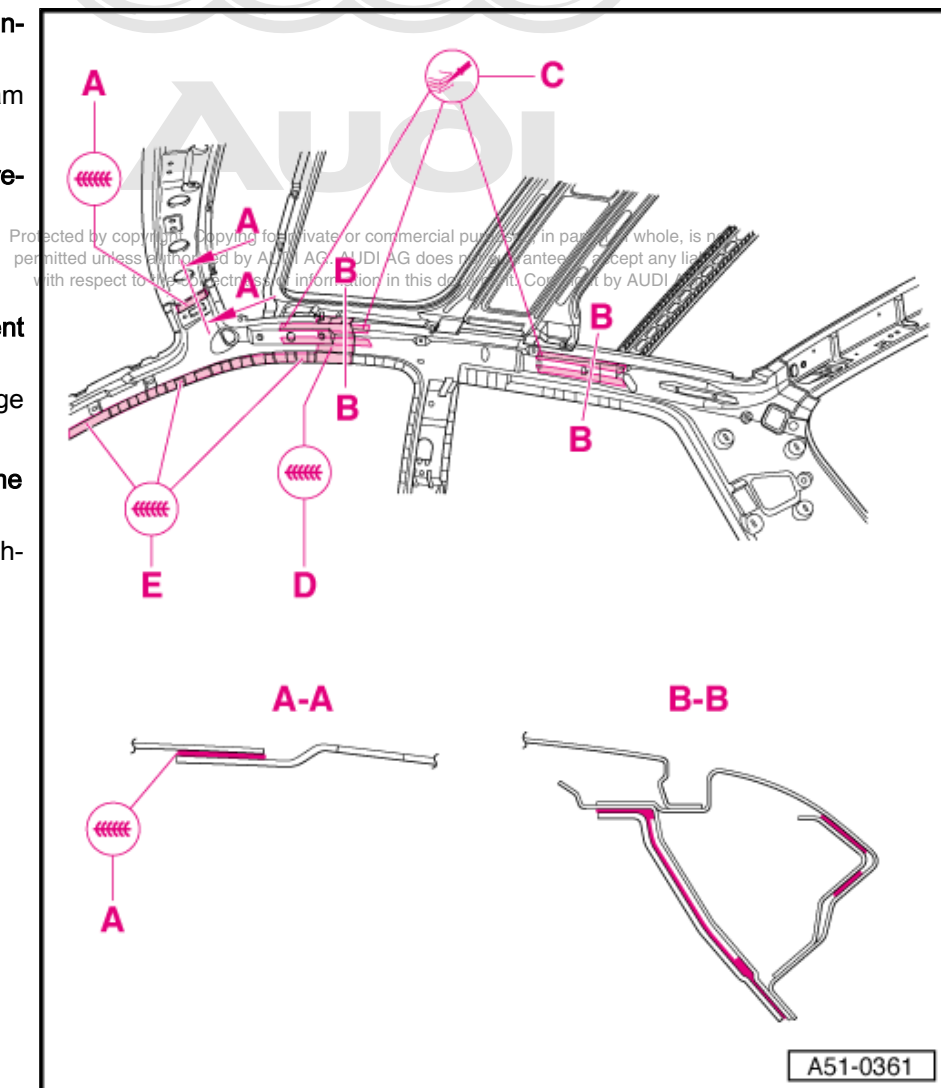
Apply body adhesive as to original joint.

D - Inner A-pillar reinforcement to inner A-pillar

2 x 10 mm SG seam on flange instead of bonded joint.

E - Outside of front side frame to top of inner A-pillar

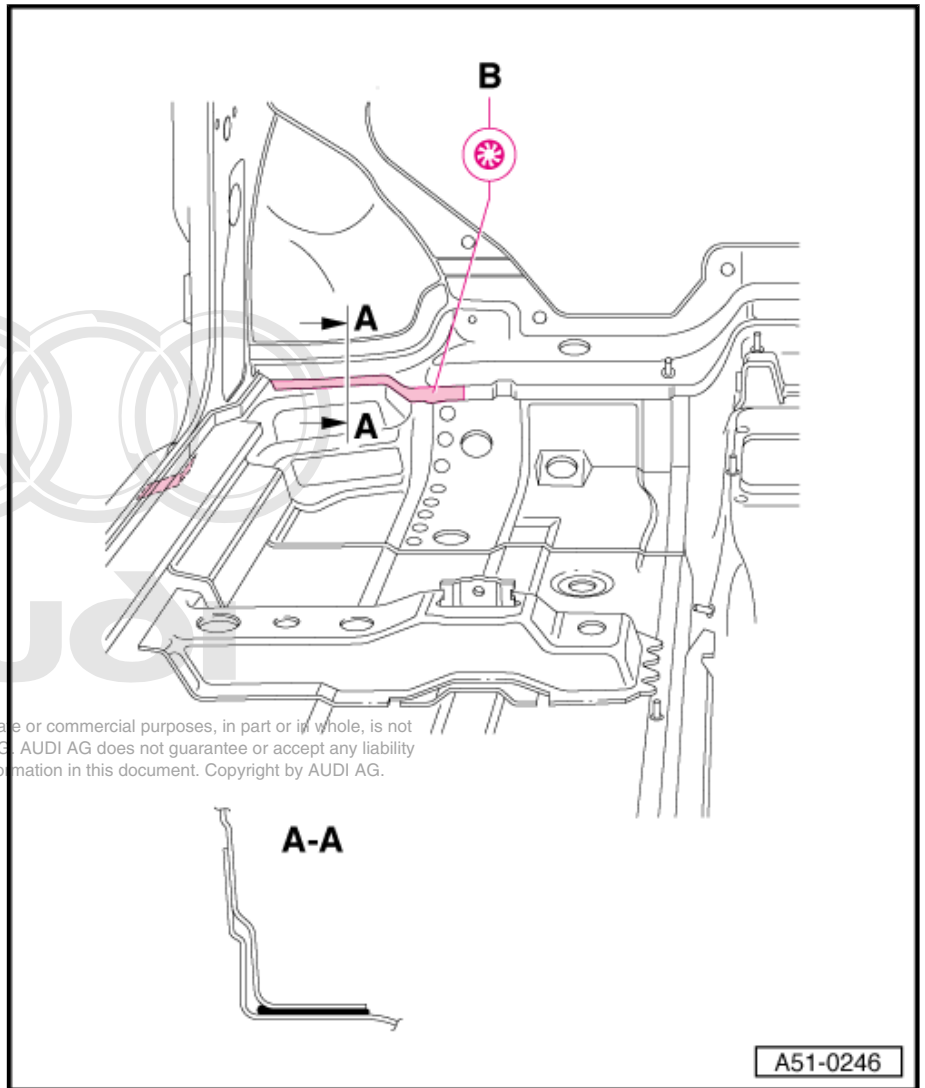
SG continuous seam in notches instead of bonded joint.



B - Front floor to frame base plate

4 x 20 mm SG continuous seam instead of bonded joint.

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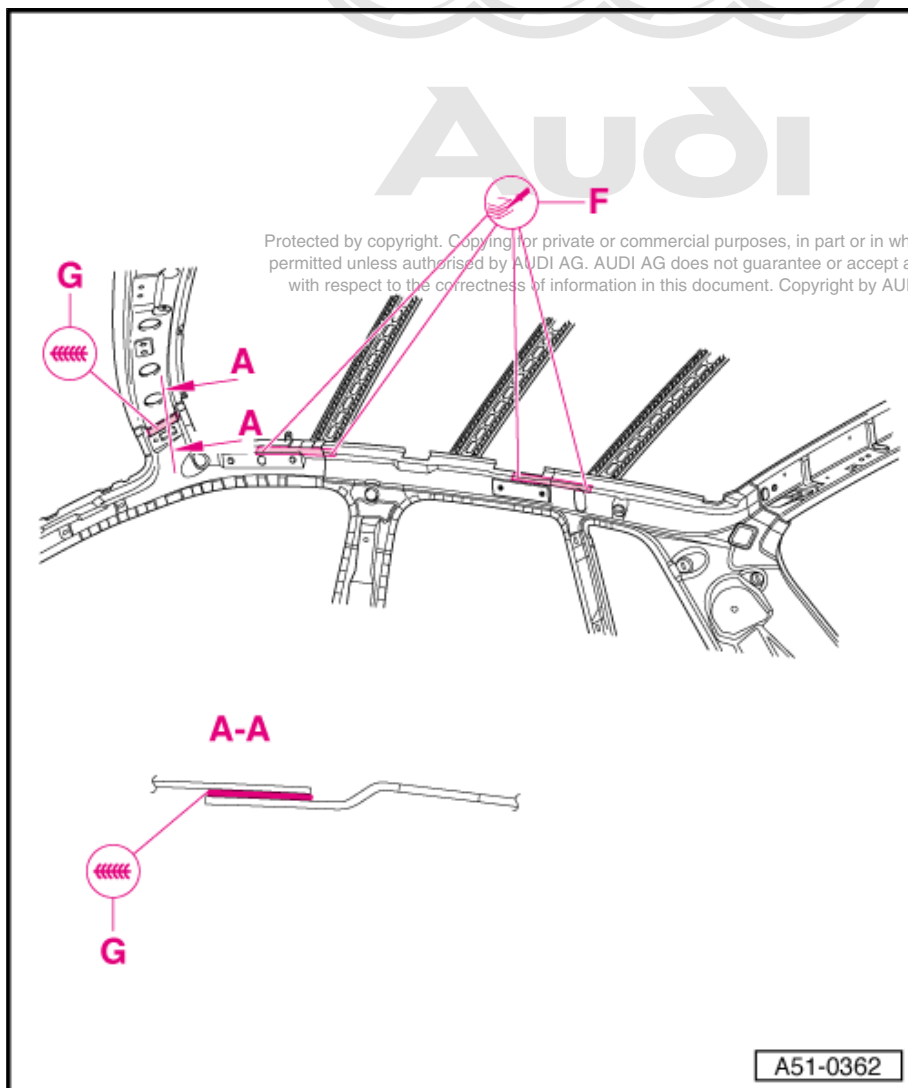
8.3 Body - centre (5-door model)

F - Outer side panel to roof reinforcement

Apply body adhesive as to original joint.

G - Front inner roof frame to inner A-pillar

Additional 2 x 10 mm SG seam at flange.



H - Front floor to frame base plate

4 x 20 mm SG continuous seam instead of bonded joint.

J - Outer side panel to inner sill panel reinforcement

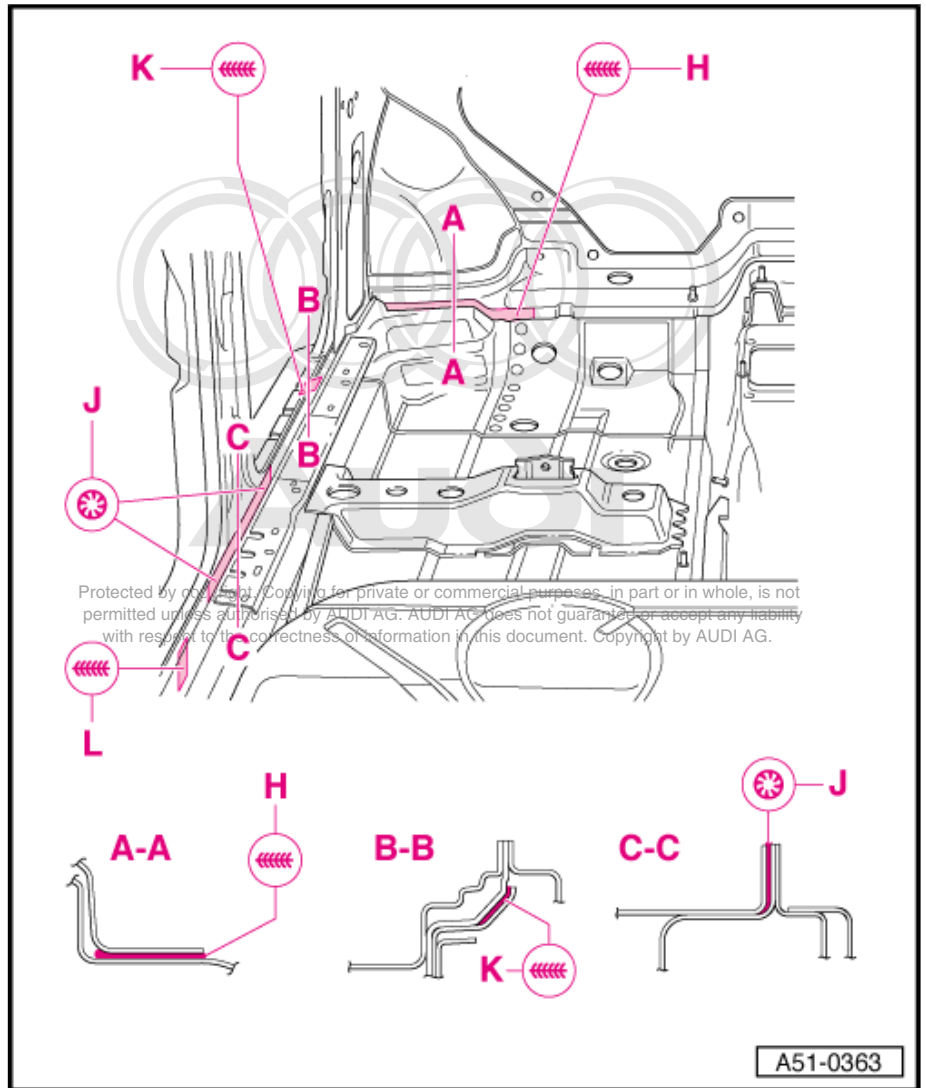
Make SG plug weld seams every 30 mm in place of bonded joint.

K - Sill panel reinforcement to A-pillar reinforcement

2 x 10 mm SG continuous seam instead of bonded joint.

L - Sill panel fillet plate to sill panel reinforcement

2 x 10 mm SG continuous seam instead of bonded joint.



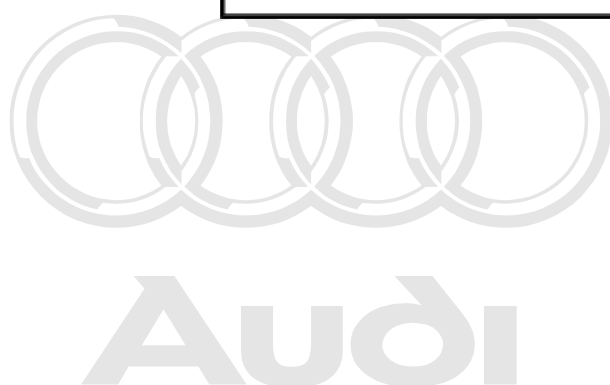
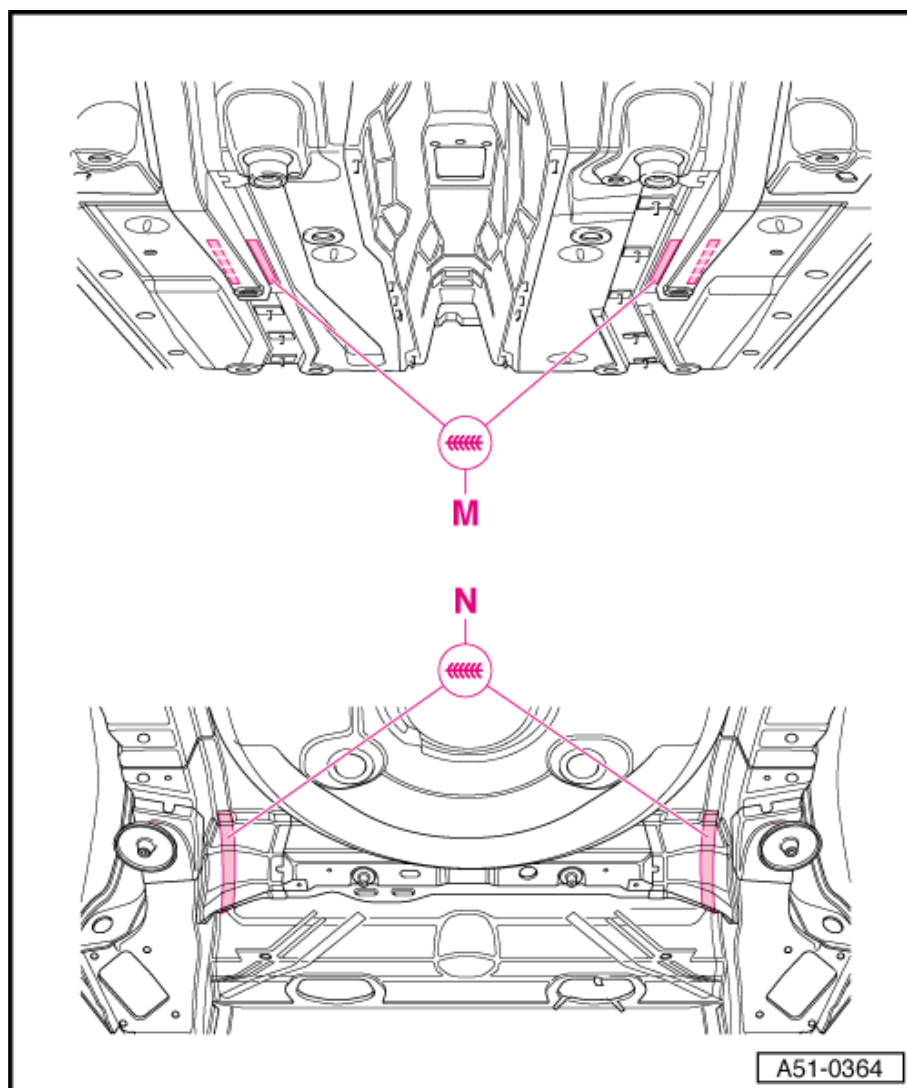
8.4 Body - centre

M - Longitudinal member to floor

5 x 30 mm SG continuous seam instead of bonded joint.

N - Cross member to rear floor

5 x 20 mm SG continuous seam instead of bonded joint.



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8.5 Body - rear

A - Same as original joint: Apply adhesive and bead over edge of wheel housing. Repair as follows if bond is damaged:

Brush area, apply paint finish, seal and apply cavity sealing. If bond is damaged over a length of more than 100 mm, make a 10 mm SG seam every 50 mm. Rework wheel housing liner if necessary.

B - Rear wheel housing liner to rear wheel housing

Additional 4 x 30 mm SG seam.

C - Rear wheel housing liner to rear floor

Twice the number of RP spot weld seams.

D - Rear longitudinal member to rear wheel housing

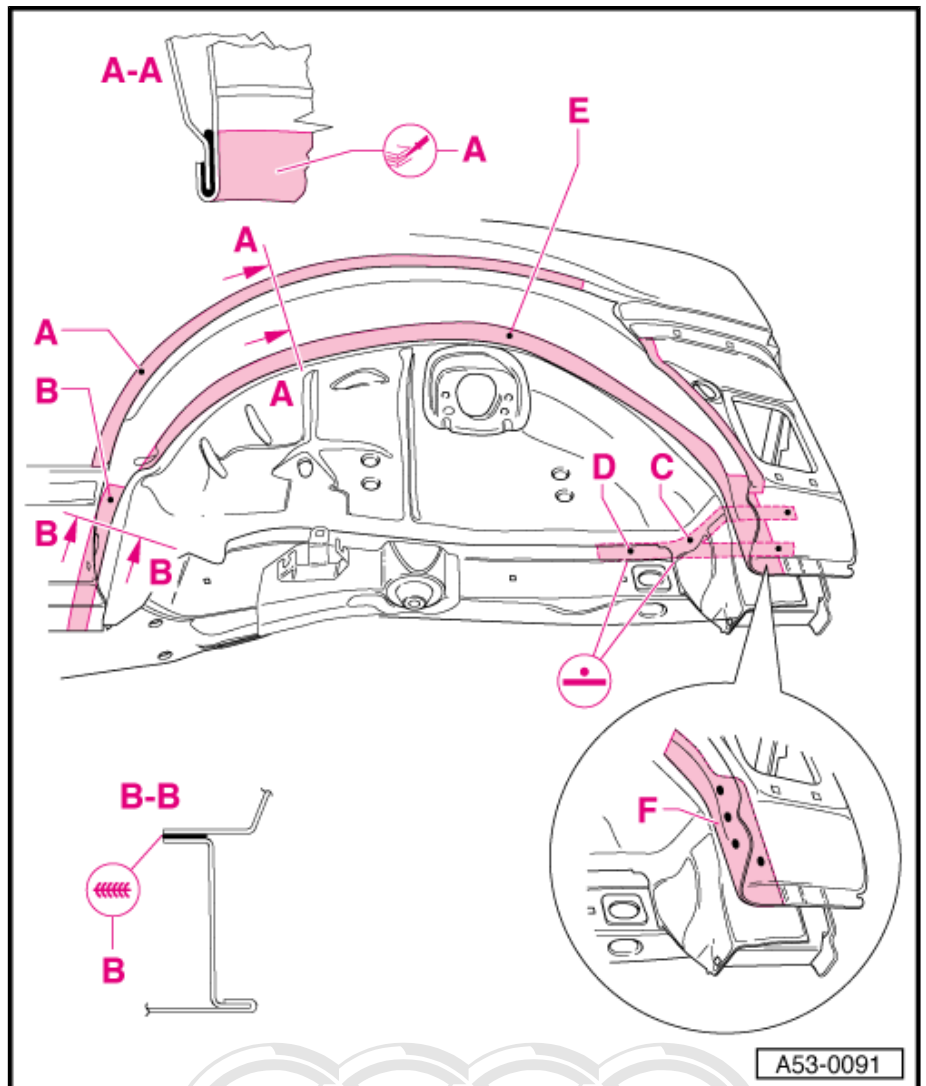
Twice the number of RP spot weld seams.

E - Rear wheel housing liner to rear wheel housing

RP spot weld seam with 25 mm spacing.

F - Rear wheel housing liner to rear wheel housing

2 additional spot welds.



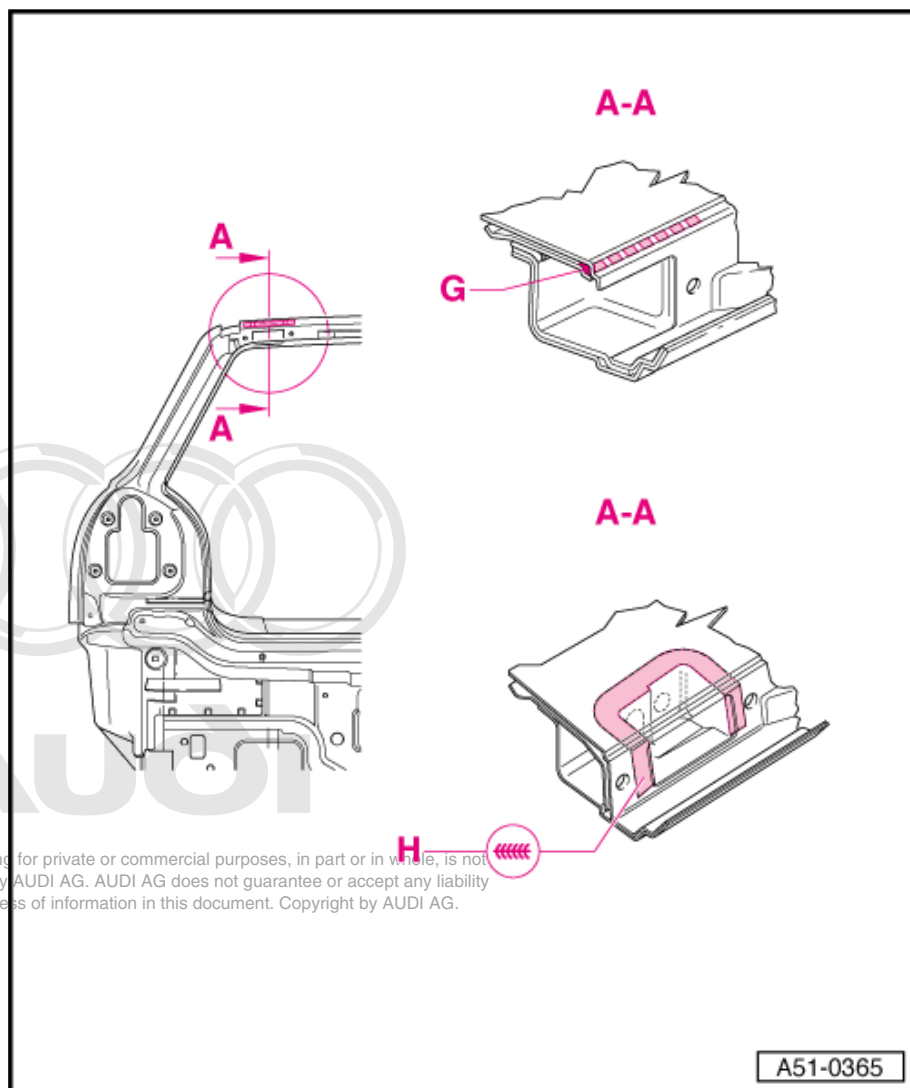
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G - Roof to rear roof frame:
Same as original joint

Insert butyl cord and fit roof.

H - Inner to outer roof frame:
Same as original joint.

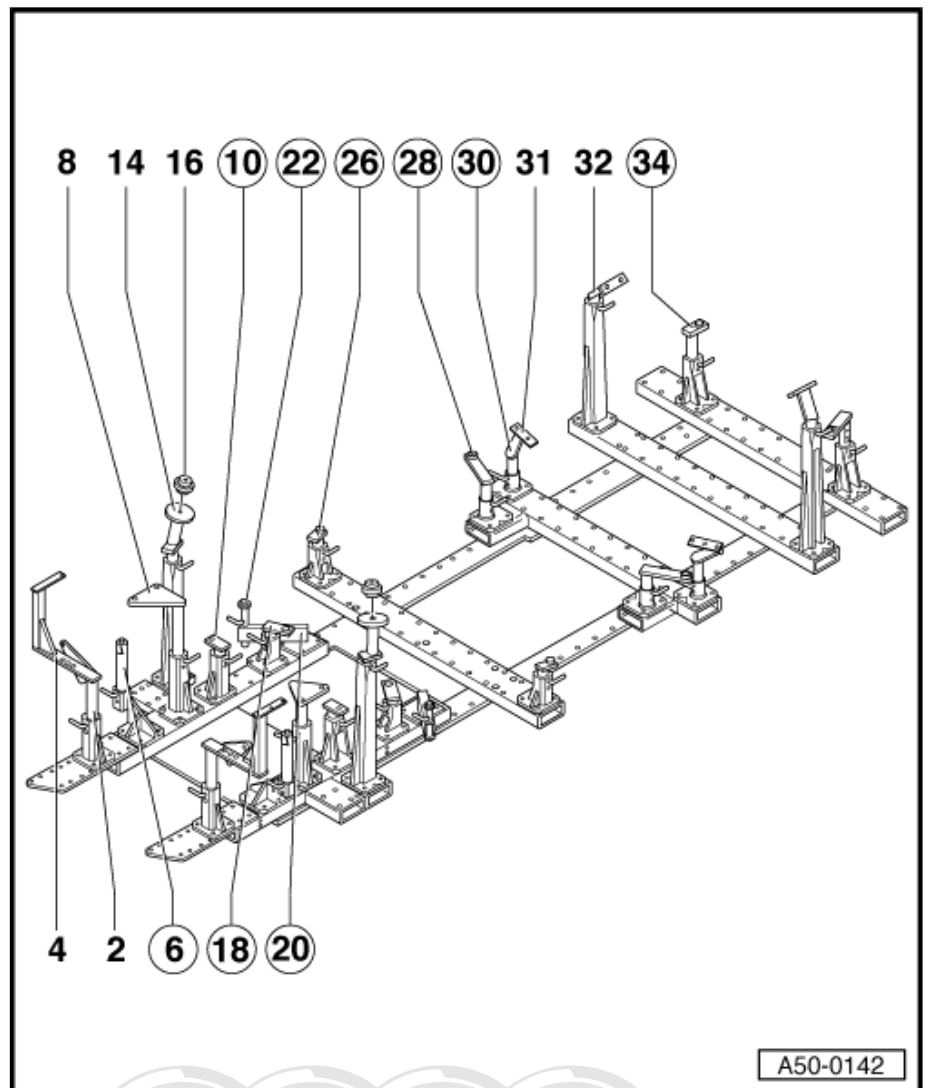
Apply body adhesive and fit roof frame.



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A51-0365

9 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 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.

Supplement for portal gauge -VAS 5007/3A-

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2 - MZ 200 and TV 400

4 - Alignment bracket mounting -2-

6 - MZ 142

8 - MZ 260

10 - MZ 200

13 - Left and right centring piece identical

14 - MZ 601

16 - Left and right centring piece identical

18 - MZ 140

20 - Bracket without MZ and alignment bracket mounting -22-

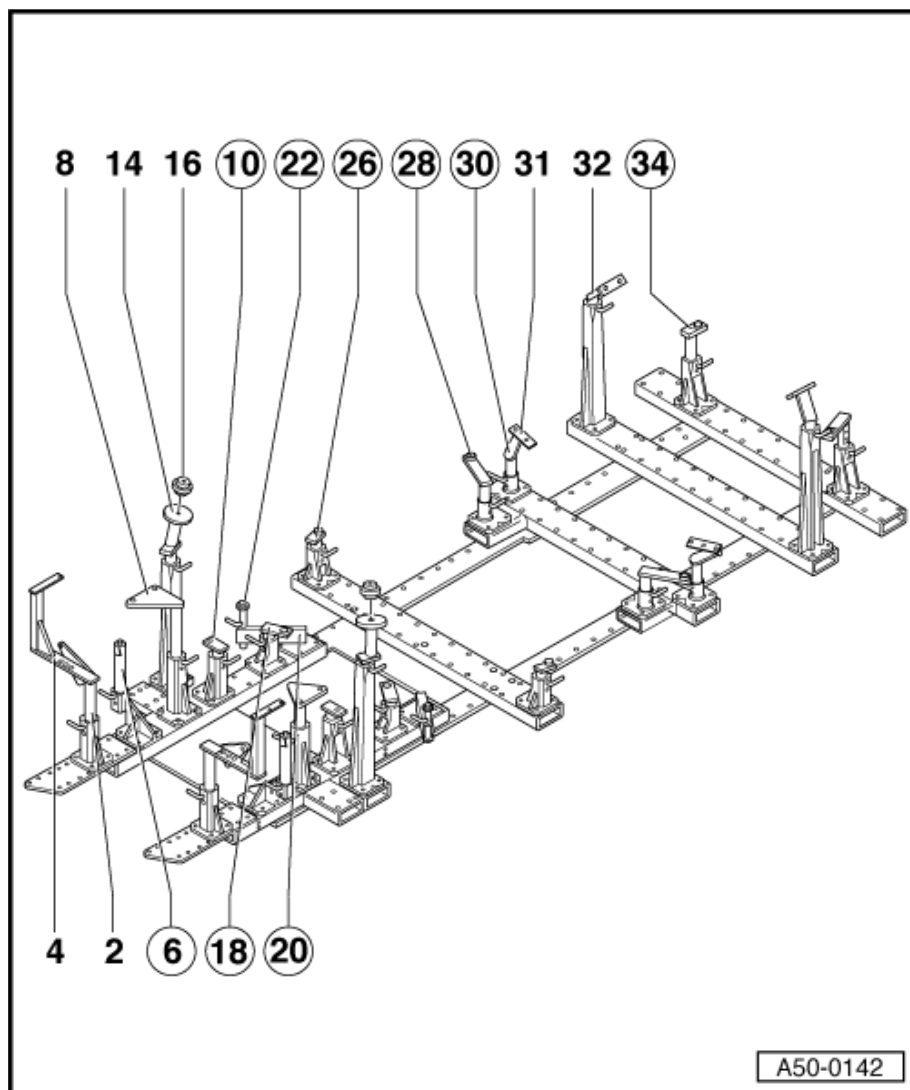
26 - MZ 140

28 - MZ 080

30 - MZ 080 and mounting plate -31-

32 - MZ 602

34 - MZ 200



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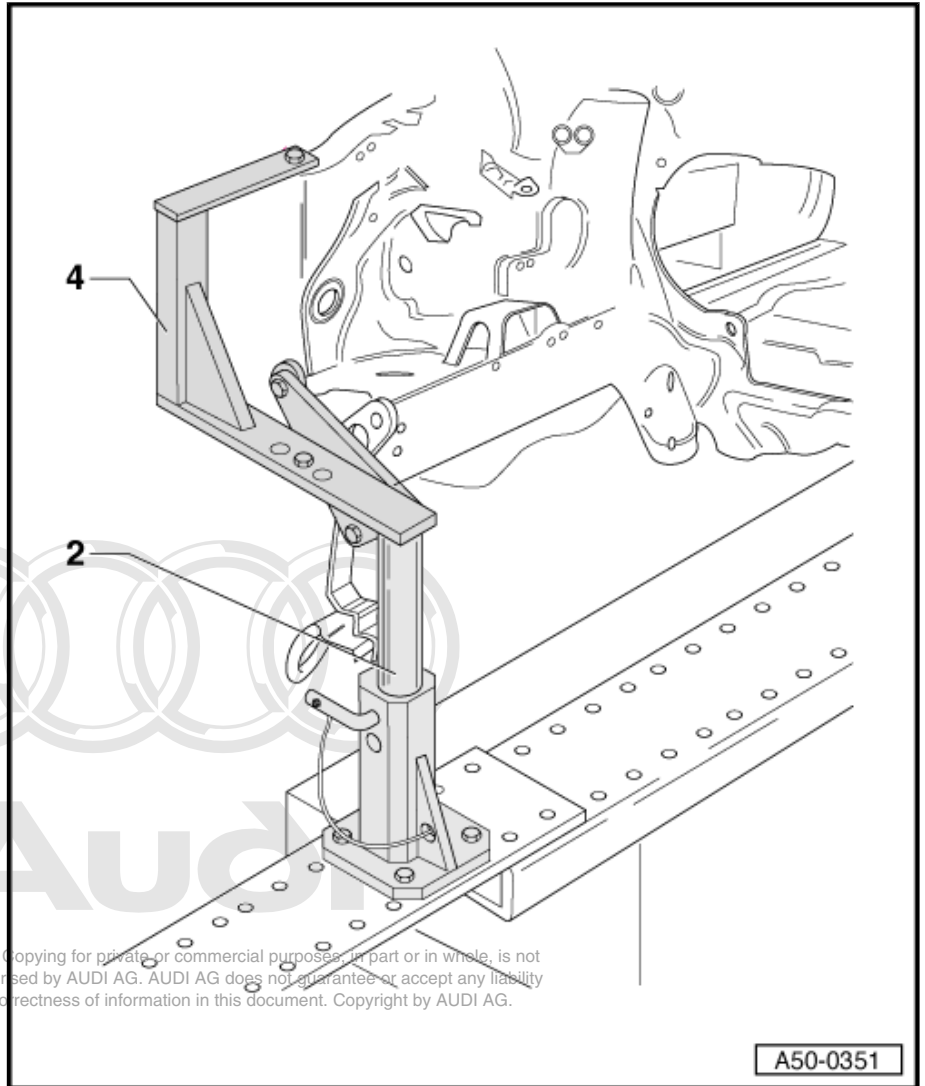
2 - Front longitudinal member

The mounting plate for the lock carrier is welded on at the factory after installation of the wing panel. This means that the mounting position can vary by several mm in longitudinal direction.

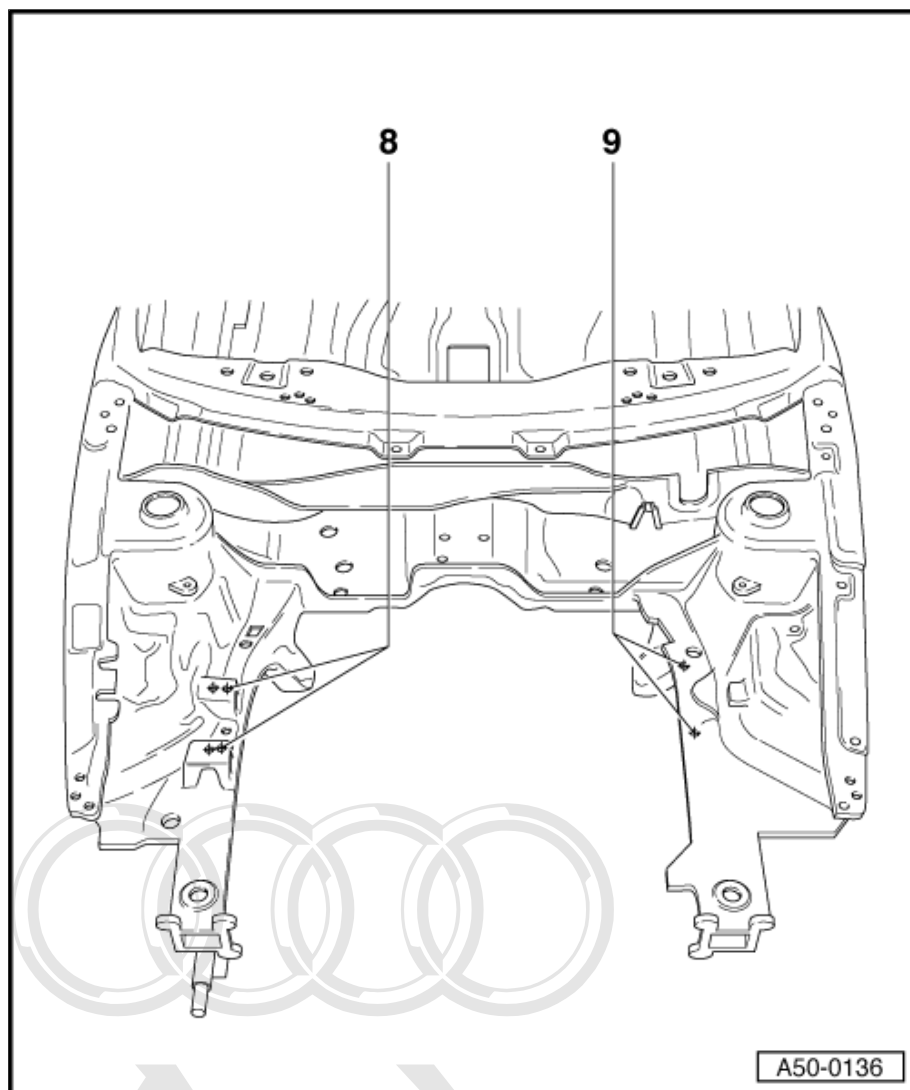
If necessary, check dimensions without bolting on the MZ element.

If only the longitudinal member or the connecting piece is being renewed, bolt alignment brackets 2 and 4 together and secure MZ element to straightening jig using a screw clamp if necessary.

4 - Front longitudinal member / top of wheel housing



Overview of front alignment brackets

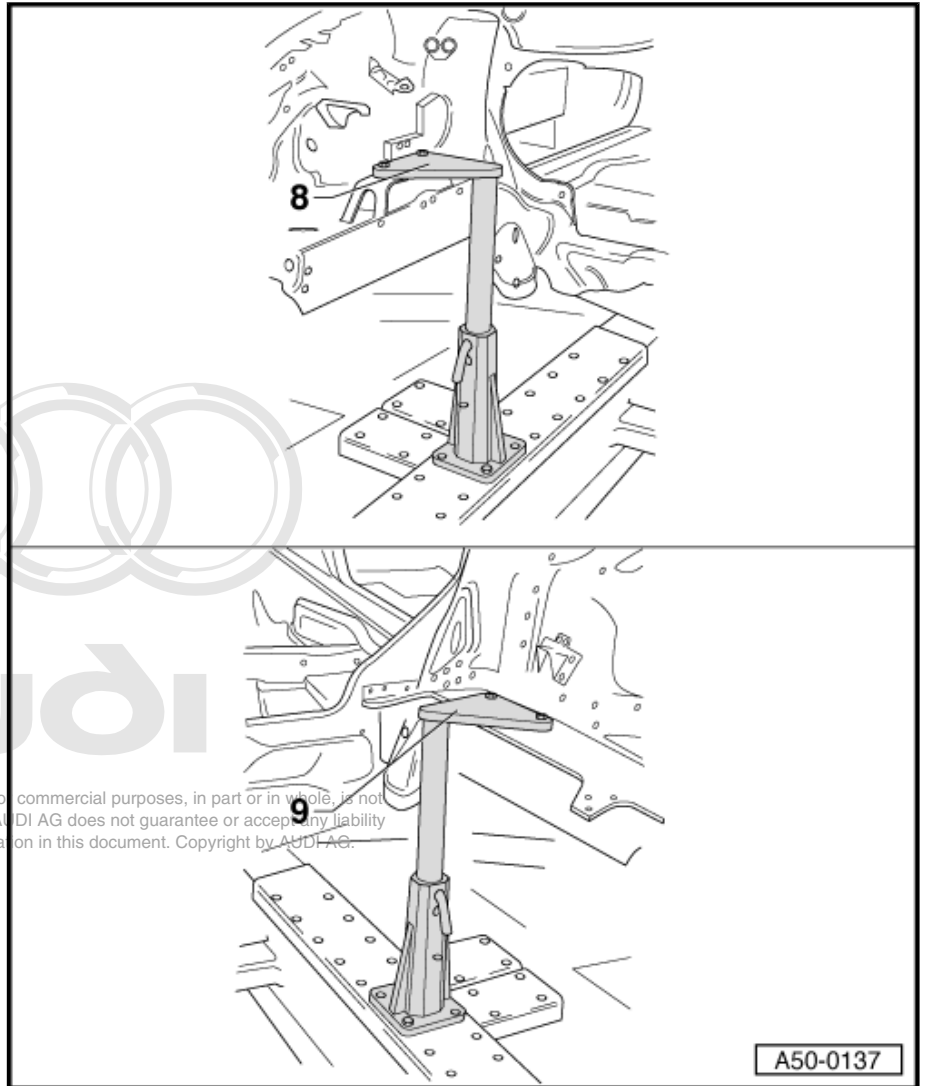


Overview of front alignment brackets

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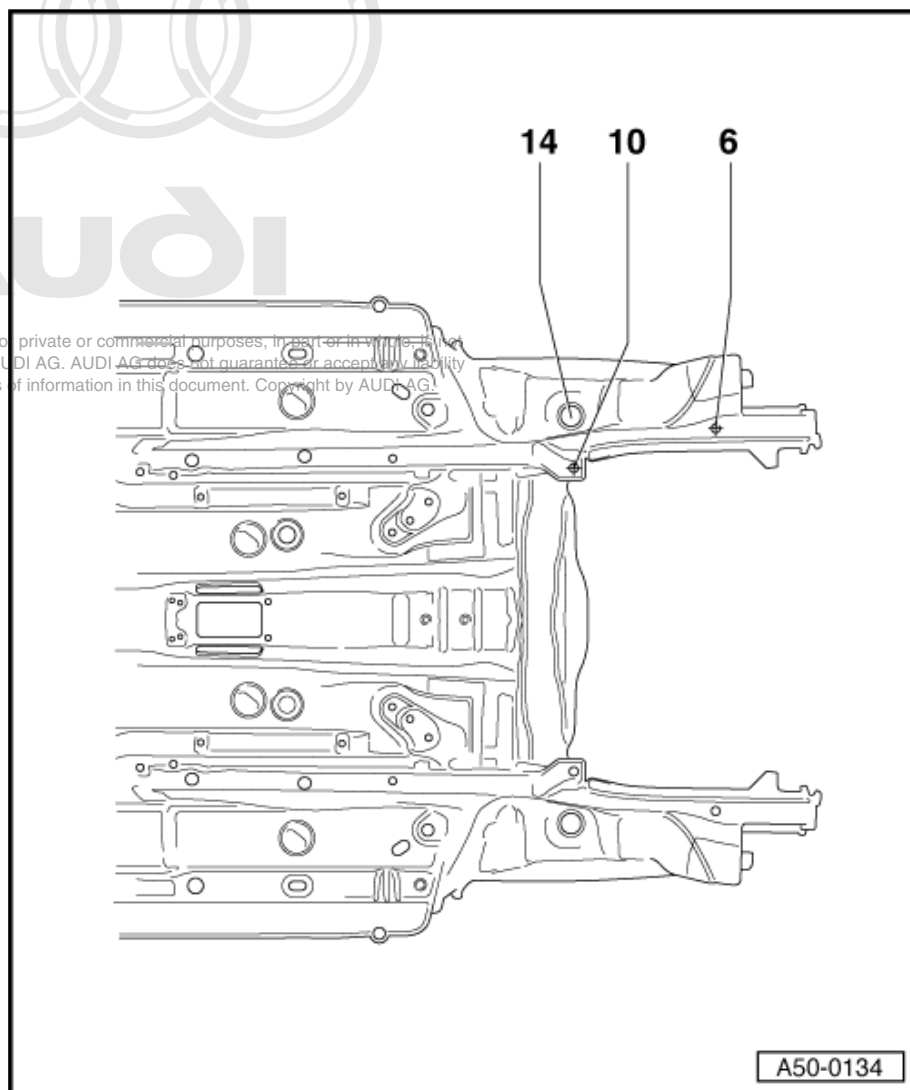
8 - Engine carrier mounting

9 - Engine carrier mounting



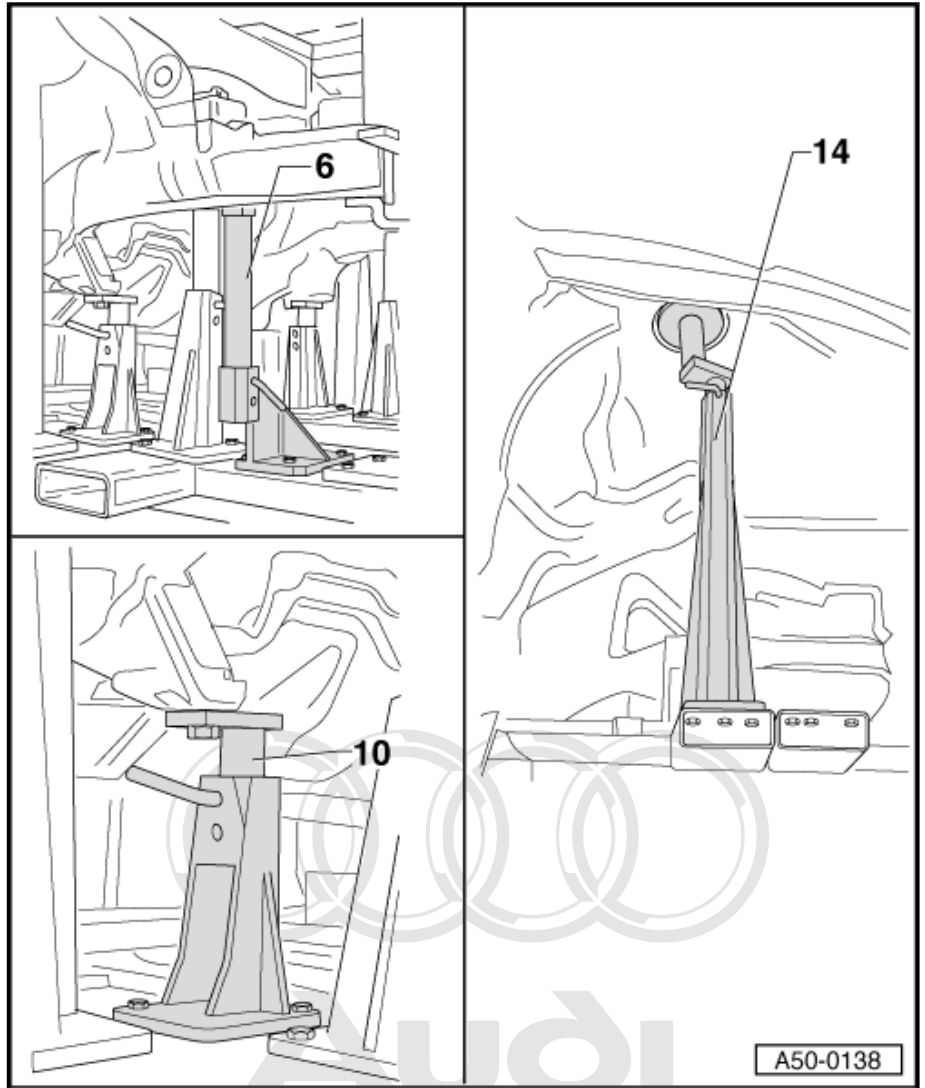
Overview of front alignment brackets

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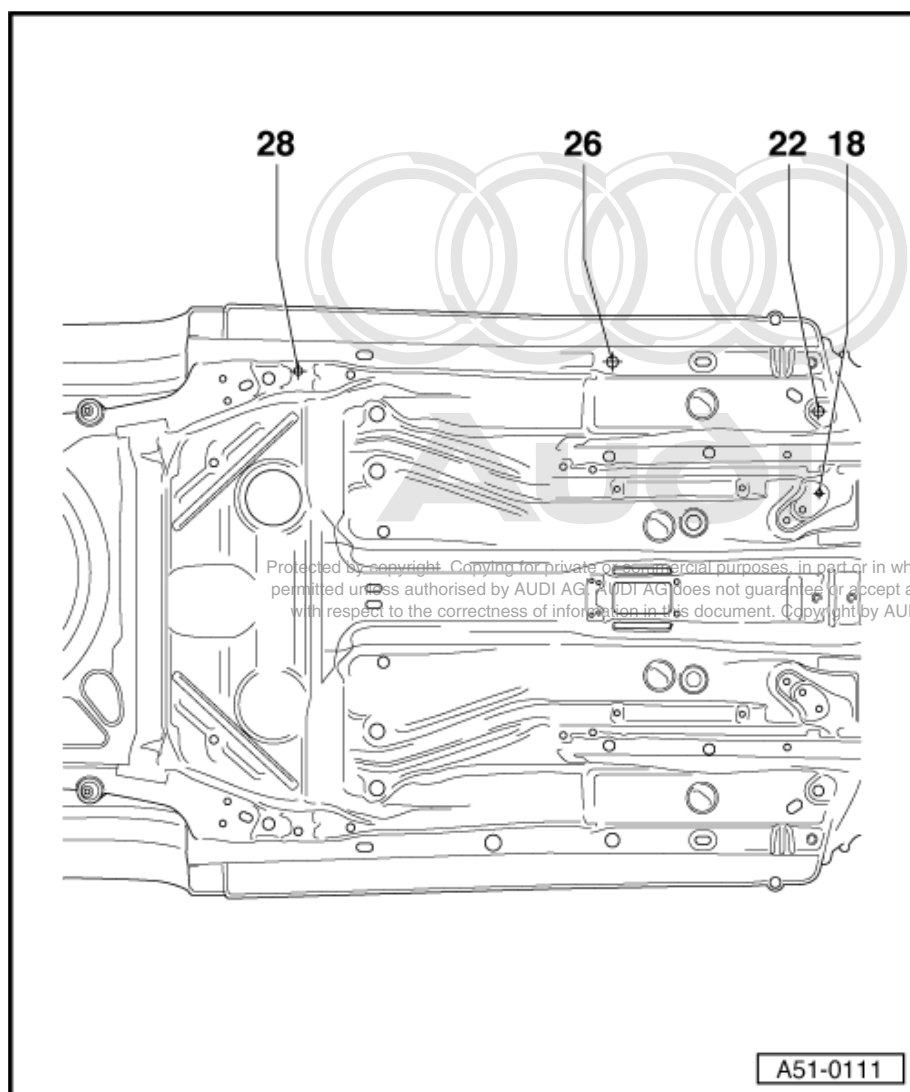


Overview of front alignment brackets

- 6 - Front longitudinal member
- 10 - Mounting for subframe
- 14 - Strut holder



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Overview of centre alignment brackets

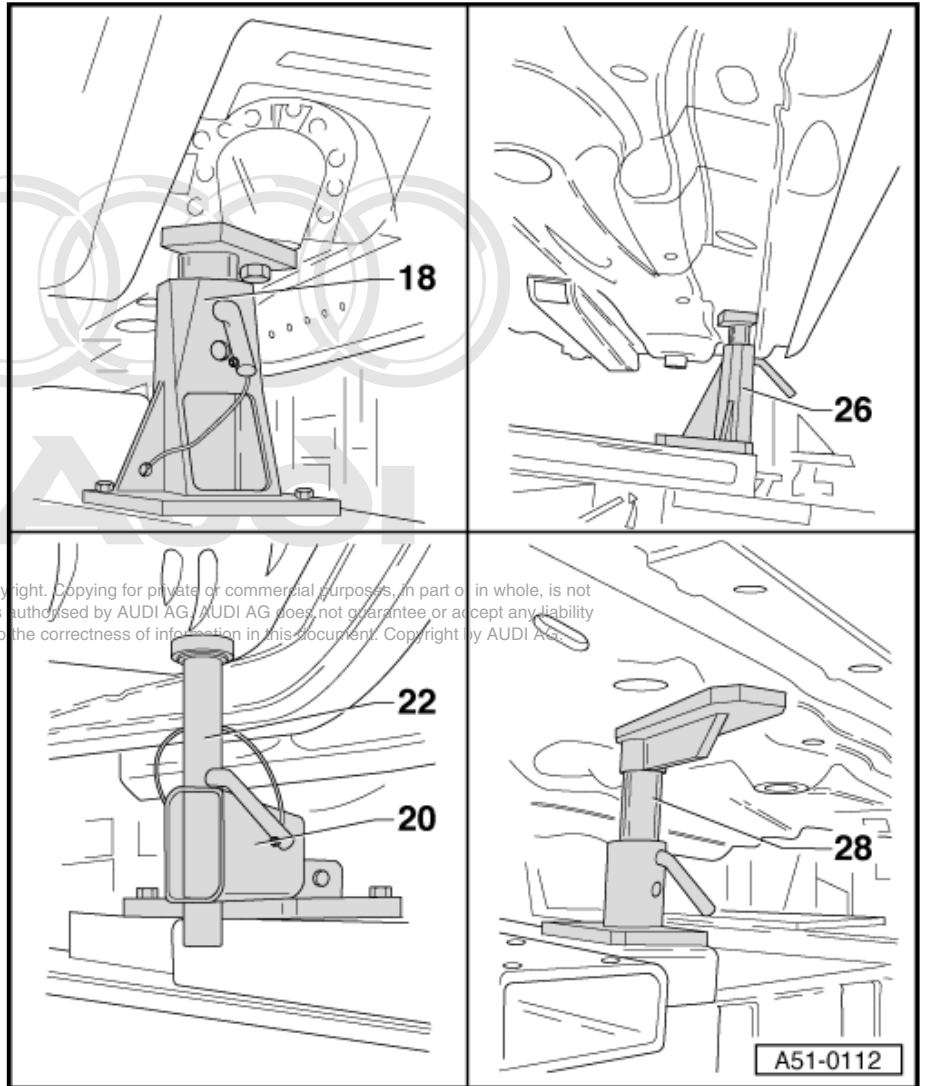
18 - Mounting for subframe

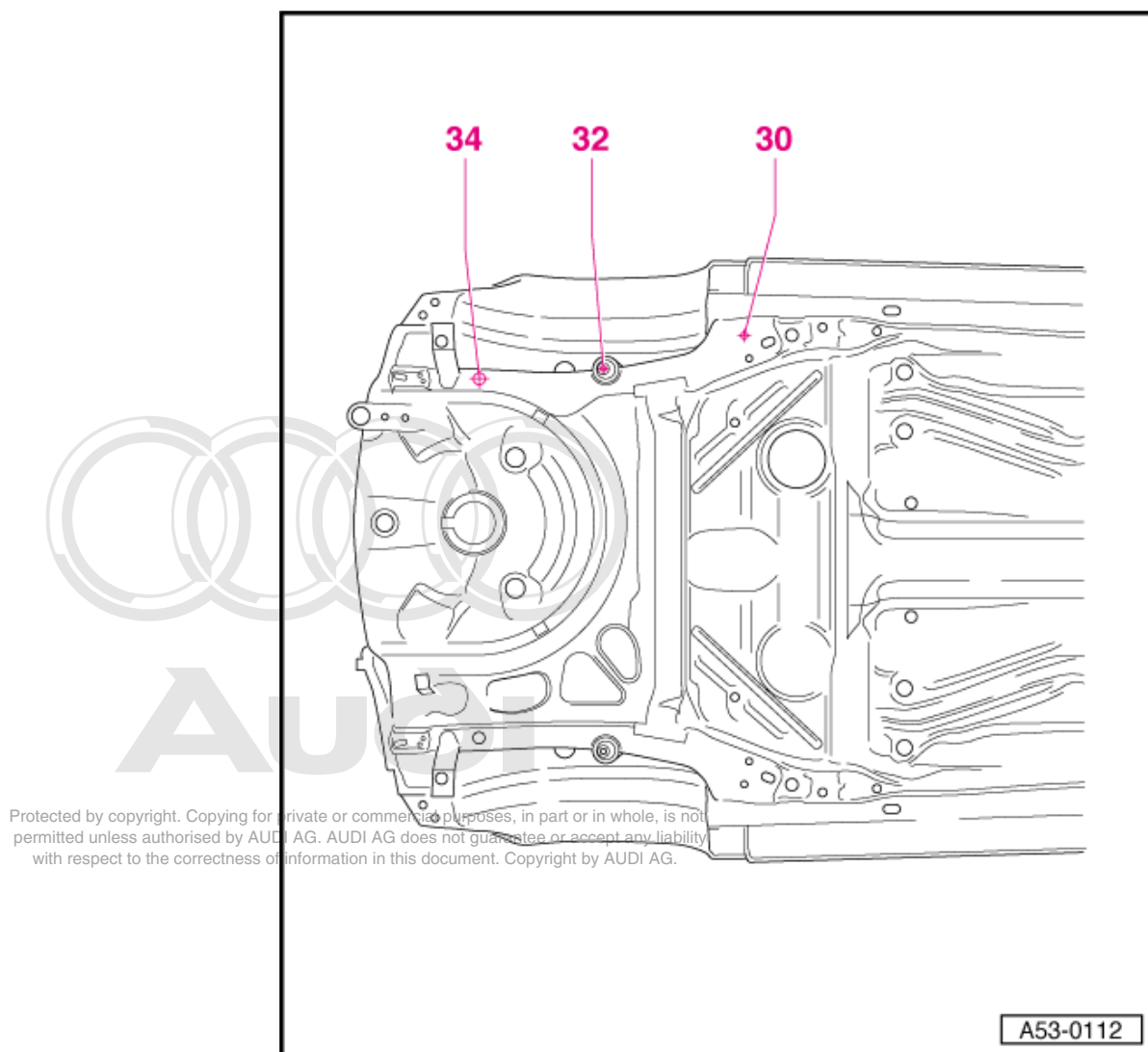
22 - Front production mounting

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

26 - Drilling in floor panel

28 - Drilling in longitudinal member





Overview of rear alignment brackets

30 - Mounting for rear axle

Do not insert pin until after fitting body on jig.

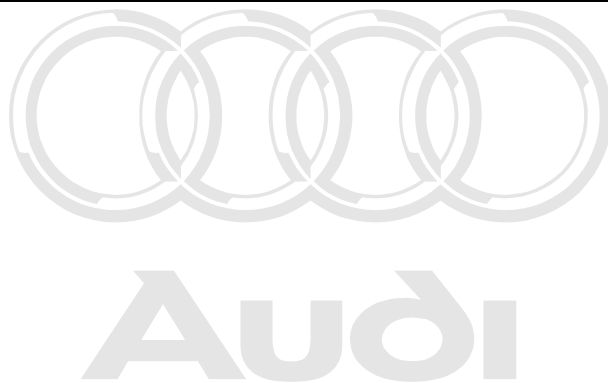
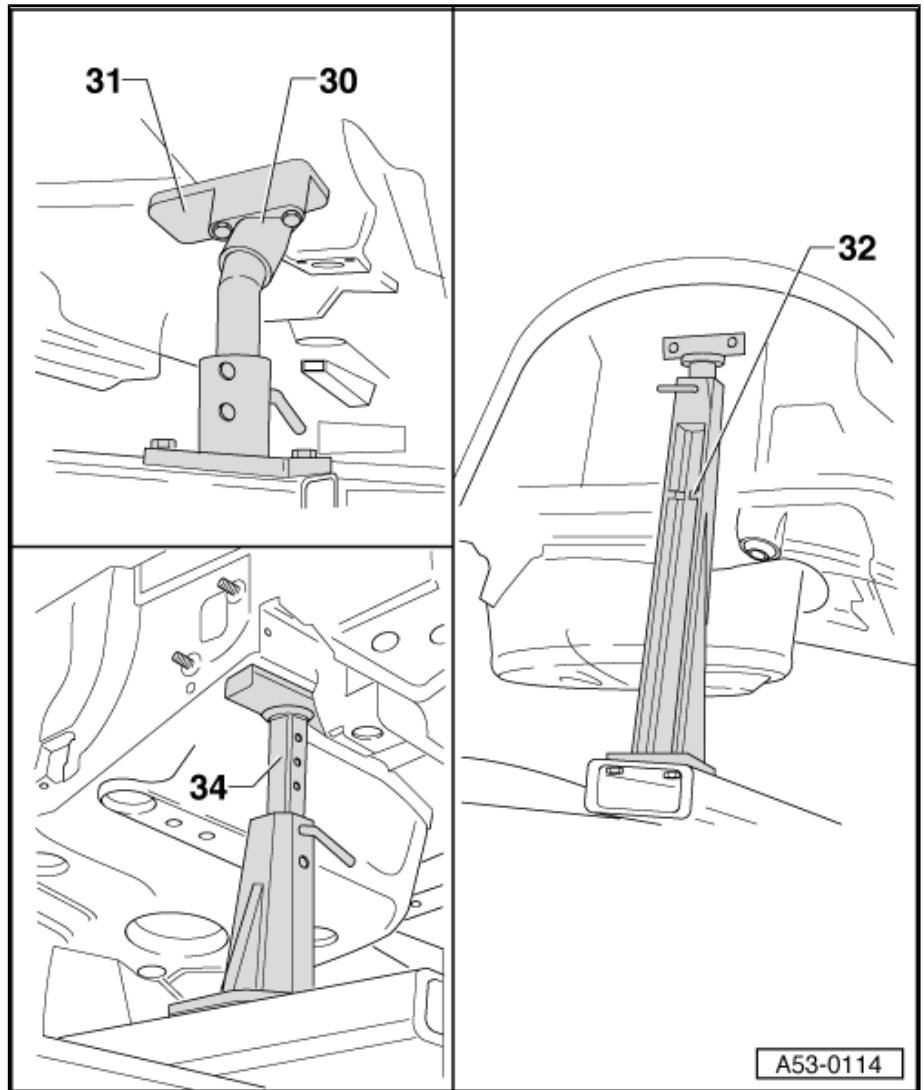
31 - Left and right spacer identical

Only use with rear axle removed.

32 - Strut holder

34 - Drilling in longitudinal member

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



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9.1 Portal gauge

9.1.1 A3 (3-door)

A - Extension

B - Telescopic column

C - Cross bar 1200 mm

49 - Mounting for A-pillar

51 - Mounting for B-pillar

26 - MZ 260

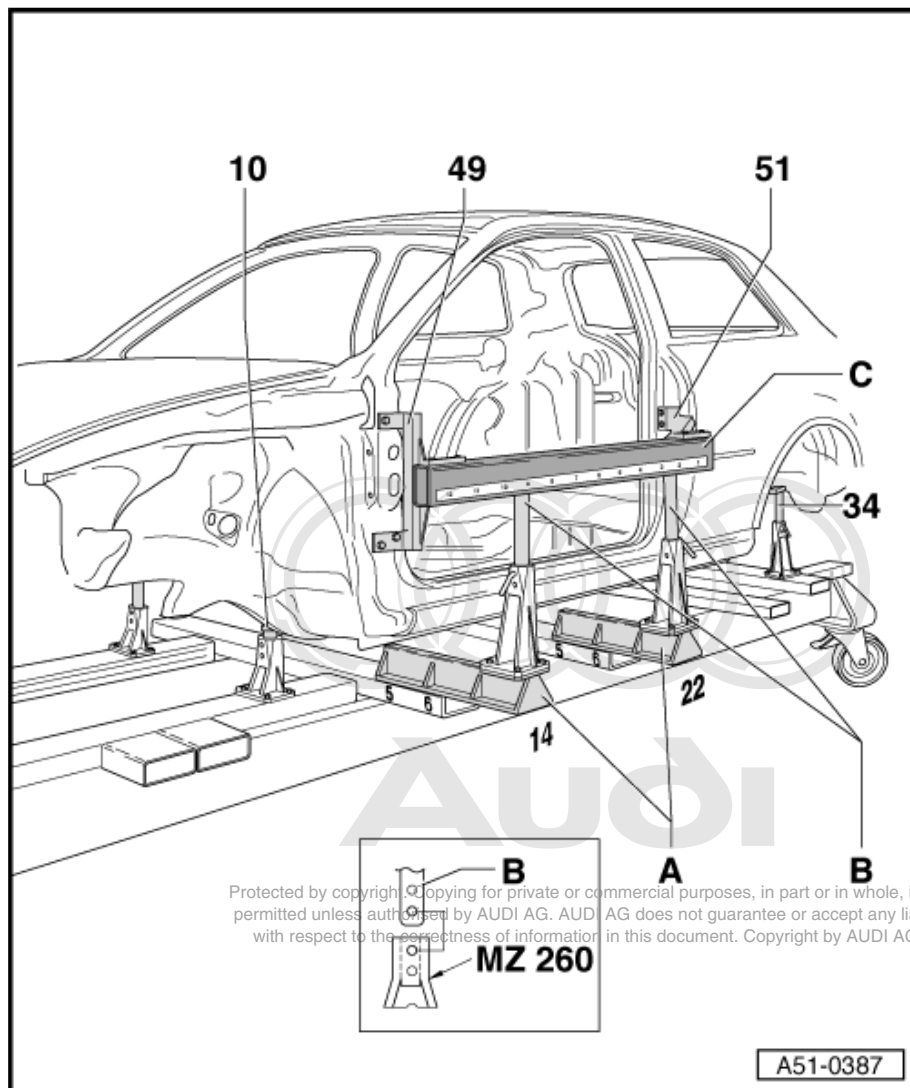
51 - MZ 260

6 - Front longitudinal member

18 - Mounting for subframe

34 - Drilling in longitudinal member

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



Portal gauge -VAS 5007-

Supplement for portal gauge -VAS 5007/3A-

9.1.2 A3 (5-door)

A - Extension

B - Telescopic column

C - Cross bar 1200 mm

49 - Mounting for A-pillar

53 - Mounting for B-pillar

49 - MZ 260

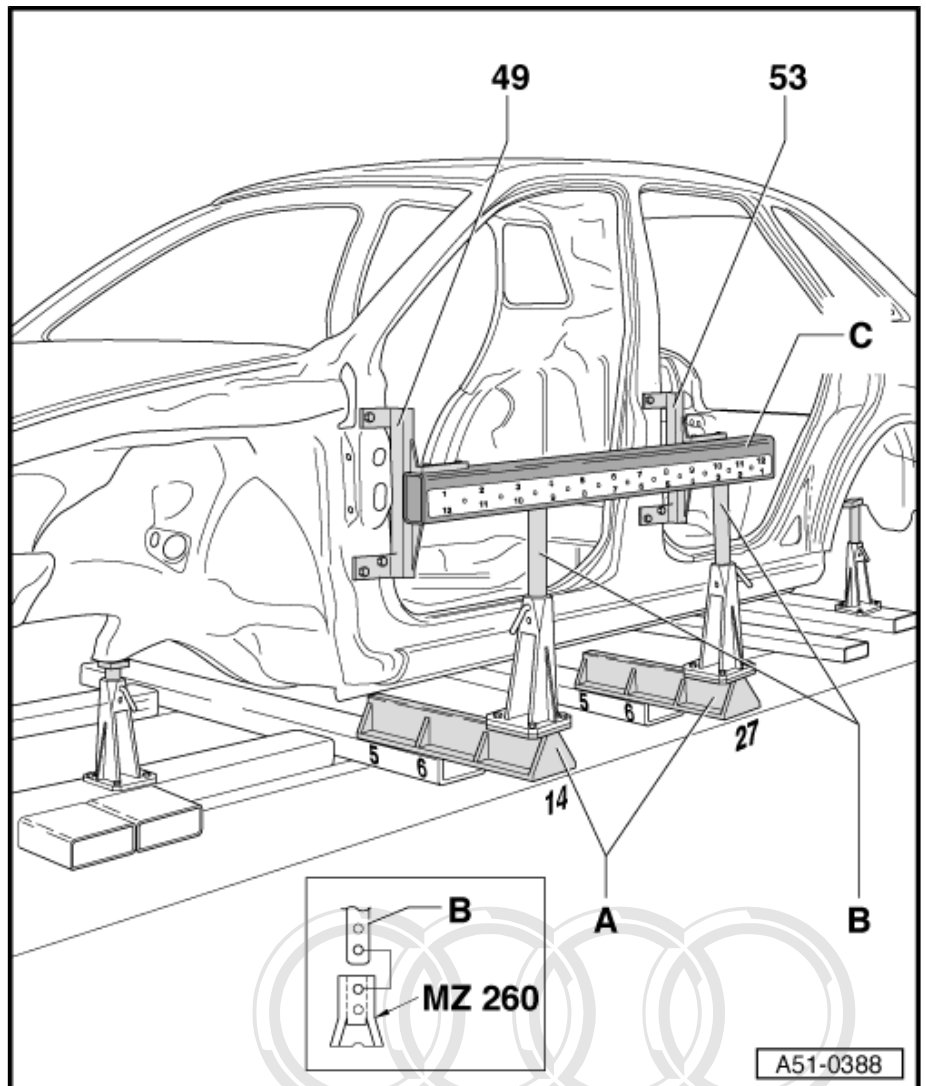
53 - MZ 260

6 - Front longitudinal member

18 - Mounting for subframe

34 - Drilling in longitudinal member

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



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A - Extension

B - Telescopic column

C - Cross bar 1200 mm

53 - Mounting for B-pillar

55 - Mounting for C-pillar

53 - MZ 260

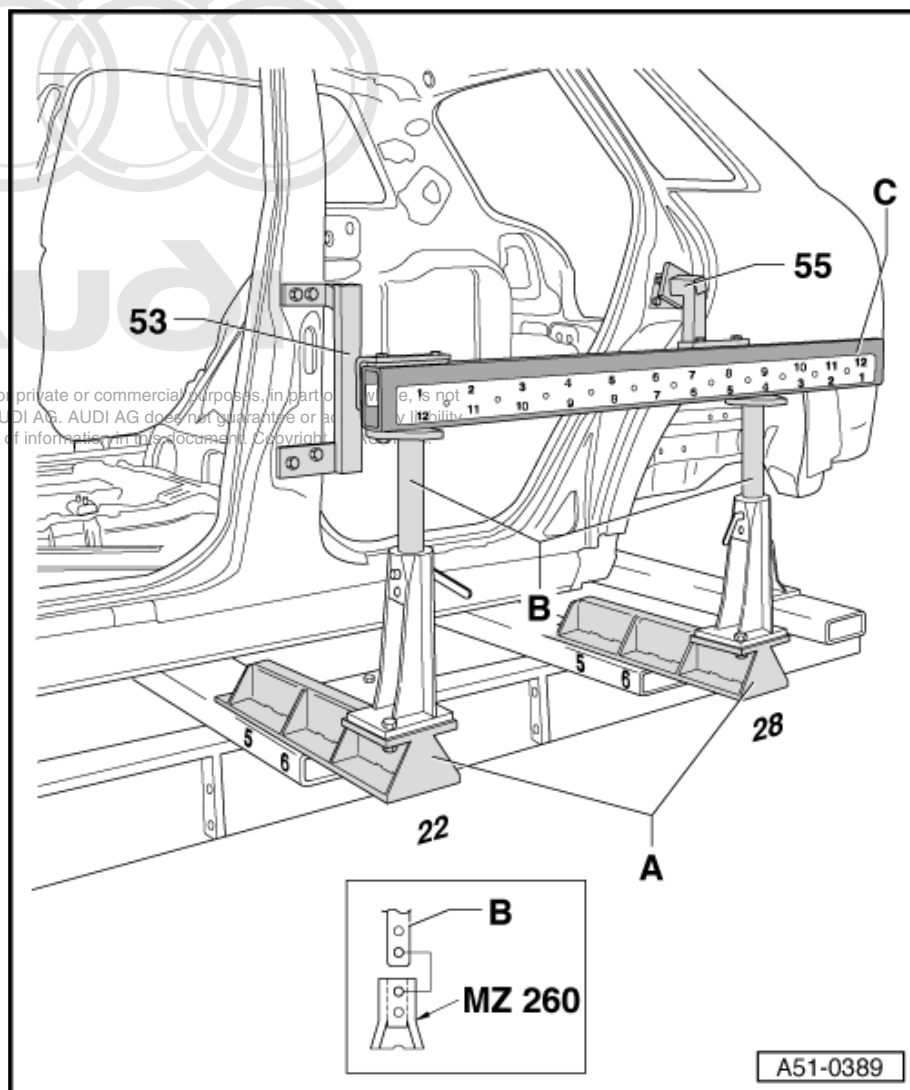
55 - MZ 260

6 - Front longitudinal member

18 - Mounting for subframe

34 - Drilling in longitudinal member

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



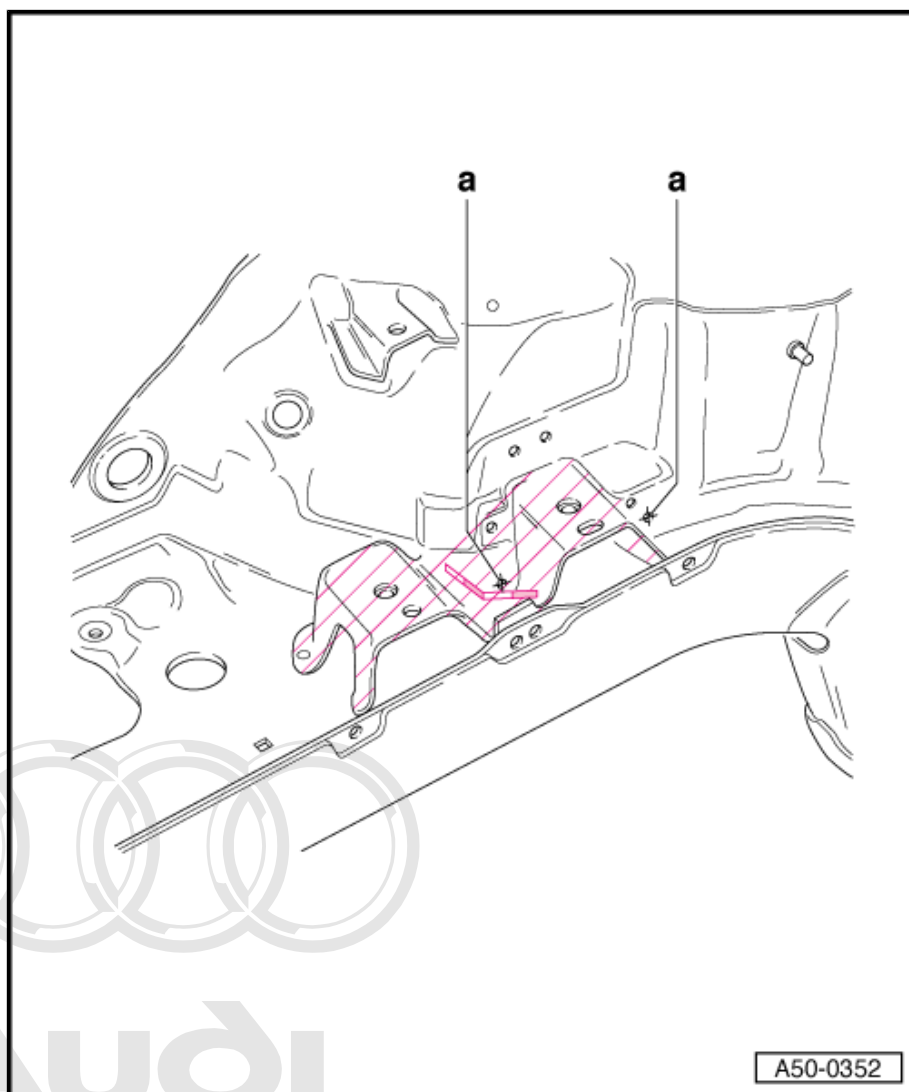
50 – Body - front

AP: 50 40 55 00

1 Engine console - Renewal

1.1 Procedure

1.1.1 Cutting locations



Engine console (right side)

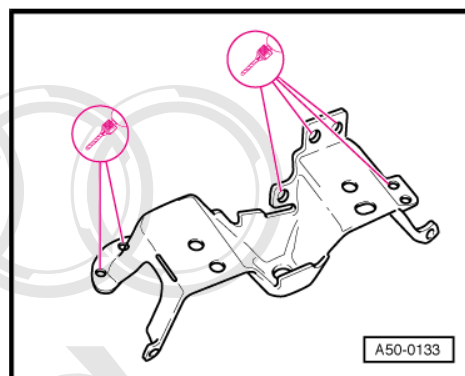
- Engine console separating cut
- Separate original joint.
- Remove front part section.
- Drill out spot welds -a- with $\varnothing 7$ mm bit.
- Remove remaining material.

1.1.2 Replacement part

- ◆ Engine console

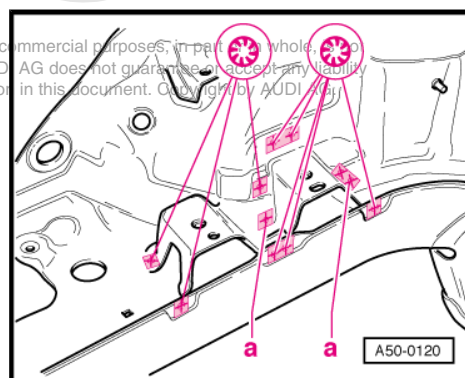
Preparing new part

- Drill dia. 7 mm holes for SG plug weld seam.



1.1.3 Welding in

- Fix new part in position with alignment bracket.
- Weld in console, SG plug weld seam.
- Weld in spot welds -a- from outside, SG plug weld seam.

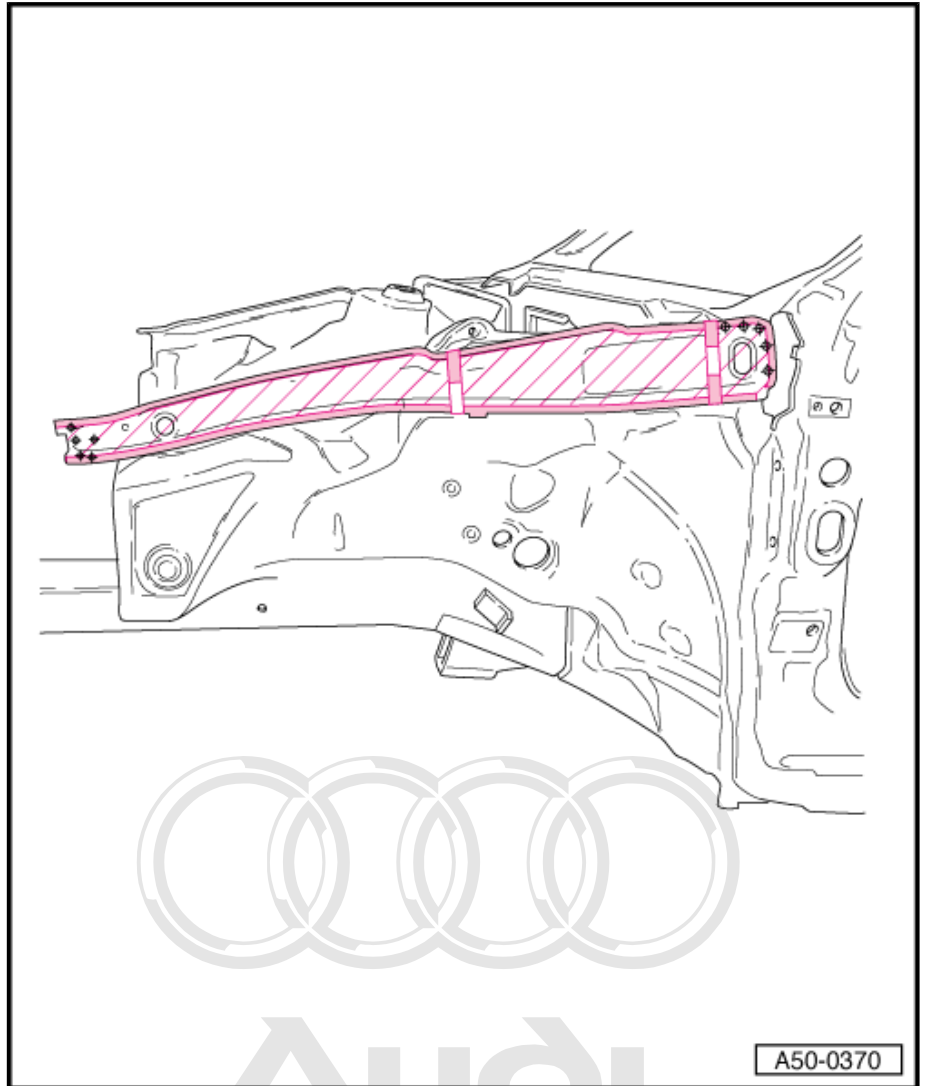


AP: 50 52 55 00

2 Intermediate piece

2.1 Procedure

2.1.1 Cutting locations



- Separate original joint.



Note:

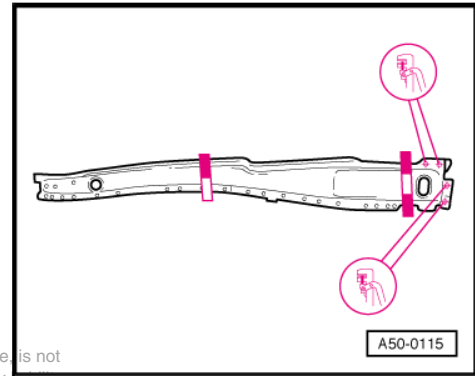
Partial replacement is possible with the separating cuts illustrated. SG continuous butt weld in the separated area.

2.1.2 Replacement part

- ◆ Reinforcement plate

Preparing new part

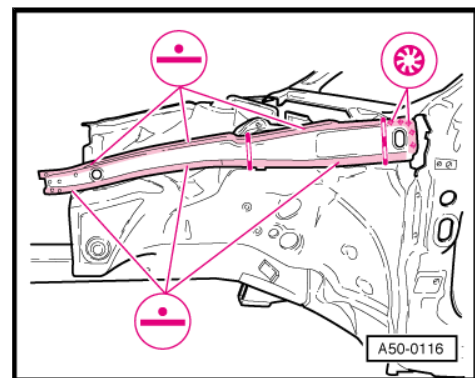
- Make holes in outer joint surface of new part.



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2.1.3 Welding in

- Weld reinforcement plate to wheel housing, RP spot weld seam.
- Weld reinforcement plate to wheel housing, SG plug weld seam.

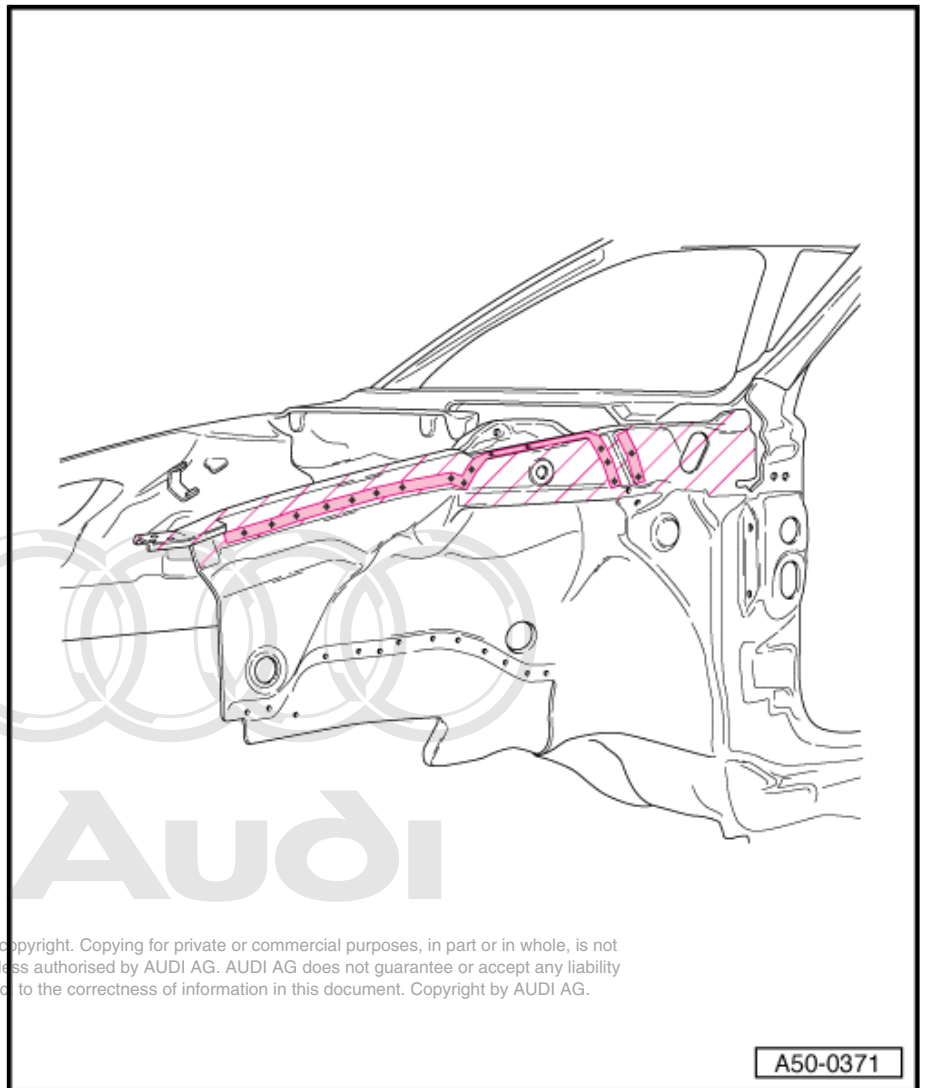


AP: 50 52 55 00

3 Upper wheel housing longitudinal member - Renewal

3.1 Procedure

3.1.1 Cutting locations



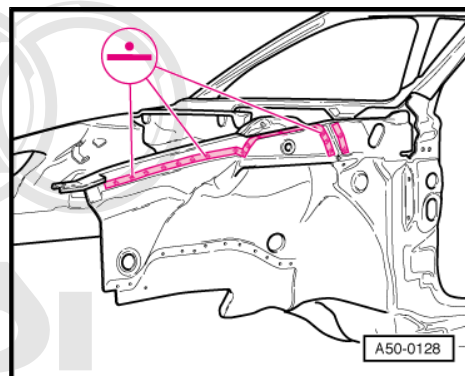
- Intermediate piece already removed
- Separate original joint.
- Remove remaining material.

3.1.2 Replacement part

- ◆ Upper wheel housing longitudinal member

3.1.3 Welding in

- Fit new part on alignment bracket.
- Spot weld upper wheel housing longitudinal member, RP spot weld seam.



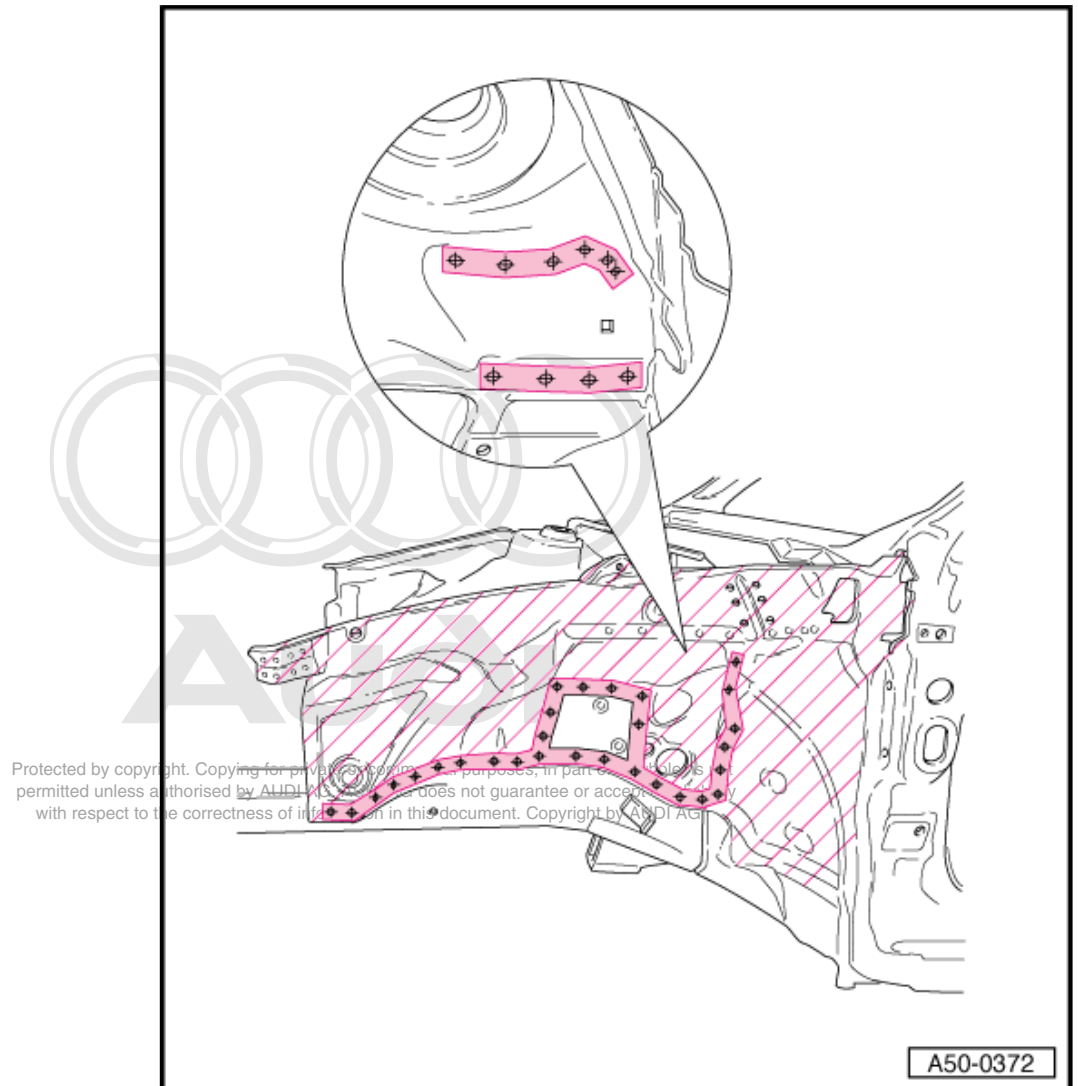
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AP: 50 74 55 00

4 Front wheel housing - Renewal

4.1 Procedure

4.1.1 Cutting locations



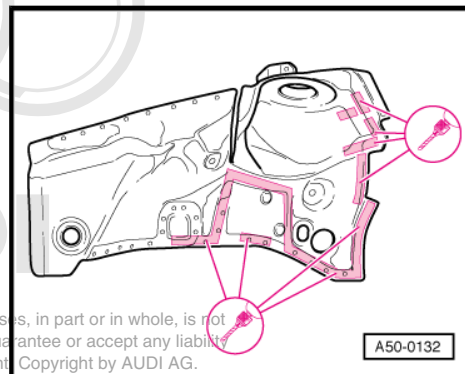
- Intermediate piece already removed
- Longitudinal member (top section) already removed
- Separate original joint.
- Remove remaining material.

4.1.2 Replacement part

- ◆ Front wheel housing

Preparing new part

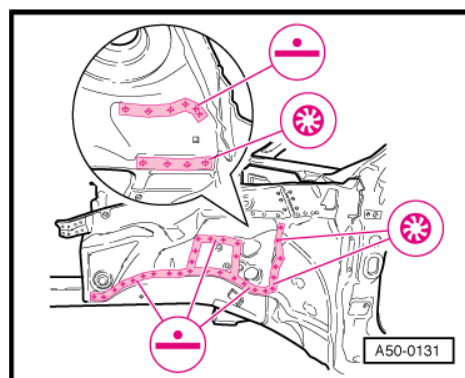
- Drill dia. 7 mm holes for SG plug weld seam.



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4.1.3 Welding in

- Locate wheel housing on alignment bracket.
- Spot weld wheel housing to lower longitudinal member, RP spot weld seam.
- Weld in remaining joint, SG plug weld seam.

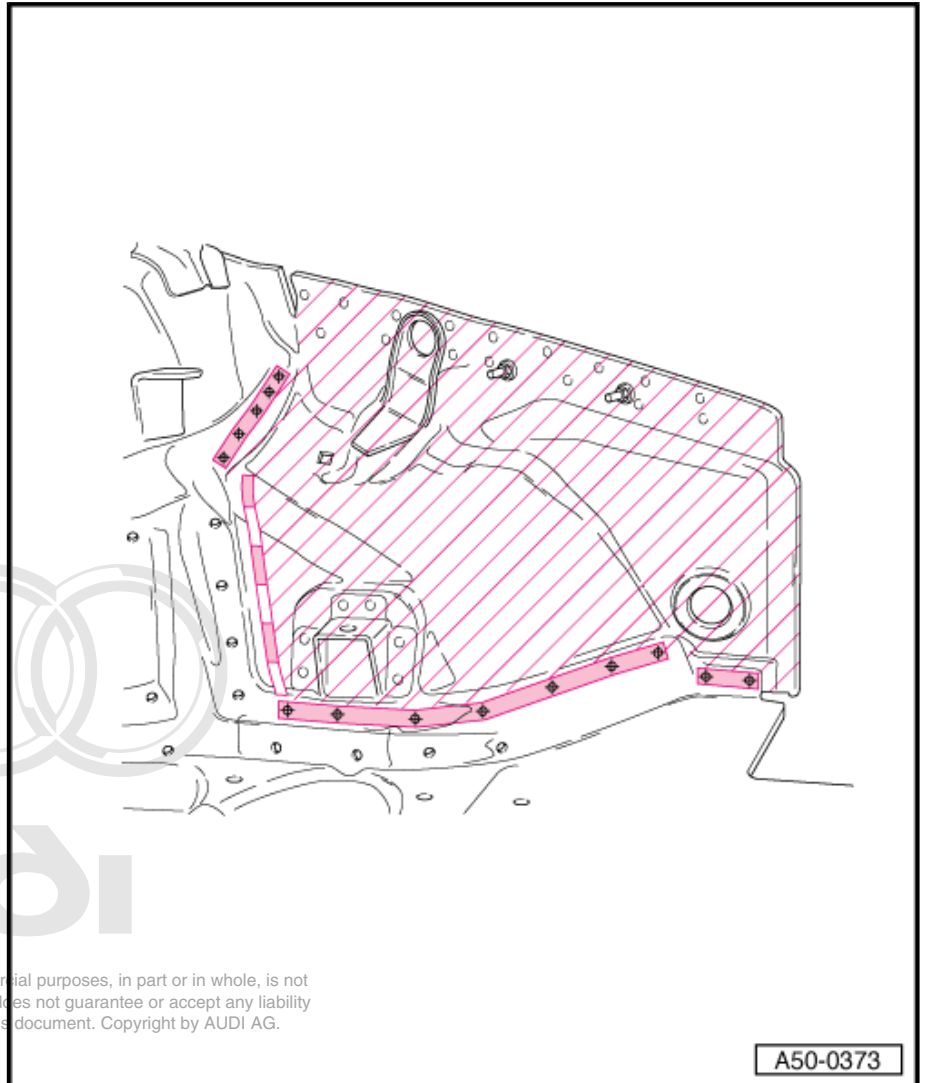


AP: 50 74 55 12

5 Front wheel housing - Partial renewal

5.1 Procedure

5.1.1 Cutting locations



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A50-0373

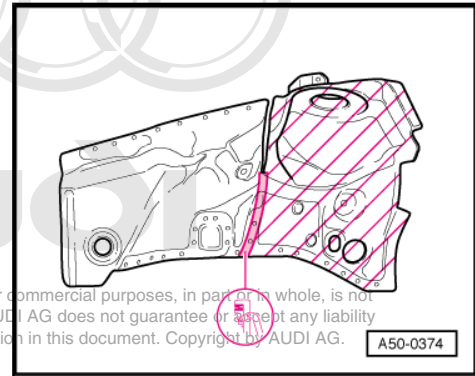
- Longitudinal member (top section) already removed
- Intermediate piece already removed
- Cut out wheel housing in front of strut holder.
- Separate original joint.
- Detach part.

5.1.2 Replacement parts

- ◆ Wheel housing

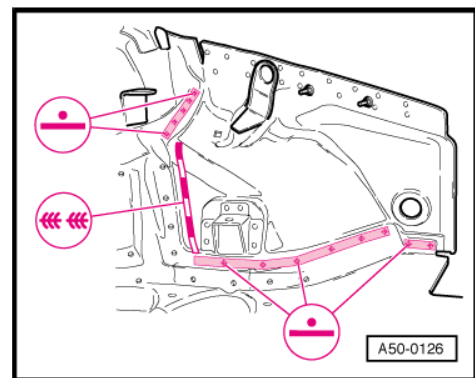
Preparing new parts

- Transfer separating cut to new part plus 10 mm for overlap.
Cut off hatched area.
- Step separating cut at body.



5.1.3 Welding in

- Weld both sides of separating cut, SG continuous seam (staggered).
- Spot weld remainder of joint, RP spot weld seam.

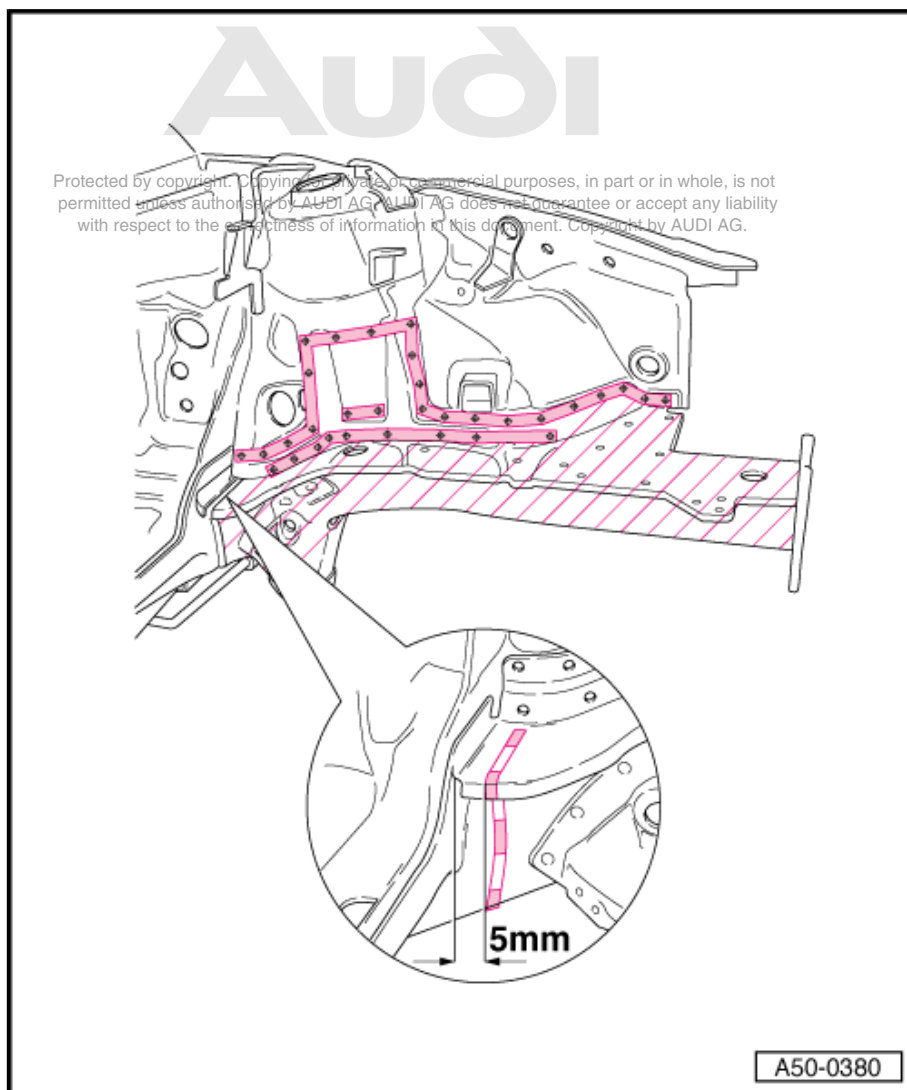


AP: 50 79 55 00

6 Front longitudinal member - Renewal

6.1 Procedure

6.1.1 Cutting locations



- Separating cut for longitudinal member.
- Separate original joint.
- Remove remaining material.

6.1.2 Replacement parts

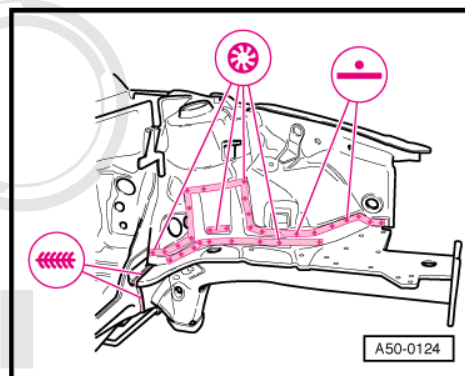
- ◆ Longitudinal member
- ◆ Impact absorber mounting
- ◆ Towing eye (right side only)

Preparing new parts

- Depending on the version of the replacement part supplied, the towing eye may have to be cut off.
- Drill dia. 7 mm holes for SG plug weld seam.

6.1.3 Welding in

- Weld in front longitudinal member, SG plug weld seam.
- Weld separating cut, SG continuous seam.
- Spot weld remainder of joint, RP spot weld seam.
- Weld in impact absorber with towing eye. ⇒ [page 55](#)



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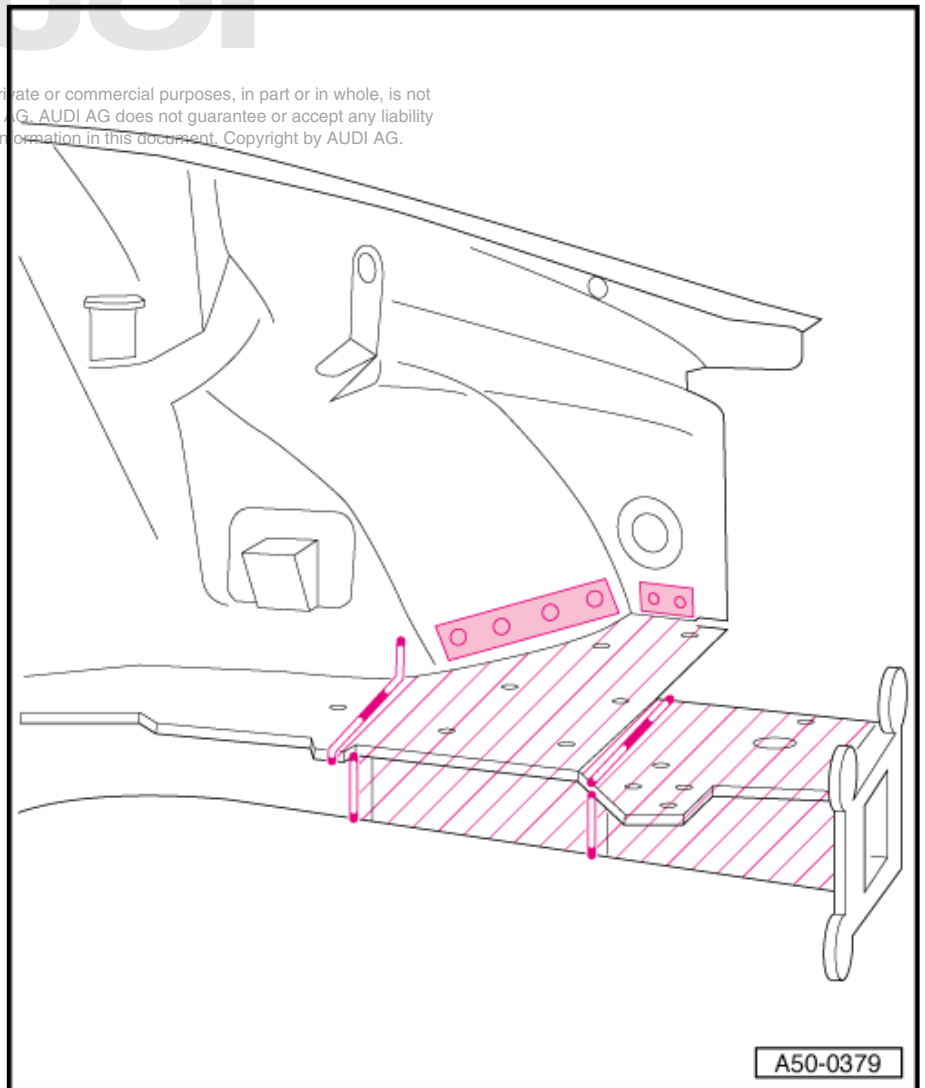
AP: 50 79 55 12

7 Front longitudinal member - Partial renewal

7.1 Procedure

7.1.1 Cutting locations

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- Make separating cut on longitudinal member according to extent of damage.



Note:

Separating cut must be a straight line.

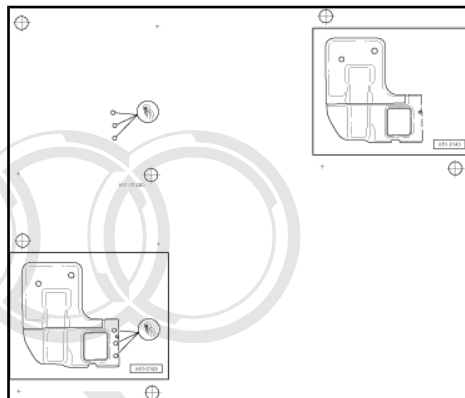
7.1.2 Replacement parts

- ◆ Towing eye

- ◆ Longitudinal member
- ◆ Impact absorber mounting
- ◆ Closure plate for longitudinal member

Preparing new part

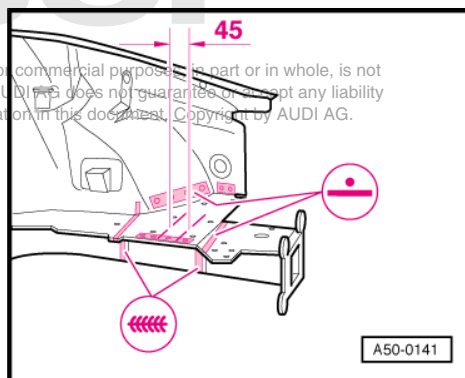
- Transfer separating cut to new part and cut off hatched area.



7.1.3 Welding in

- Locate and secure section of longitudinal member on alignment bracket.
- Butt weld longitudinal member, SG continuous seam.
- Spot weld remainder of joint, RP spot weld seam.

The spot welds must be parallel. It is important to keep to the specified spacings.

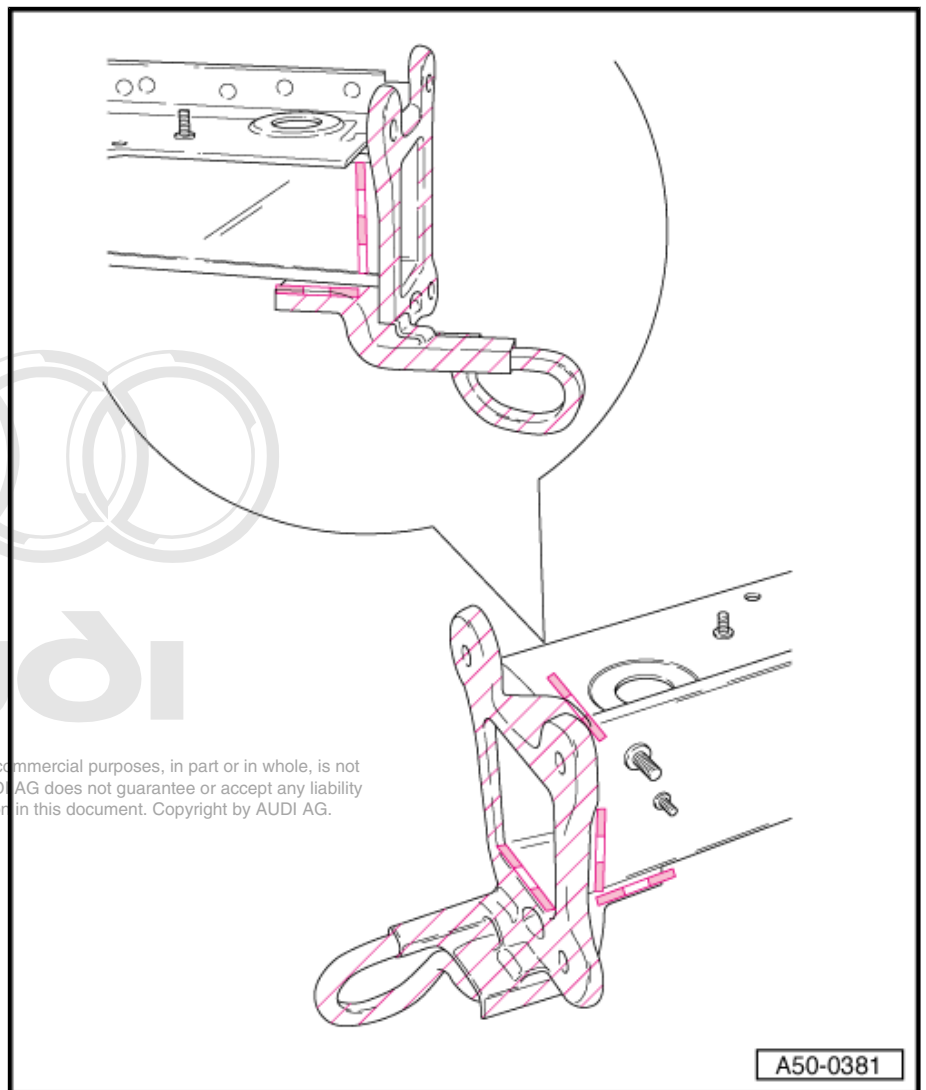


AP: 50 80 55 00

8 Impact absorber mounting with towing eye

8.1 Procedure

8.1.1 Cutting locations



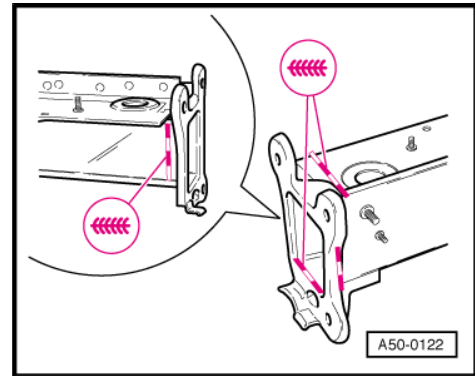
- Separate original joint.
- Remove remaining material.

8.1.2 Replacement parts

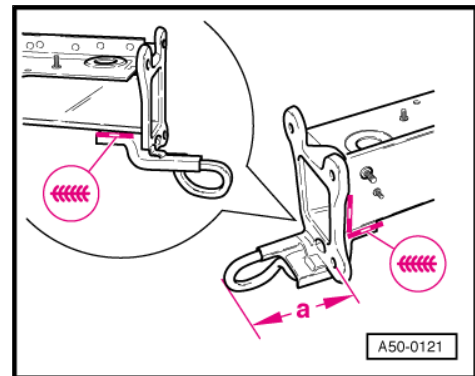
- ◆ Towing eye
- ◆ Impact absorber mounting

8.1.3 Welding in

- Weld in impact absorber mounting, SG continuous seam.



- Weld in towing eye, SG continuous seam.
- Dimension a = 110 mm



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51 – Body - centre

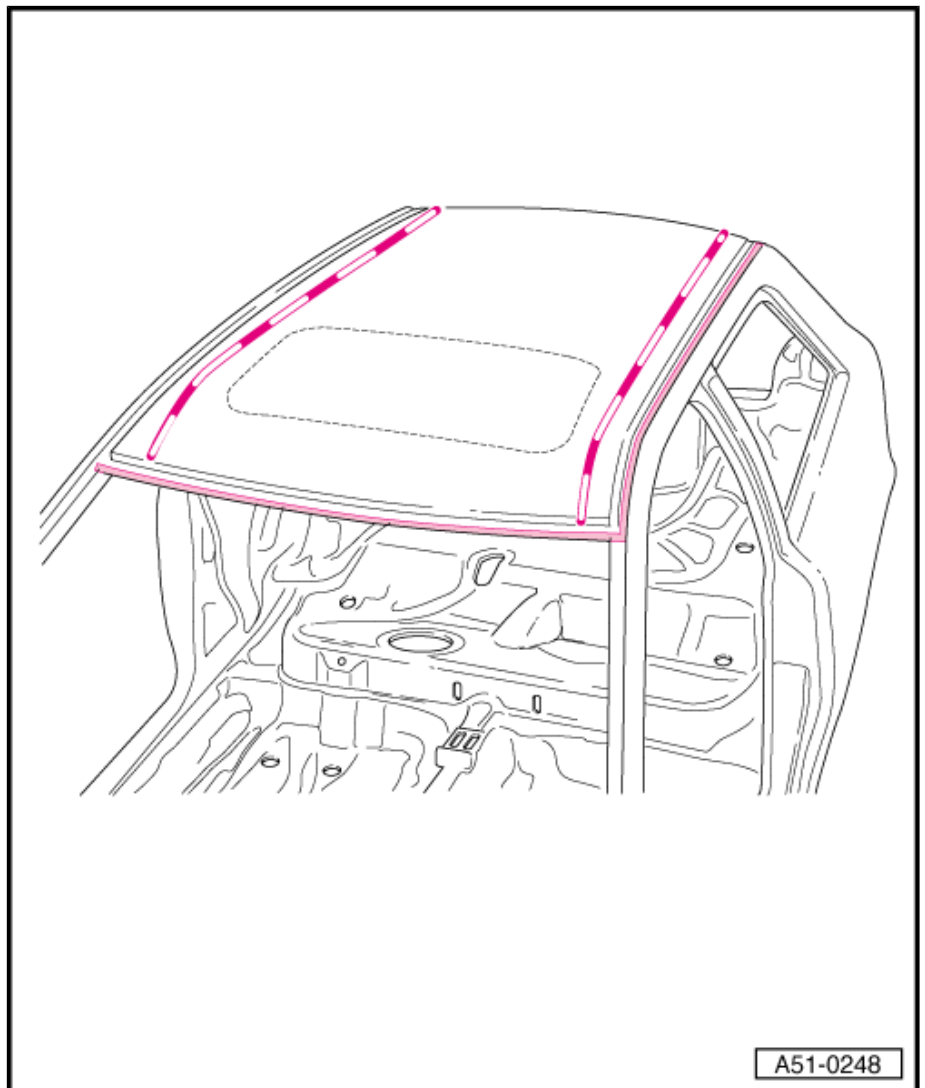
AP: 51 03 55 00

1 Roof - Renewal

1.1 Procedure

1.1.1 Cutting locations

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- Roughly cut out roof.
- Cut out roof reinforcement as well.

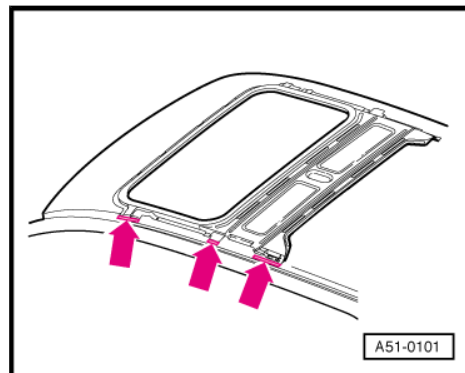
A special hose set with reduced nozzle diameter is required for the shielded arc welding unit when performing repairs on the roof.

- ◆ Hose set for shielded arc welding -VAS 5023-
- Separate original joint.



Note:

- ◆ Cut out roof reinforcement as well.
- ◆ This description covers the repair method with riveting and bonding as well as shielded arc welding (SG).
- On models with sun roof, cut through bond points with a knife.



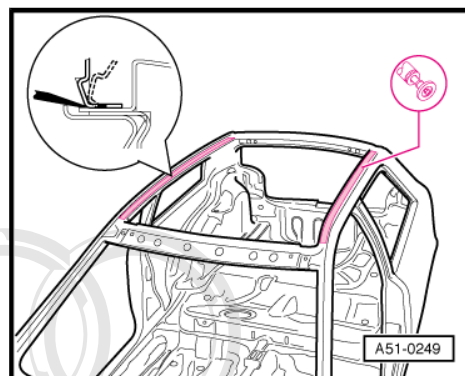
- Remove sealing compound from sealing channel.
- Grind surface of laser weld seam and use chisel to bend up remaining pieces and prise off.



Note:

Only grind surface of laser weld seam. Do not grind through roof. If the roof frame is damaged, this must also be replaced.

- Remove remaining material.



1.1.2 Replacement parts

- ◆ Roof
- ◆ Butyl adhesive sealing cord AKL 450 005 05
- ◆ Assembly adhesive D 190 MKD A3

Preparing new part

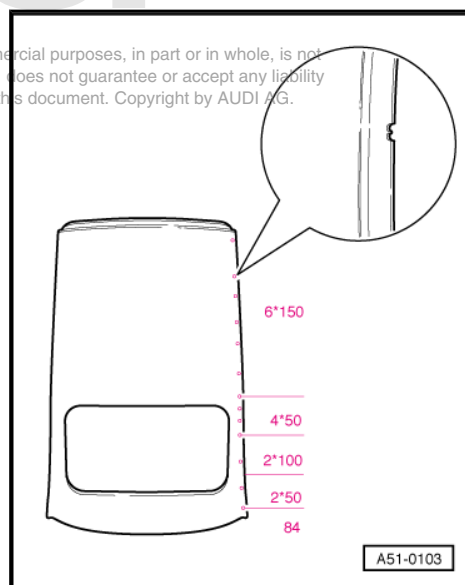
- Mark position of spot welds.
- Make holes in outer joint surface of new part.

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Note:

If the replacement roof panel is not to be riveted and bonded, make holes in new part for SG plug weld seam in the area of the rivet holes.



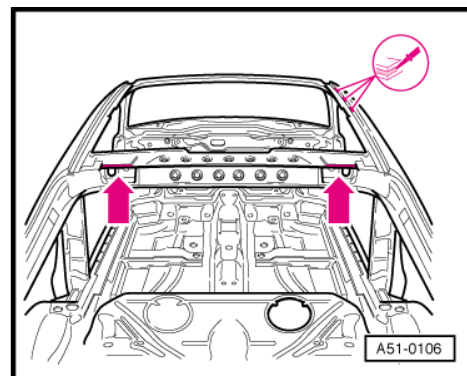
1.1.3 Welding in

- Place a 120 mm length of butyl cord centrally over rear lid hinge cut-out on roof cross member.
- On models with sun roof, apply assembly adhesive in the area of the roof reinforcement.
- Fit roof and fix in place.

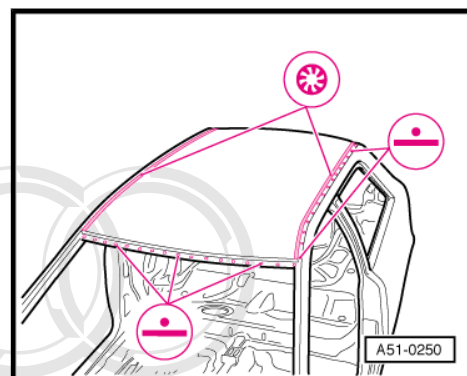


Caution:

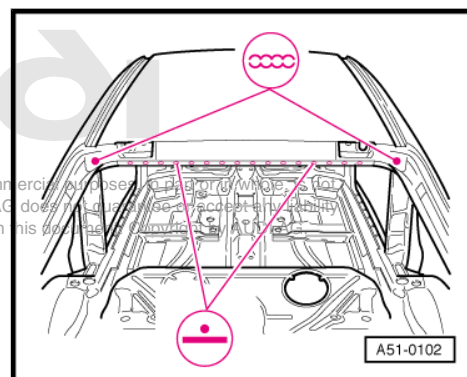
Check fit with windscreen and rear window. It is important to maintain dimension -a- of 12 ± 1 mm for roof joint strip.



- Spot weld roof, RP spot weld seam.
- Weld in remaining joint, SG plug weld seam.



- Spot weld roof, RP spot weld seam.
- Braze roof.
- Working from the passenger compartment, fill gap between roof and roof frame (front and rear) with sealant.



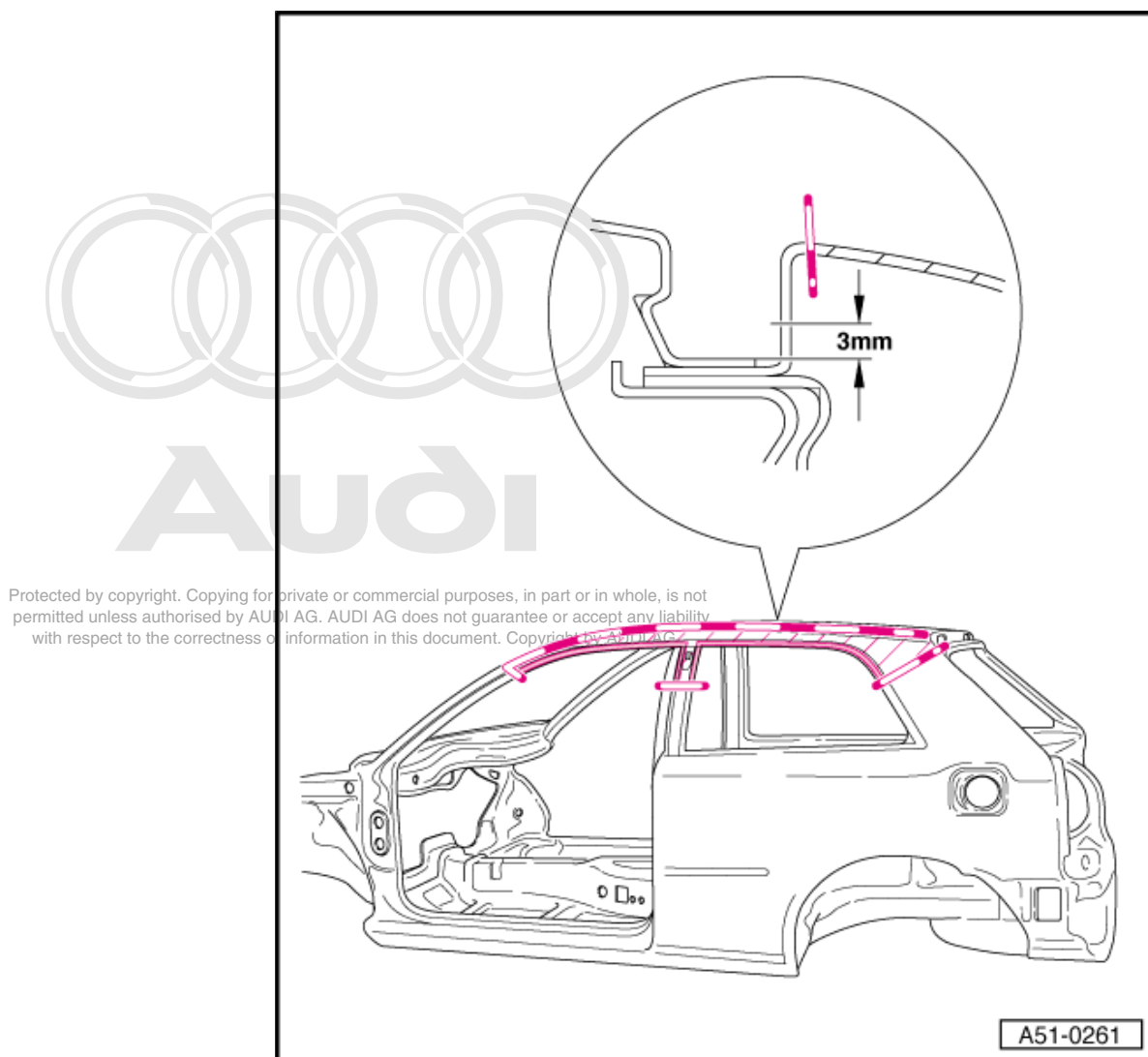
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AP: 51 05 55 00

2 Roof side member - Renewal

2.1 Procedure

2.1.1 Cutting locations



- Cut out as shown. Take care not to damage internal reinforcement.
- Make separating cut at A, B and C-pillar according to degree of damage.
- Roughly cut out roof frame.
- Shorten remaining flange section to 3 mm.
- Separate original joint.



Note:

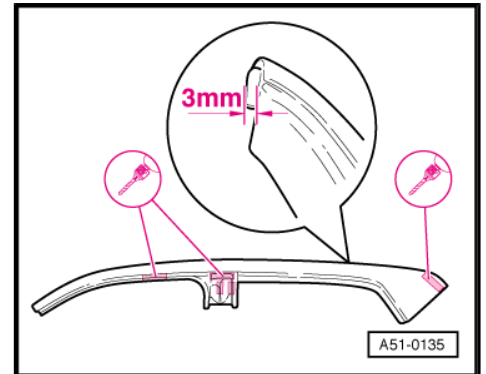
If the inner reinforcement is damaged it must also be replaced.

2.1.2 Replacement parts

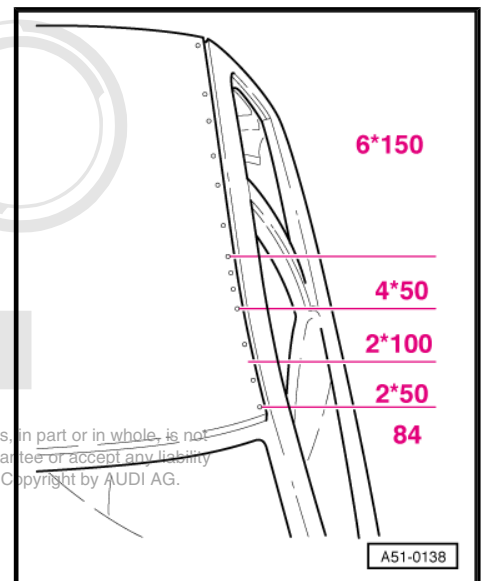
- ◆ Roof frame
- ◆ Assembly adhesive D 190 MKD A3

Preparing new part

- Transfer separating cut to new part and cut to size.
- Drill dia. 7 mm holes for SG plug weld seam.
- Shorten roof frame flange to 3 mm.



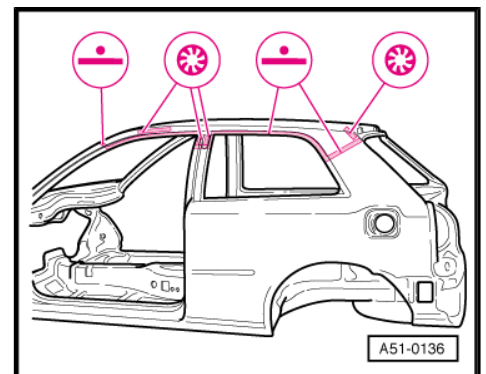
- Mark position of spot welds.
- Sand down paint at marked locations for SG continuous seam (staggered).



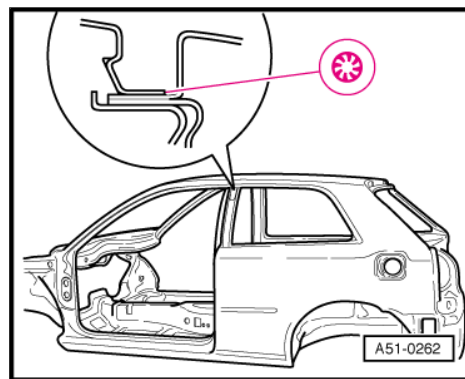
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2.1.3 Welding in

- Place an additional thickness of the same material behind the A, B + C-pillar separating cuts.
- Weld in new part, RP spot weld seam.
- Weld in remaining joint, SG plug weld seam.



- Weld joint to roof frame, SG plug weld seam.



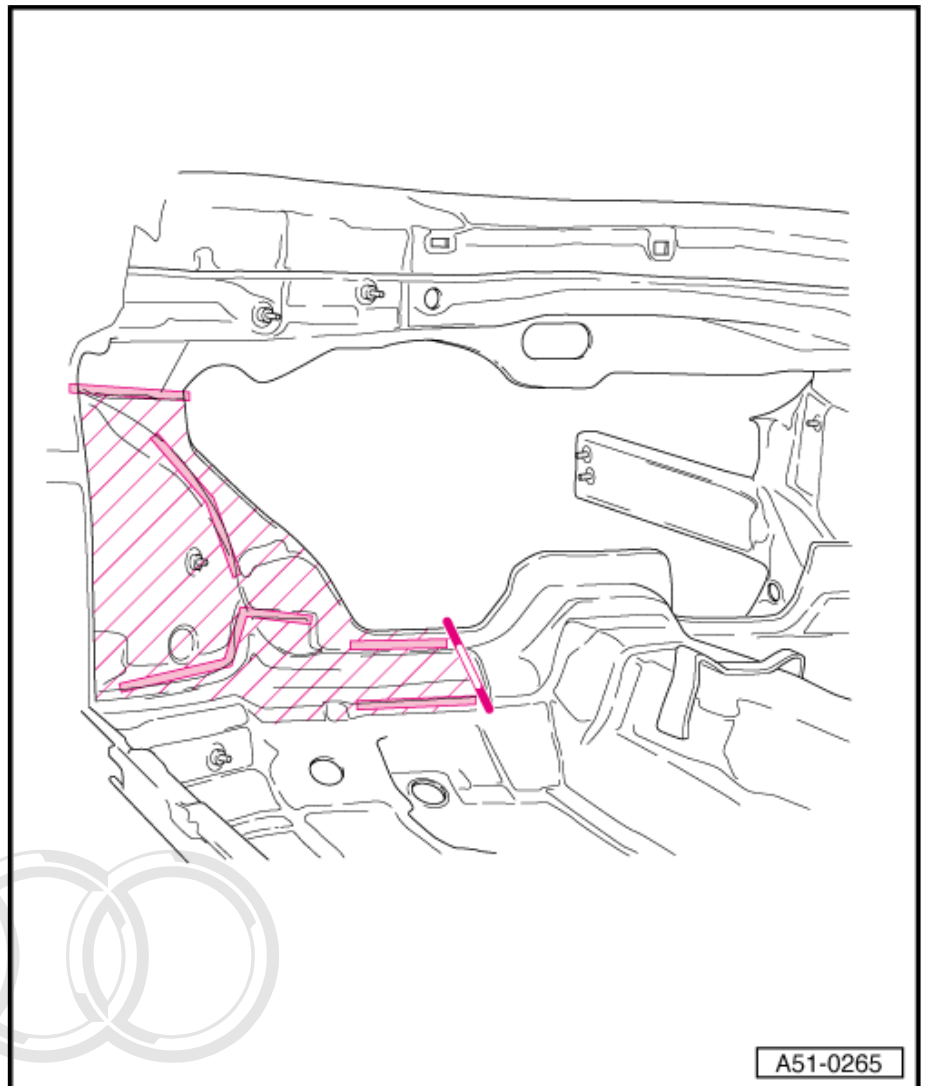
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AP: 51 05 55 52

3 Cross panel - Renewal

3.1 Procedure

3.1.1 Cutting locations



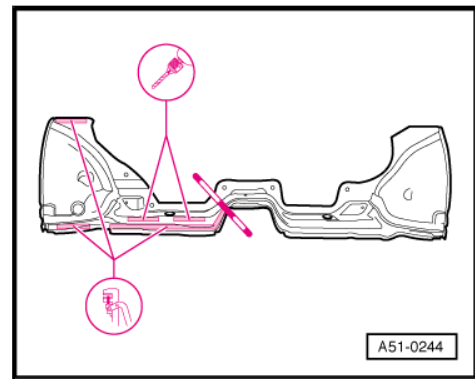
- A-pillar and inner A-pillar already removed
- Separate original joint.
- Make separating cut according to extent of damage.
- Remove remaining material.

3.1.2 Replacement part

- ◆ Cross panel

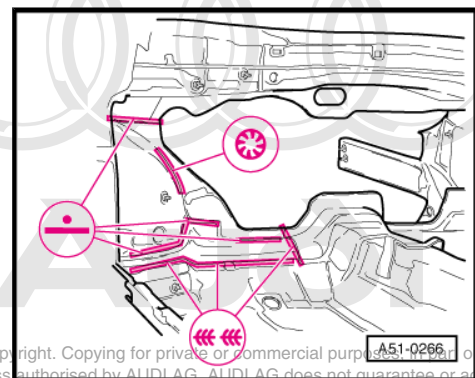
Preparing new part

- Make holes in outer joint surface of new part.
- Transfer separating cut to new part and cut to size.
- Drill dia. 7 mm holes for SG plug weld seam.



3.1.3 Welding in

- At separating cut, SG continuous seam (staggered).
- Weld in new part, RP spot weld seam.
- Weld in remaining joint, SG plug weld seam.



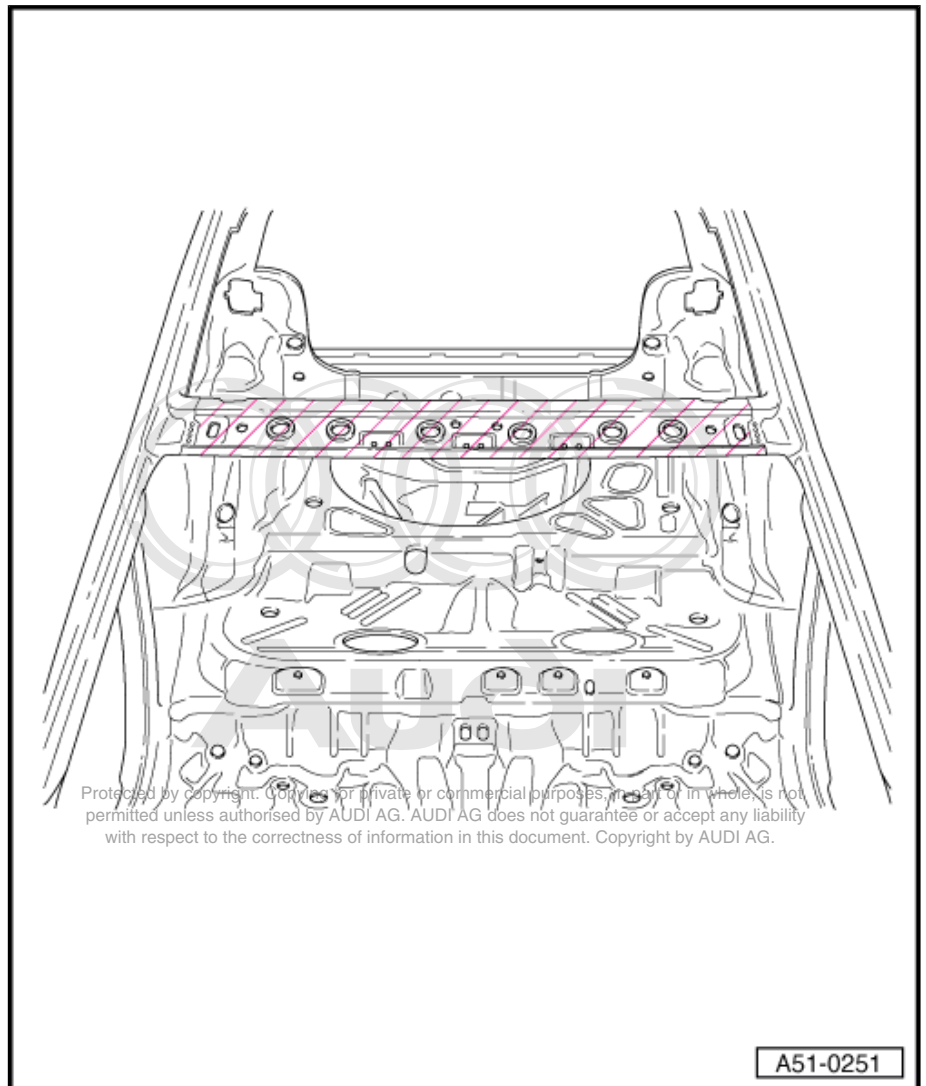
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AP: 51 07 55 50

4 Front roof cross member - Renewal

4.1 Procedure

4.1.1 Cutting locations



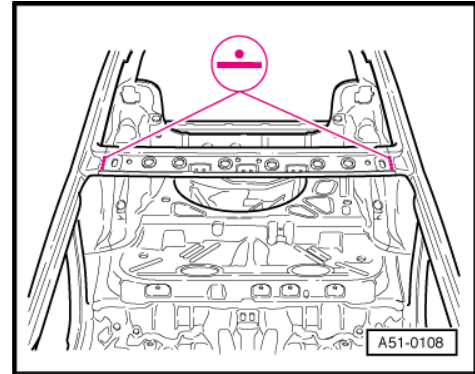
- Roof already removed
- Separate original joint.
- Remove remaining material.

4.1.2 Replacement parts

- ◆ Roof cross member

4.1.3 Welding in

- Match up and fix new part in position.
- Weld in new part, RP spot weld seam.



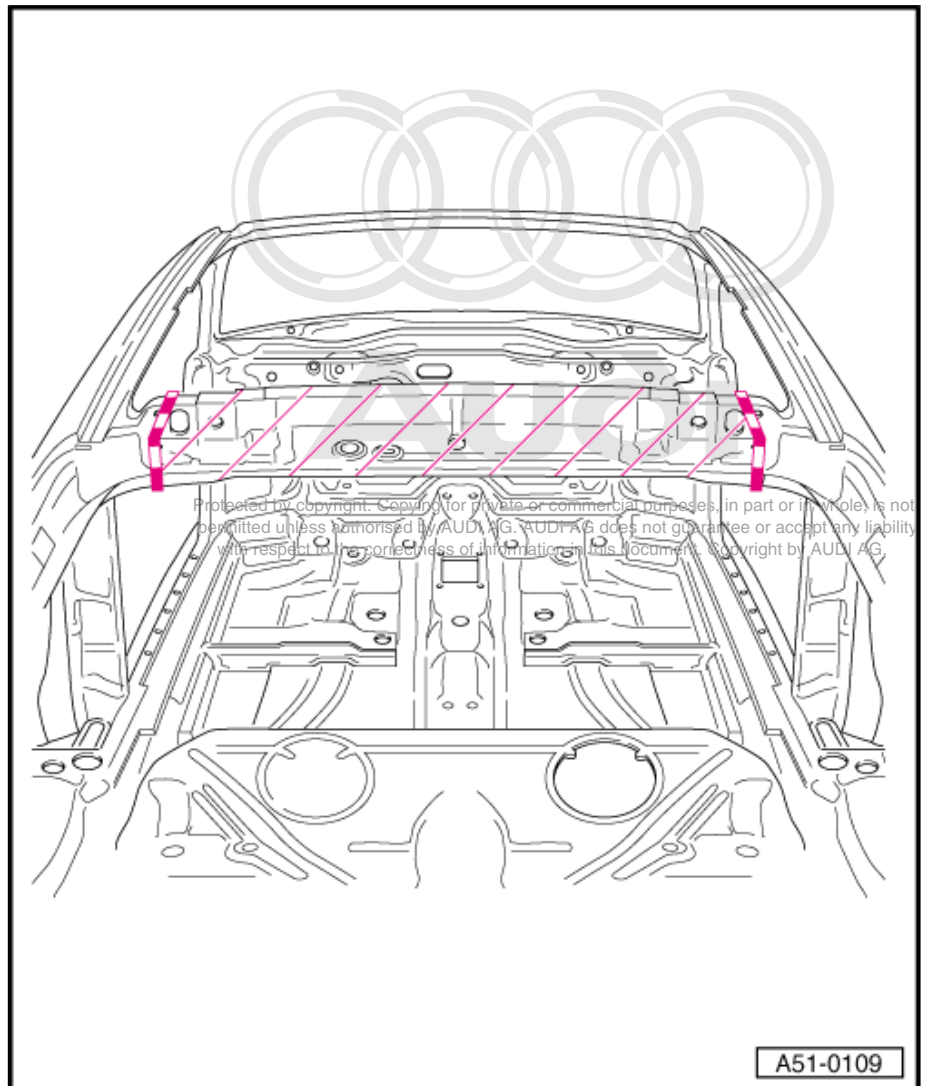
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AP: 51 09 55 50

5 Rear roof frame - Renewal

5.1 Procedure

5.1.1 Cutting locations



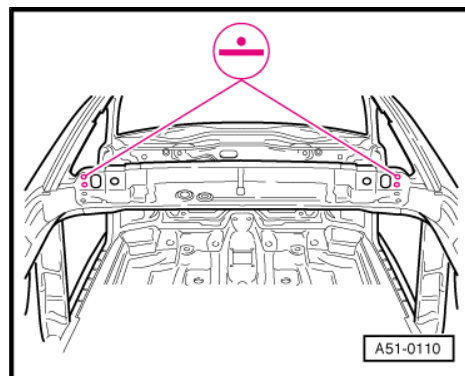
- Roof already removed
- Separating cut
- Remove remaining material.

5.1.2 Replacement part

- ◆ Roof frame

5.1.3 Welding in

- Match up and fix new part in position.
- Weld in new part, RP spot weld seam.



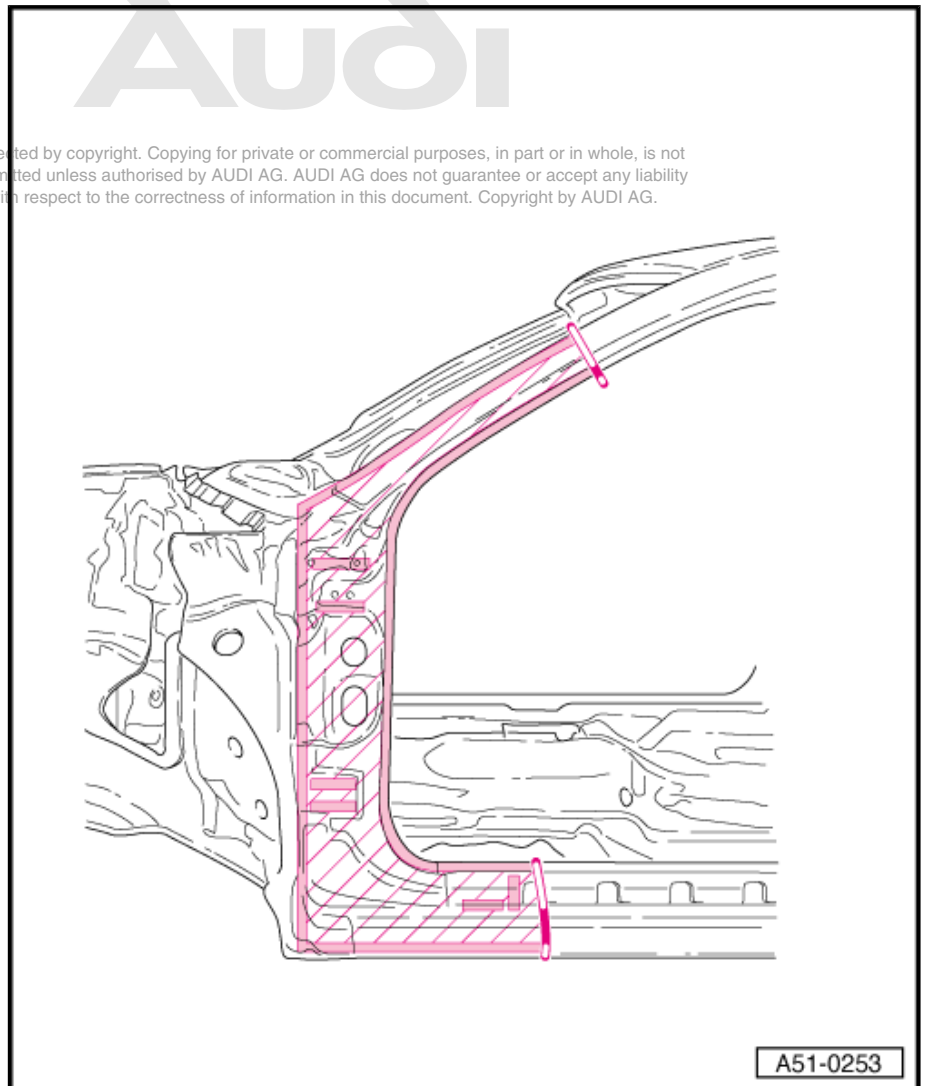
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6 A-pillar - Renewal

6.1 Procedure

6.1.1 Cutting locations



Locate A-pillar on portal gauge supplement -VAS 5007/3A- .

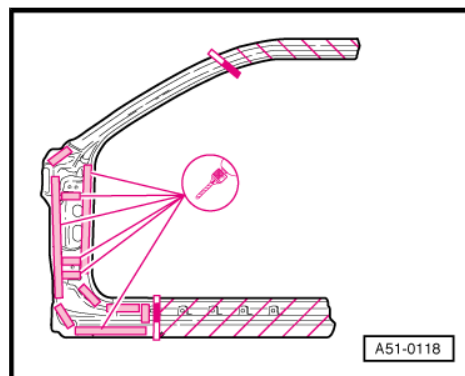
- Make separating cut at top according to extent of damage. Do not cut in vicinity of inner reinforcement.
- Separate original joint.

6.1.2 Replacement part

- ◆ A-pillar (sub-part)

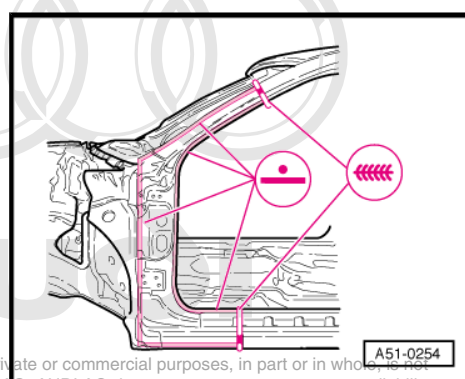
Preparing new part

- Transfer separating cuts to new part and cut off hatched area.
- Drill dia. 7 mm holes for SG plug weld seam.



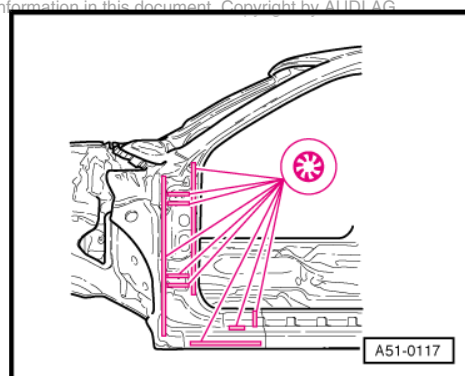
6.1.3 Welding in

- Weld in A-pillar, RP spot weld seam.
- Butt weld separating cuts, SG continuous seam.



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- Weld in A-pillar, SG plug weld seam.
- Weld A-pillar to wheel housing, SG plug weld seam.



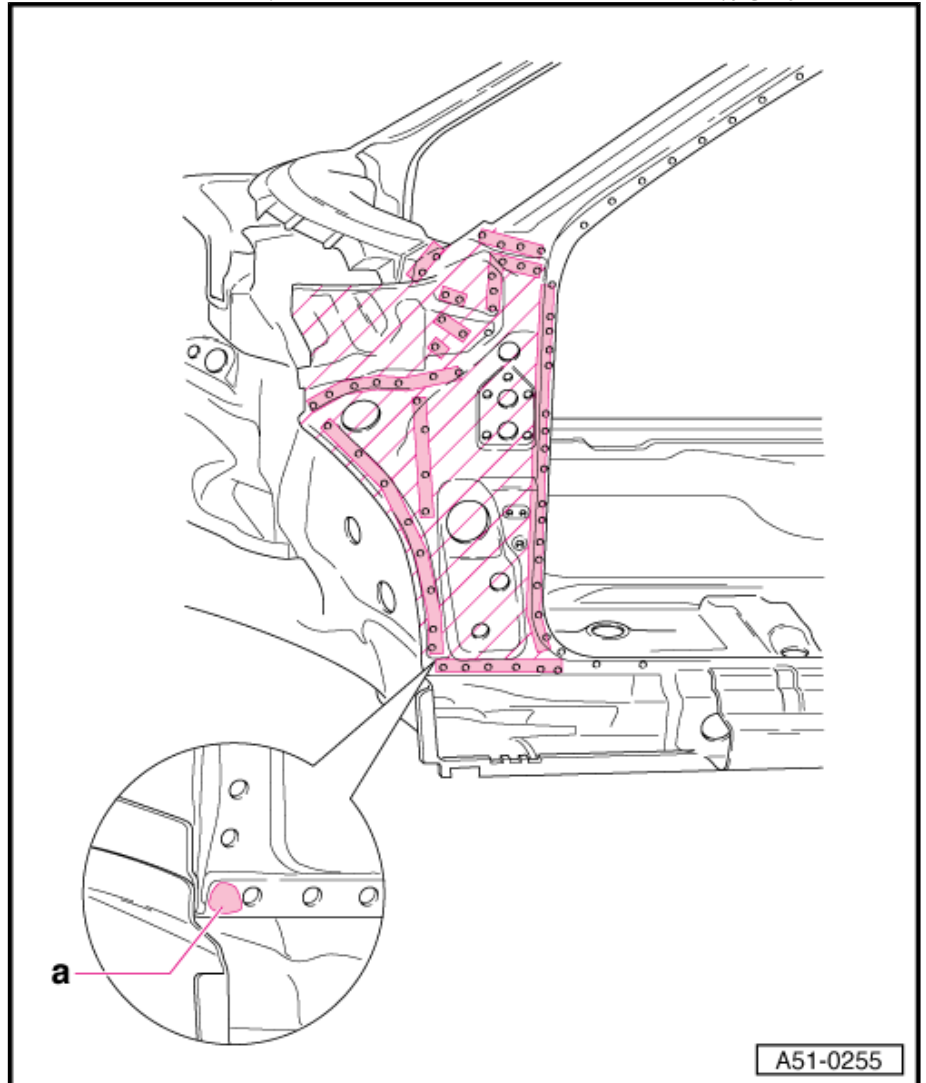
AP: 51 37 55 12

7 Inner A-pillar - Renewal

7.1 Procedure

7.1.1 Cutting locations

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A51-0255

- A-pillar already cut out
- Separate original joint.
- Drill out spot welds - a - from inside.
- Remove remaining material.

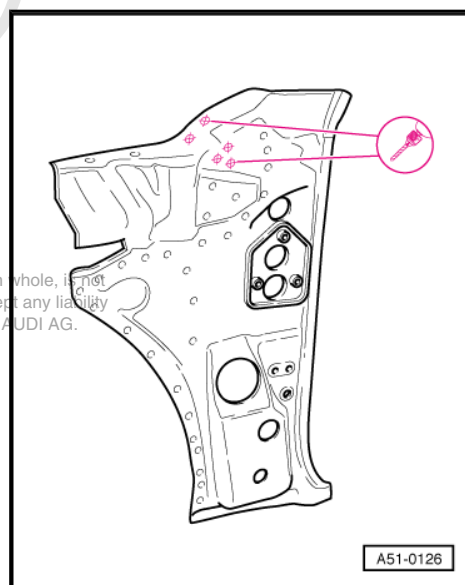
7.1.2 Replacement part

- ◆ Inner A-pillar

Preparing new part

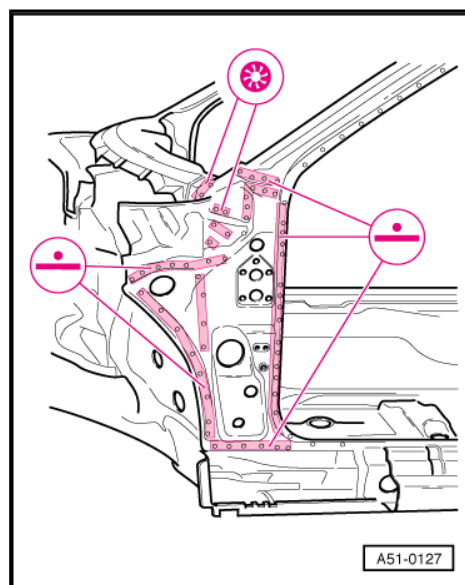
- Drill dia. 7 mm holes for SG plug weld seam.

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7.1.3 Welding in

- Weld in inner A-pillar, RP spot weld seam.
- Weld in A-pillar, SG plug weld seam.

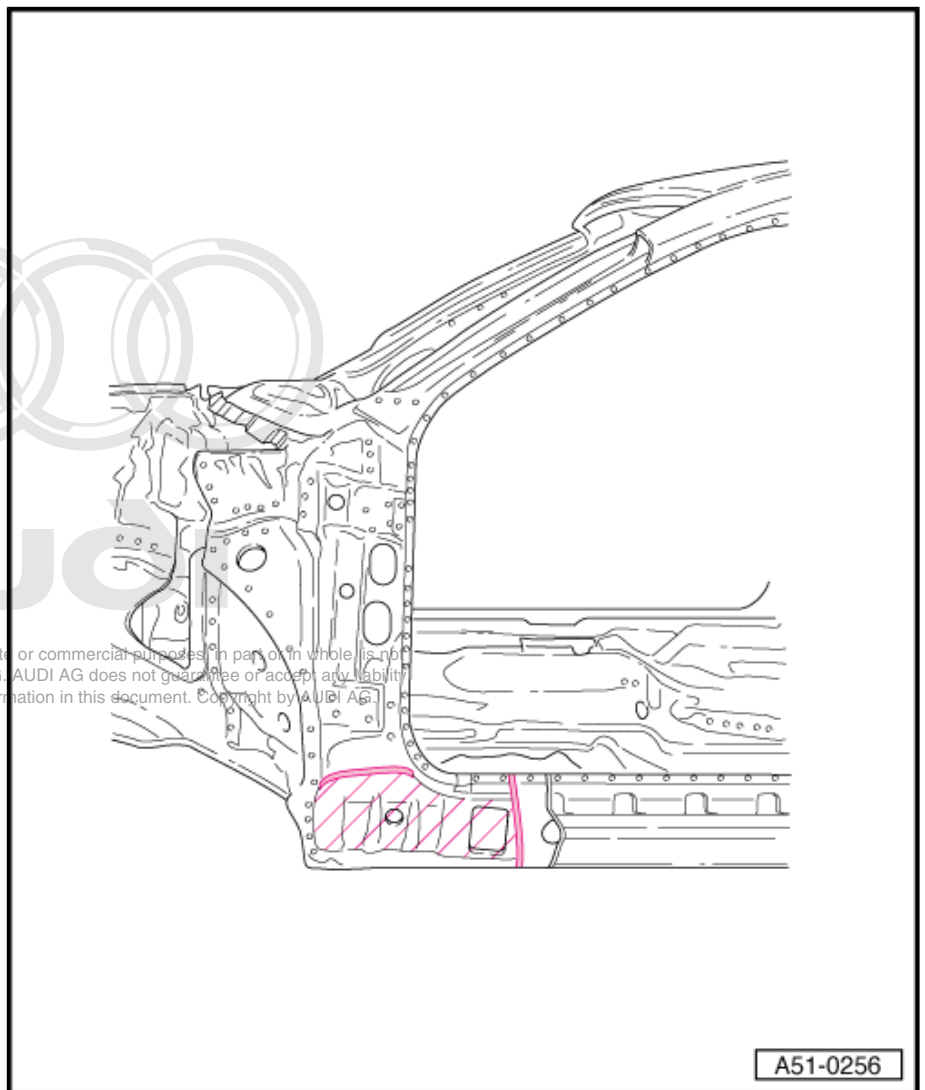


AP: 51 38 55 50

8 A-pillar reinforcement (inner) - Renewal

8.1 Procedure

8.1.1 Cutting locations



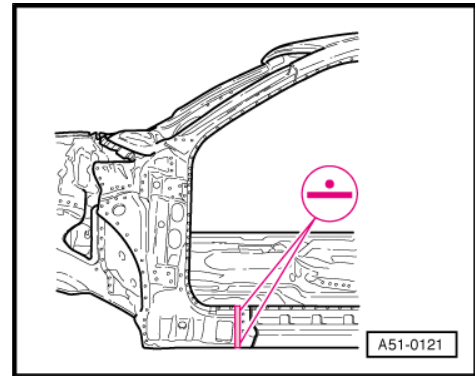
- Separate original joint.
- Remove adhesive remnants with knife and scraper.

8.1.2 Replacement part

- ◆ A-pillar reinforcement

8.1.3 Welding in

- Weld in inner A-pillar, RP spot weld seam.
- Double the number of spot welds as replacement for adhesive.



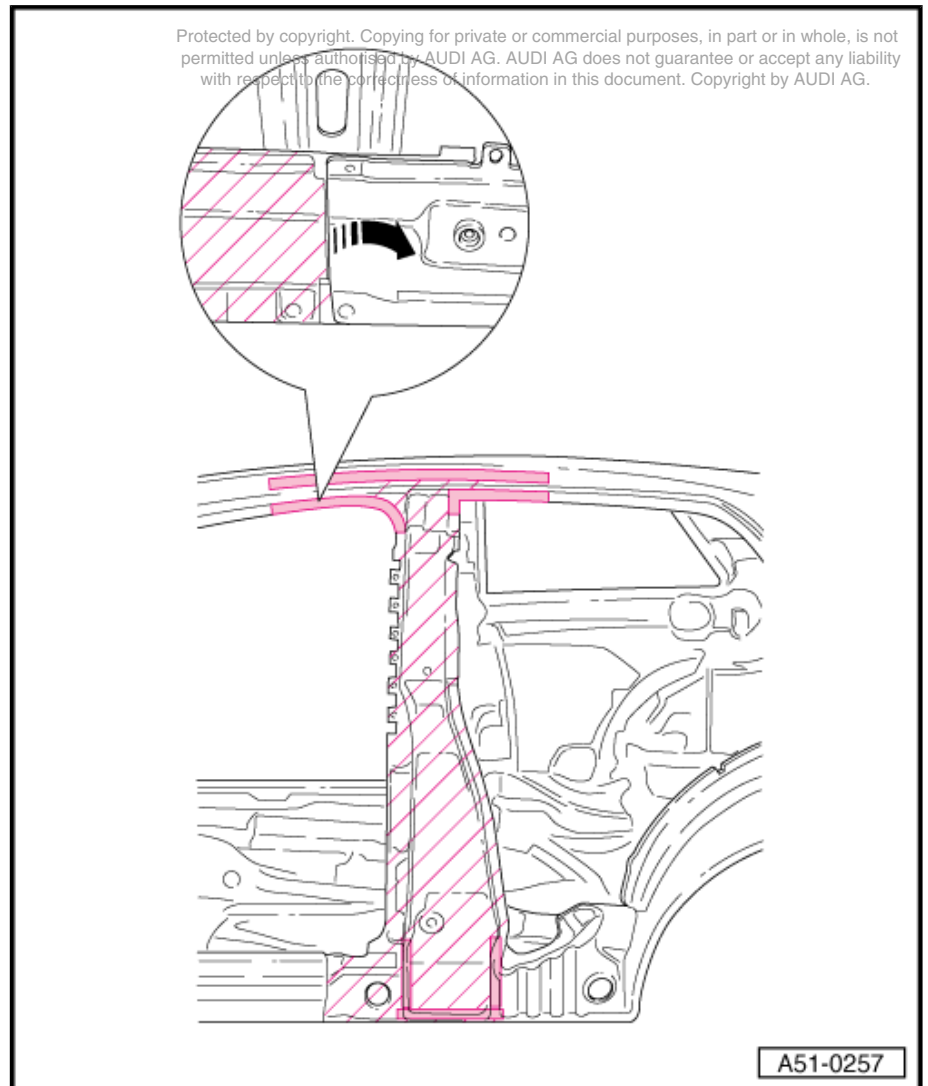
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9 B-pillar (3-door) - Renewal

9.1 Procedure

9.1.1 Cutting locations



Locate B-pillar on portal gauge supplement -VAS 5007/3A- .

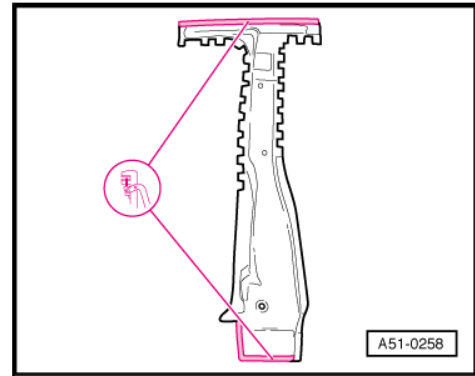
- Slightly bend open inner A-pillar reinforcement.
- Separate original joint.
- Remove remaining material.

9.1.2 Replacement part

- ◆ Inner B-pillar

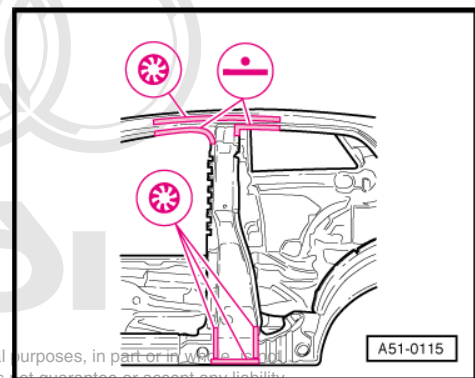
Preparing new part

- Make holes in outer joint surface of new part.



9.1.3 Welding in

- Weld in inner B-pillar, SG plug weld seam.
- Spot weld inner B-pillar, RP spot weld seam.



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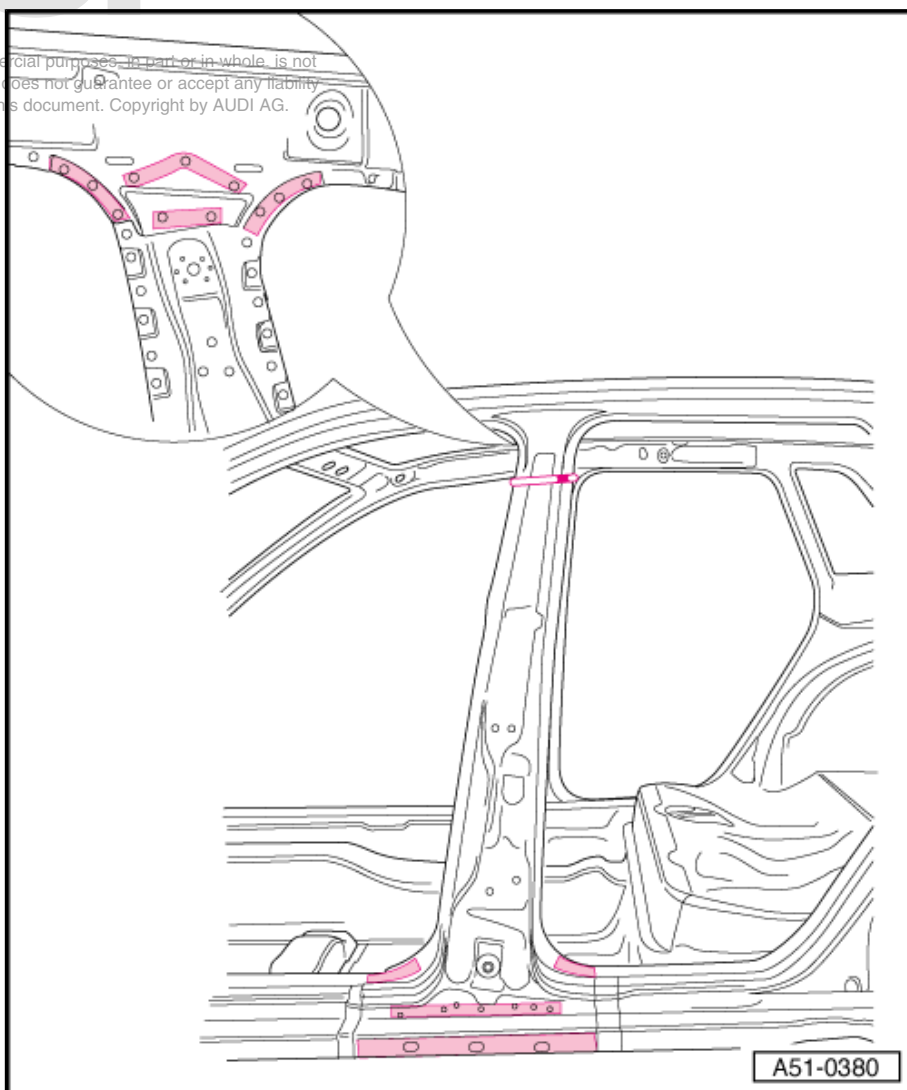
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10 Inner B-pillar (5-door) - Renewal

10.1 Procedure

10.1.1 Cutting locations

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- Locate B-pillar on portal gauge supplement -VAS 5007/3A- .
- Outer B-pillar already removed
- Separate inner B-pillar 40 mm further down.
- Separate original joint.
- Pull out B-pillar downwards.
- Remove remaining material.

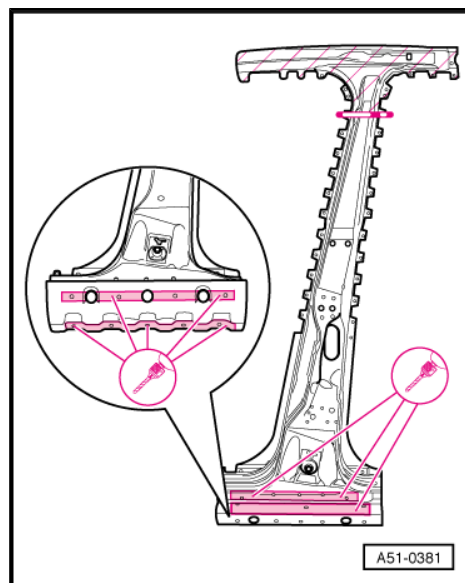
10.1.2 Replacement part

- ◆ Inner B-pillar

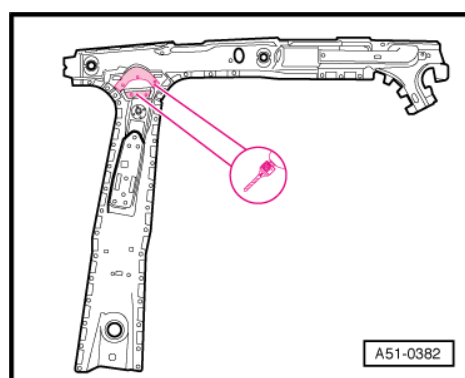
- ◆ Inner roof frame to inner B-pillar reinforcement.

Preparing new parts

- Transfer separating cut to new part and cut off hatched area.
- Drill dia. 7 mm holes for SG plug weld seam.



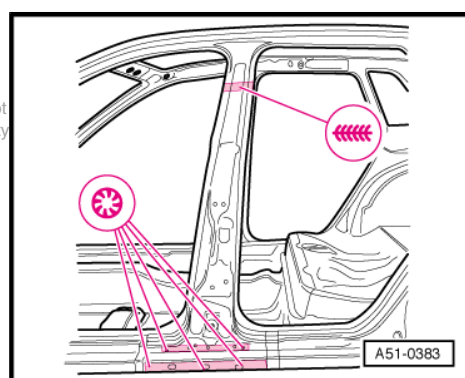
- Drill inner roof frame off inner B-pillar reinforcement.



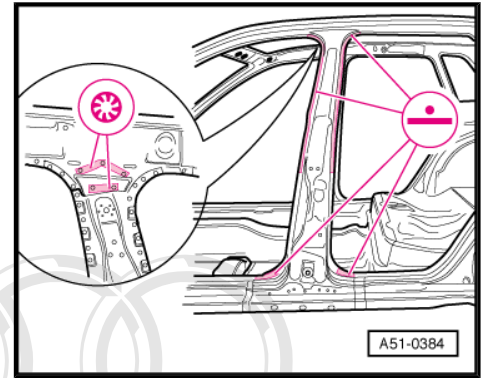
10.1.3 Welding in

- Locate B-pillar on portal gauge supplement -VAS 5007/3A- .
- Weld in inner B-pillar, SG plug weld seam.
- Butt weld B-pillar separating cut, SG continuous seam.

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- Weld in new part, SG plug weld seam.
- Spot weld inner B-pillar, RP spot weld seam.



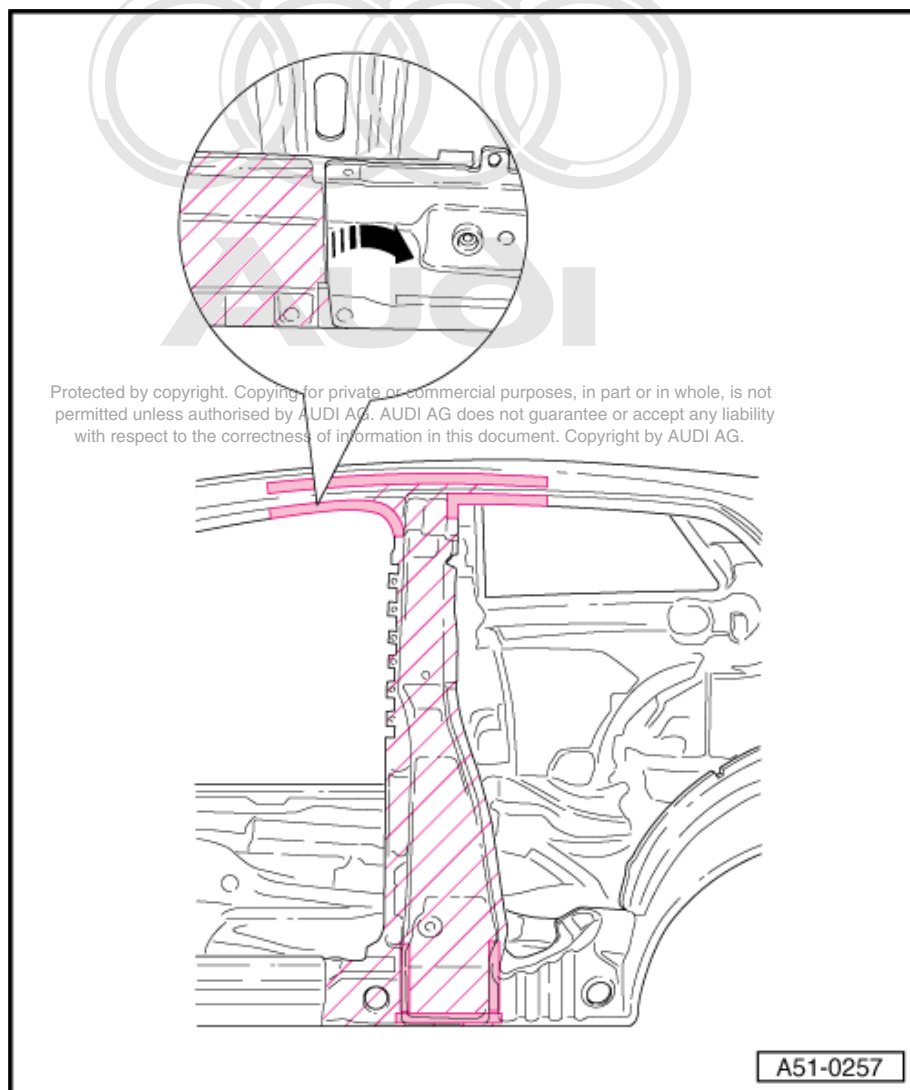
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11 B-pillar (3-door) - Renewal

11.1 Procedure

11.1.1 Cutting locations



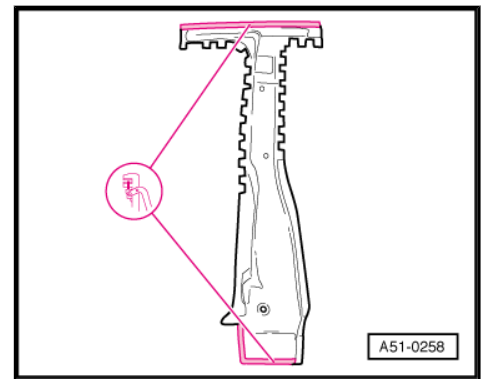
- Locate B-pillar on portal gauge supplement -VAS 5007/3A- .
- Cut out as shown. Take care not to damage internal reinforcement.
- Separate original joint.
- Remove remaining material.

11.1.2 Replacement part

- ◆ Side panel

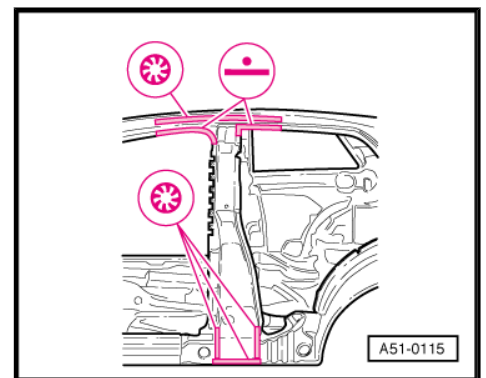
Preparing new part

- Make holes in outer joint surface of new part.



11.1.3 Welding in

- Match up B-pillar with no load on vehicle and tack weld.
- Weld in inner B-pillar, SG plug weld seam.
- Spot weld inner B-pillar, RP spot weld seam.



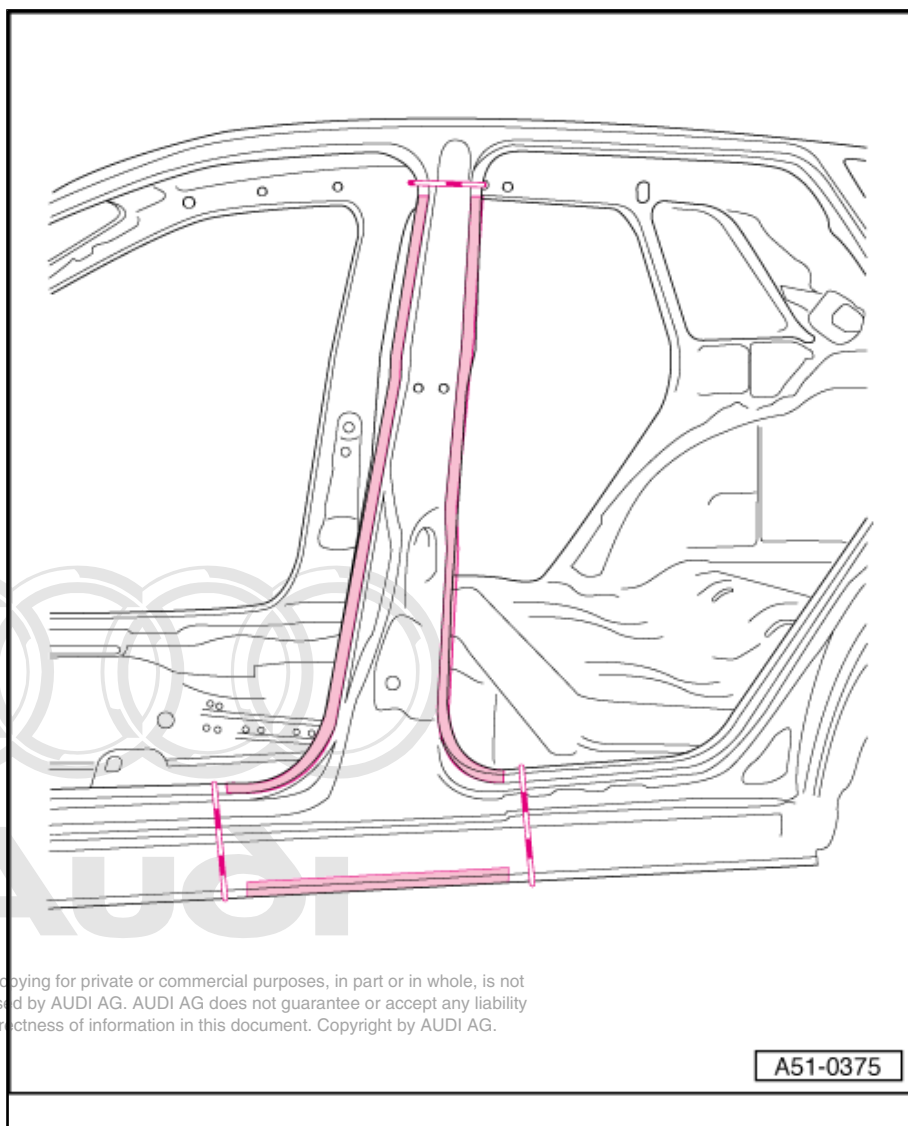
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12 B-pillar (5-door) - Renewal

12.1 Procedure

12.1.1 Cutting locations



Locate B-pillar on portal gauge supplement -VAS 5007/3A- .

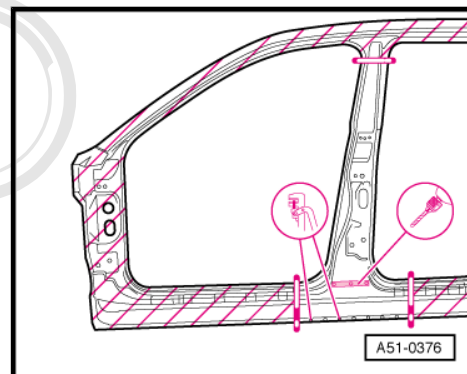
- Position separating cuts according to degree of damage and cut out.
- Make separating cut on B-pillar according to degree of damage.
- Separate original joint.
- Remove remaining material.

12.1.2 Replacement part

- ◆ Sub-part A-pillar to B-pillar

Preparing new part

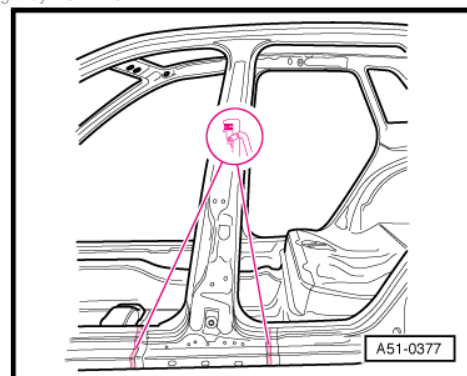
- Transfer separating cut to new part and cut off hatched area.
- Drill dia. 7 mm holes for SG plug weld seam.
- Make holes every 20 mm in outer joint surface of new part.



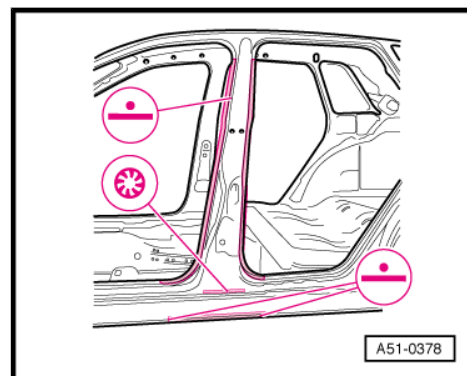
12.1.3 Welding in

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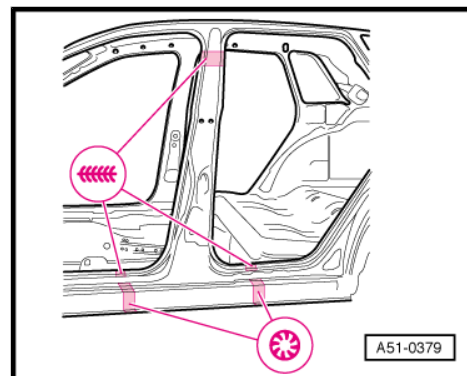
- Step separating cut at body.



- Match up B-pillar with no load on vehicle and tack weld.
- Weld in B-pillar, SG plug weld seam.
- Spot weld B-pillar, RP spot weld seam.



- Weld overlap, SG plug weld seam.
- Butt weld separating cut, SG continuous seam.
- Weld in remaining joint, SG continuous seam.
- Tin overlap area.



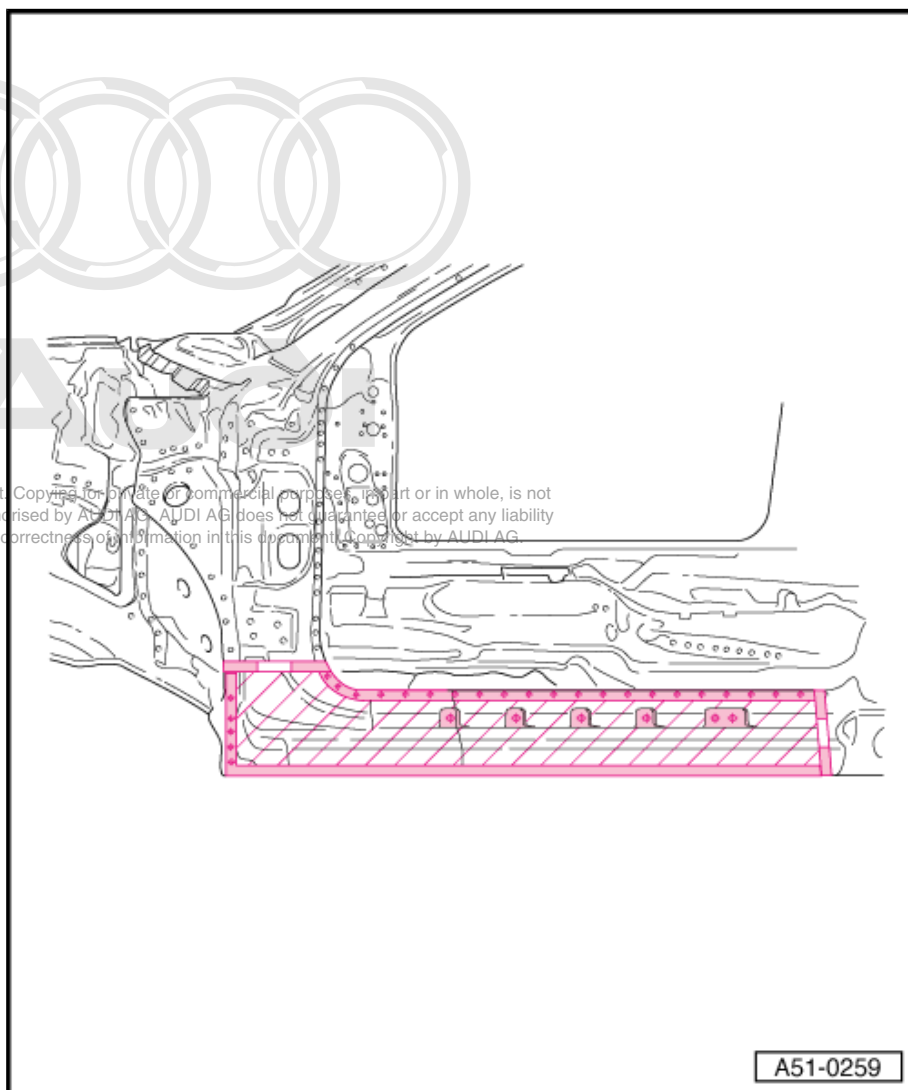
AP: 51 45 55 00

13 Outer side member (3-door) - Renewal

13.1 Procedure

13.1.1 Cutting locations

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- Separate original joint. Inner reinforcement must be drilled off.
- Make separating cuts in side member according to extent of damage.
- Remove remaining material.

**Note:**

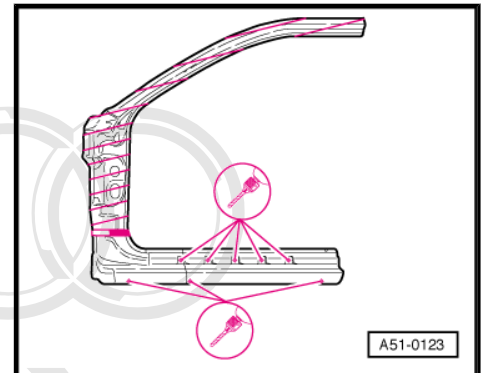
Do not damage inner reinforcement in vicinity of side member.

13.1.2 Replacement part

- ◆ Side member (sub-part)

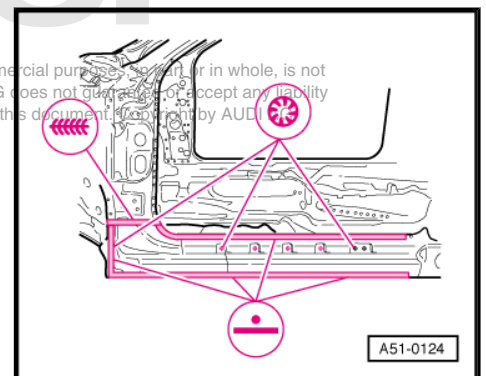
Preparing new part

- Transfer separating cut to new part and cut off hatched area.
- Drill side member for plug welding.



13.1.3 Welding in

- Weld in side member, SG plug weld seam.
- Butt weld separating cuts, SG continuous seam.
- Weld in side member, RP spot weld seam.

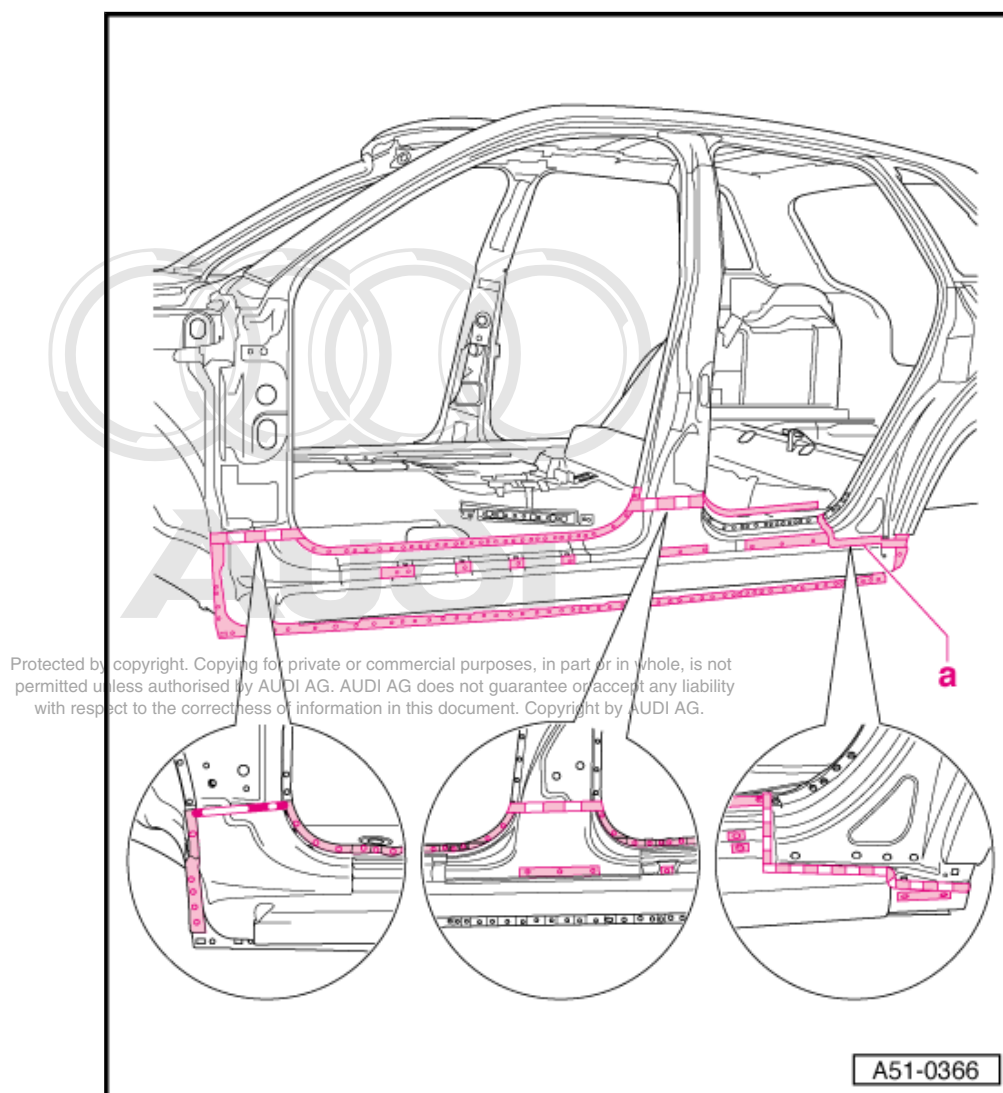


AP: 51 45 55 00

14 Outer side member (5-door) - Renewal

14.1 Procedure

14.1.1 Cutting locations



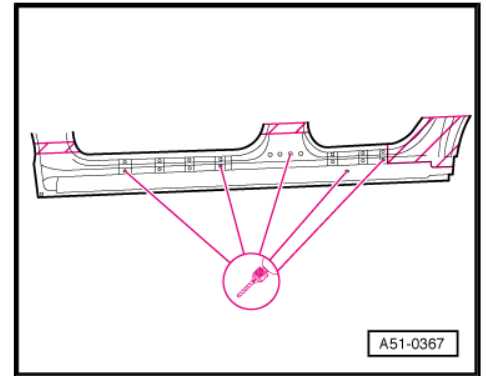
- Separate original joint.
- Make separating cut -a- as shown. Take care not to damage internal reinforcement.
- Make separating cuts in side member according to extent of damage.
- Remove remaining material.

14.1.2 Replacement part

- ◆ Side member (sub-part)

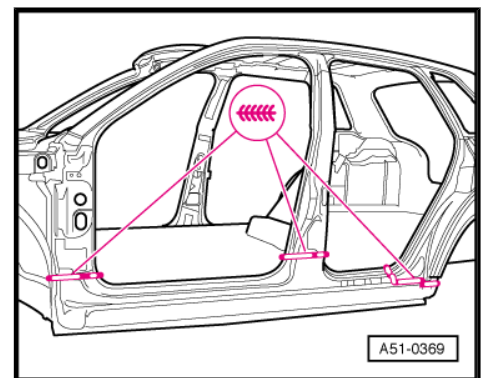
Preparing new part

- Transfer separating cut to new part and cut off hatched area.
- Drill side member for plug welding.

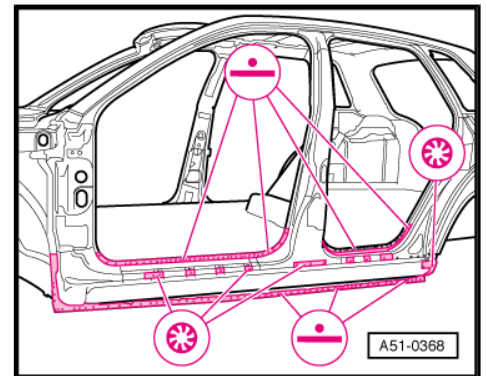


14.1.3 Welding in

- Butt weld separating cuts, SG continuous seam.



- Weld in side member, SG plug weld seam.
- Weld in side member, RP spot weld seam.



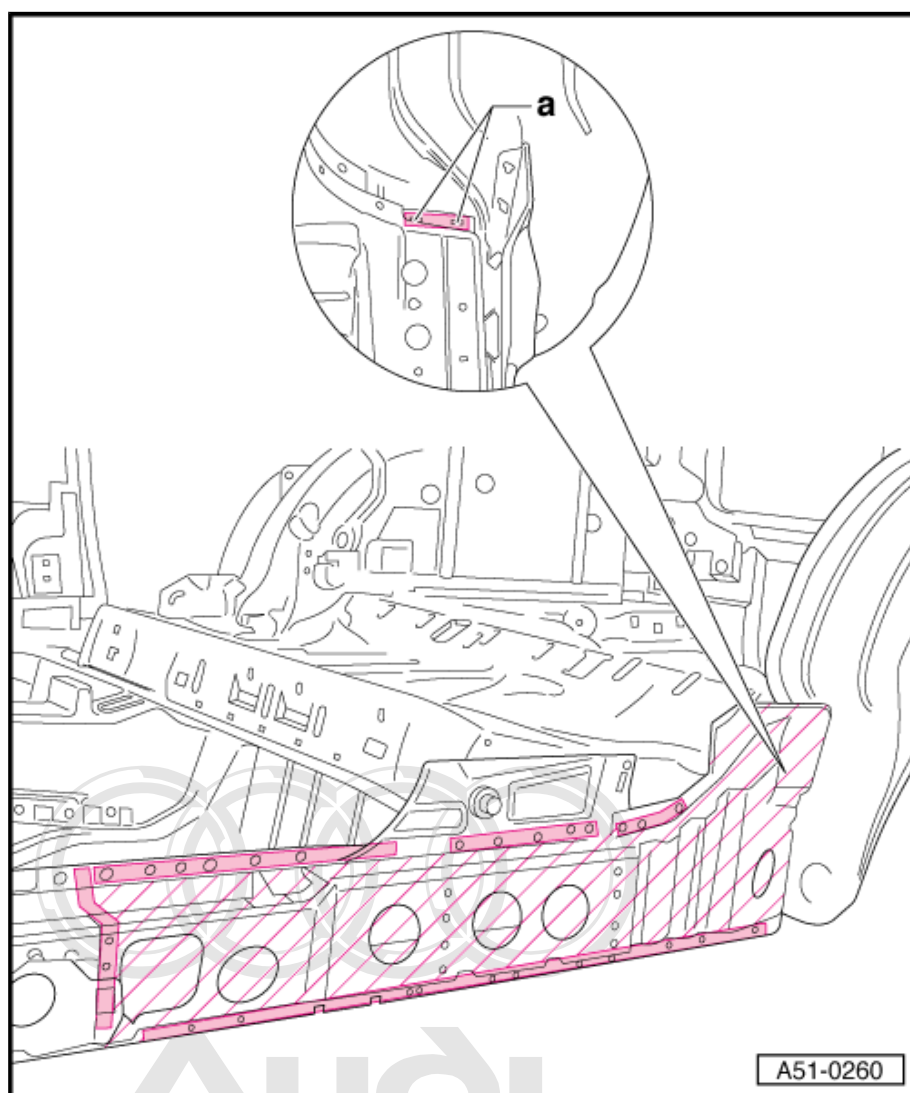
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15 Inner side member (3-door) - Renewal

15.1 Procedure

15.1.1 Cutting locations



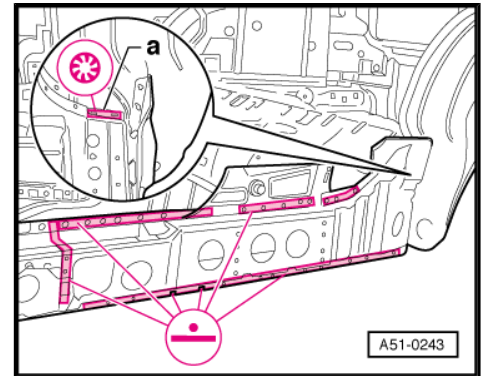
- Side panel already cut out
- Inner B-pillar already cut out
- Separate original joint.
- Drill out spot welds -a- at outer wheel housing.
- Remove remaining material.

15.1.2 Replacement part

- ◆ Bulkhead plate

15.1.3 Welding in

- Weld in bulkhead plate, RP spot weld seam.
- Weld in bulkhead plate at wheel housing, SG plug weld seam.



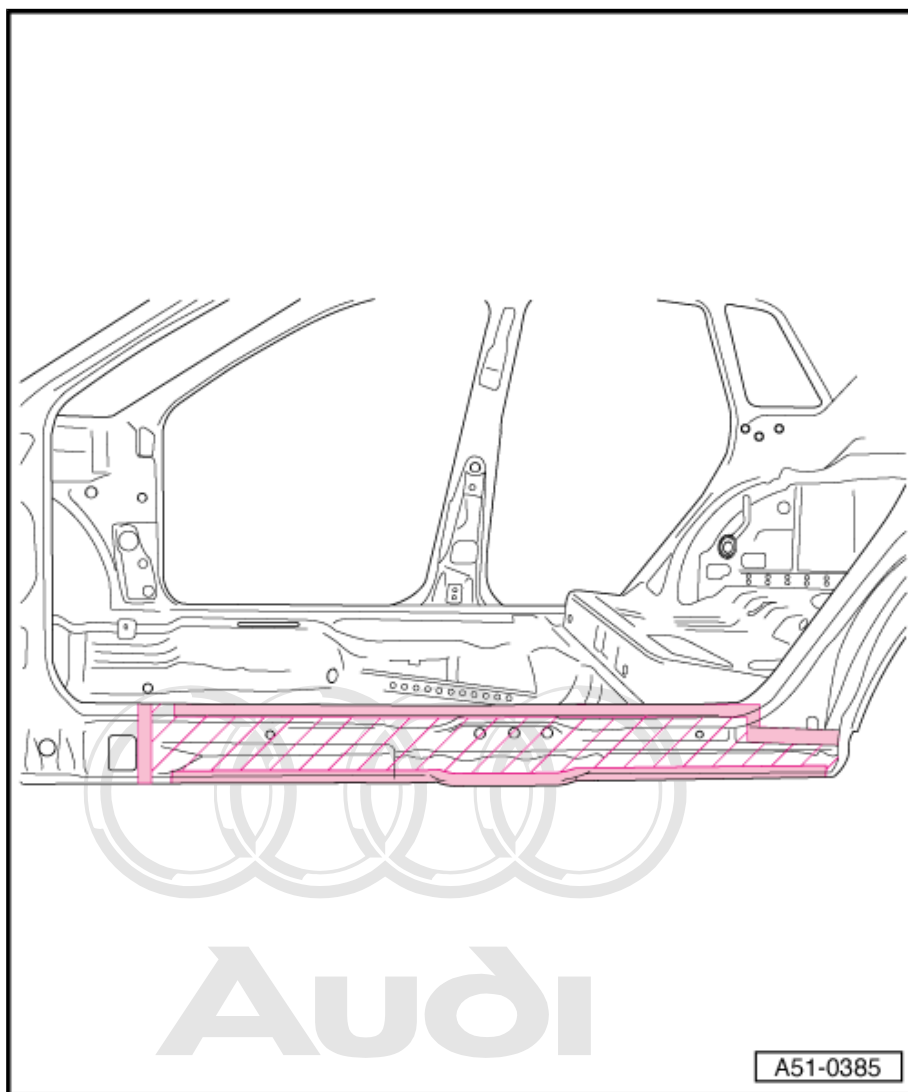
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16 Inner side member (5-door) - Renewal

16.1 Procedure

16.1.1 Cutting locations



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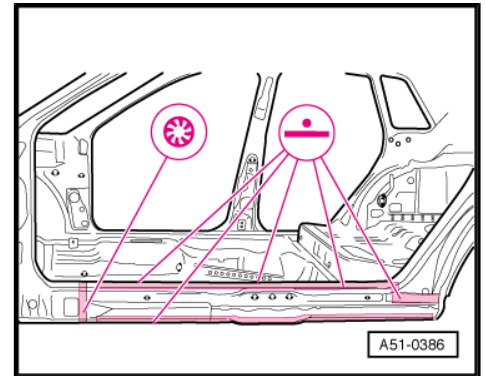
- Side member, outer B-pillar and inner B-pillar already removed.
- Separate original joint.
- Make separating cuts in side member according to extent of damage.
- Remove remaining material.

16.1.2 Replacement part

- ◆ Inner side member

16.1.3 Welding in

- Weld in side member, RP spot weld seam.
- Butt weld separating cut, SG continuous seam.
- Instead of bonding, joint with A-pillar reinforcement is additionally welded, 3 x SG plug weld seam.



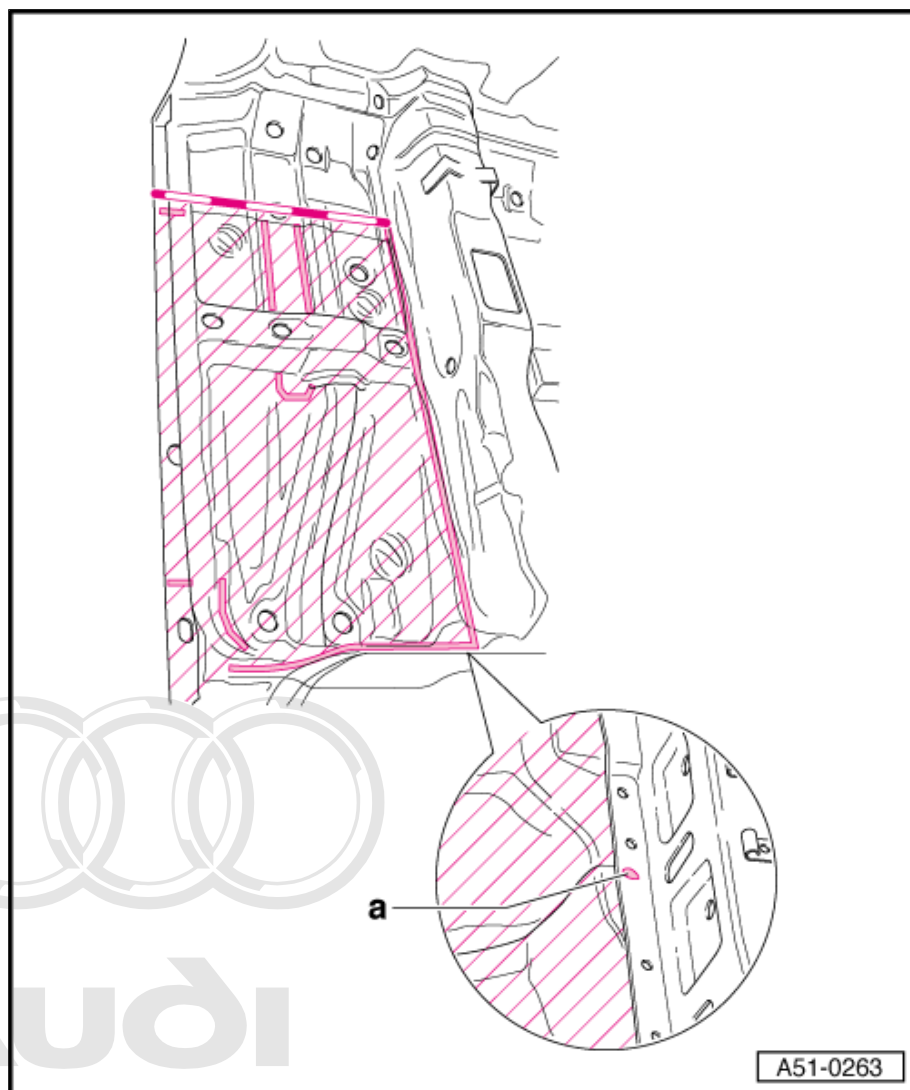
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17 Floor panel - Renewal

17.1 Procedure

17.1.1 Cutting locations



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- Associated operations: Outer side member, fillet plate and inner sill panel removed.
- A-pillar and inner A-pillar already removed
- Side panel and inner B-pillar already removed.
- Make separating cut according to extent of damage.
- Separate original joint.
- Drill off spot weld -a- (two metal thicknesses).
- Remove remaining material.

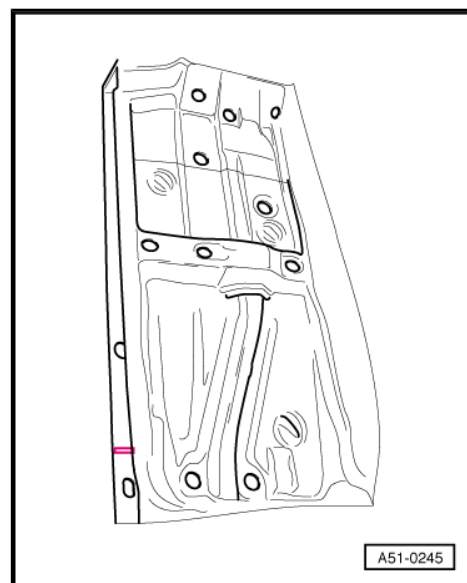
17.1.2 Replacement part

◆ Floor panel sub-part

Preparing new part

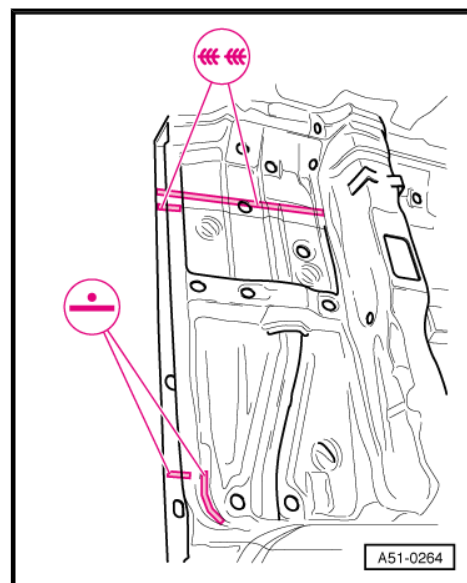
- Transfer separating cut to new part plus 20 mm for overlap.
Cut off hatched area.
- Make holes in outer joint surface of new part.
- Drill dia. 7 mm holes for SG plug weld seam.

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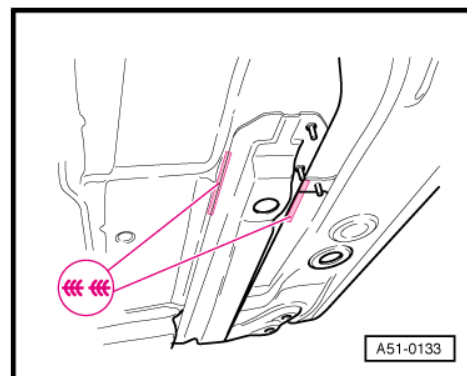


17.1.3 Welding in

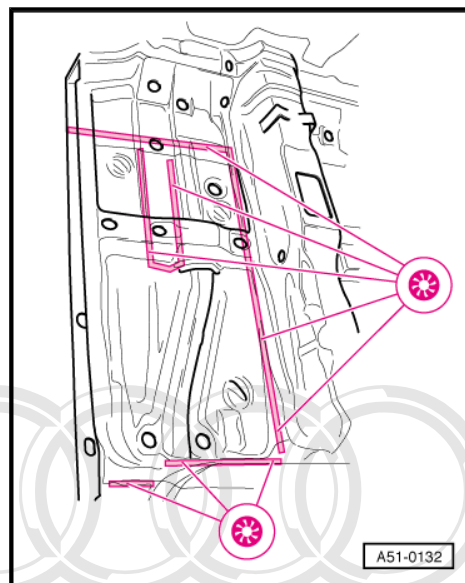
- Weld in new part, SG continuous seam (staggered).
- Weld in new part, RP spot weld seam.



- Weld floor panel from underneath to longitudinal member, 2 x 15 mm on both sides, SG continuous seam (staggered).



- Weld in remaining joint, SG plug weld seam.



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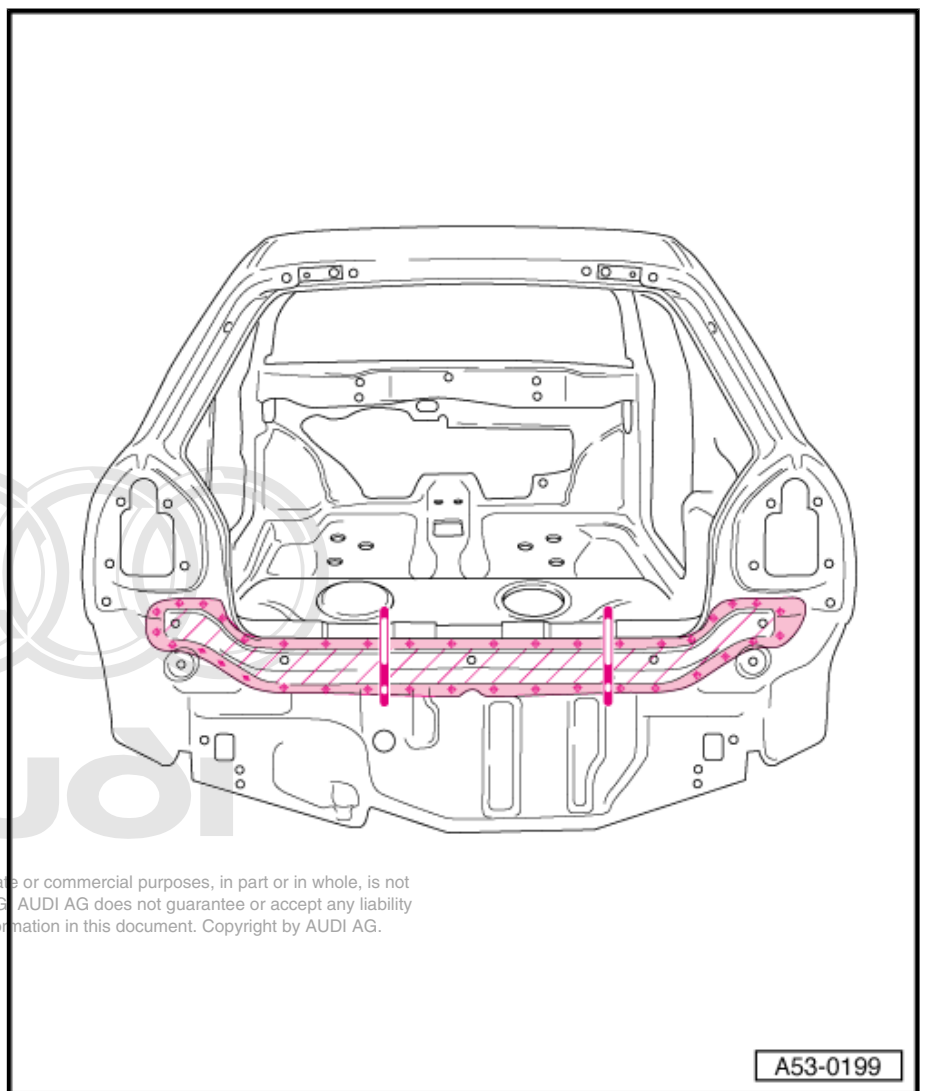
53 – Body - rear

AP: 53 05 55 00

1 Rear cross panel (top section) - Renewal

1.1 Procedure

1.1.1 Cutting locations



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- Separate original joint.
- Detach part.

**Note:**

Partial replacement is possible with the separating cuts illustrated. SG continuous butt weld in the separated area.

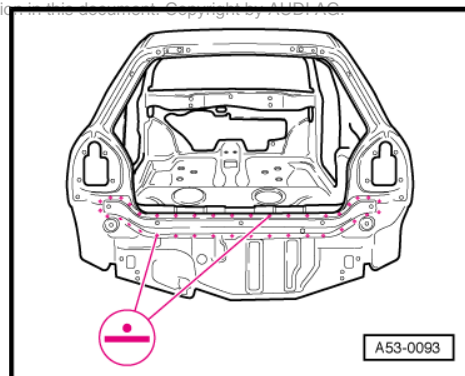
1.1.2 Replacement part

- ◆ Rear cross panel

1.1.3 Welding in

- Spot weld rear cross panel, RP spot weld seam.

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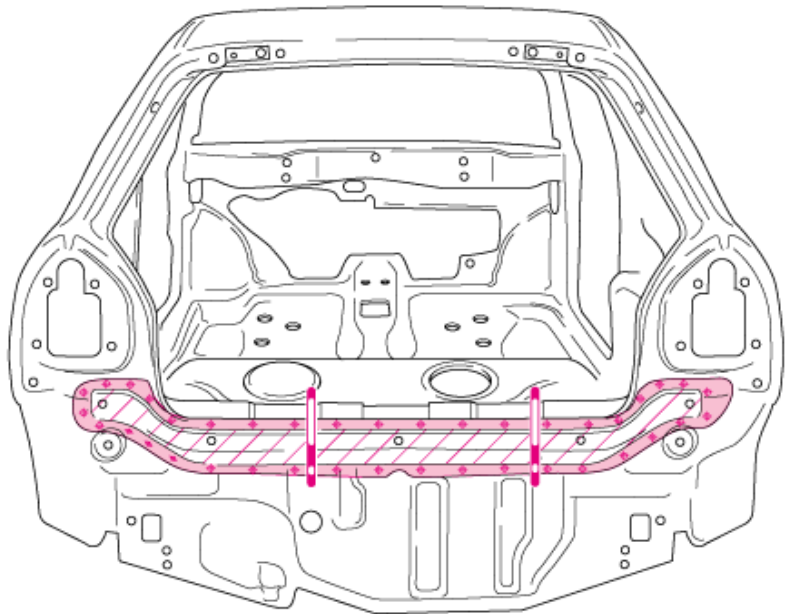
AP: 53 05 55 00

2 Rear cross panel (top section) - Renewal

2.1 Procedure

2.1.1 Cutting locations

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- Separate original joint.
- Detach part.



Note:

Partial replacement is possible with the separating cuts illustrated. SG continuous butt weld in the separated area.

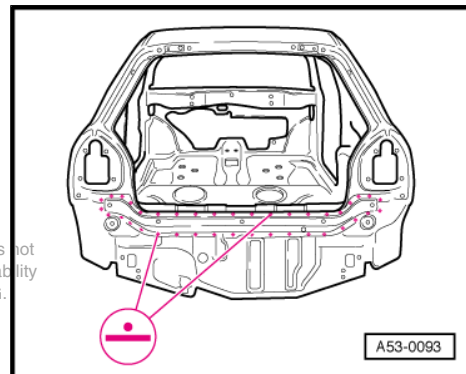
2.1.2 Replacement part

- ◆ Rear cross panel

2.1.3 Welding in

- Spot weld rear cross panel, RP spot weld seam.

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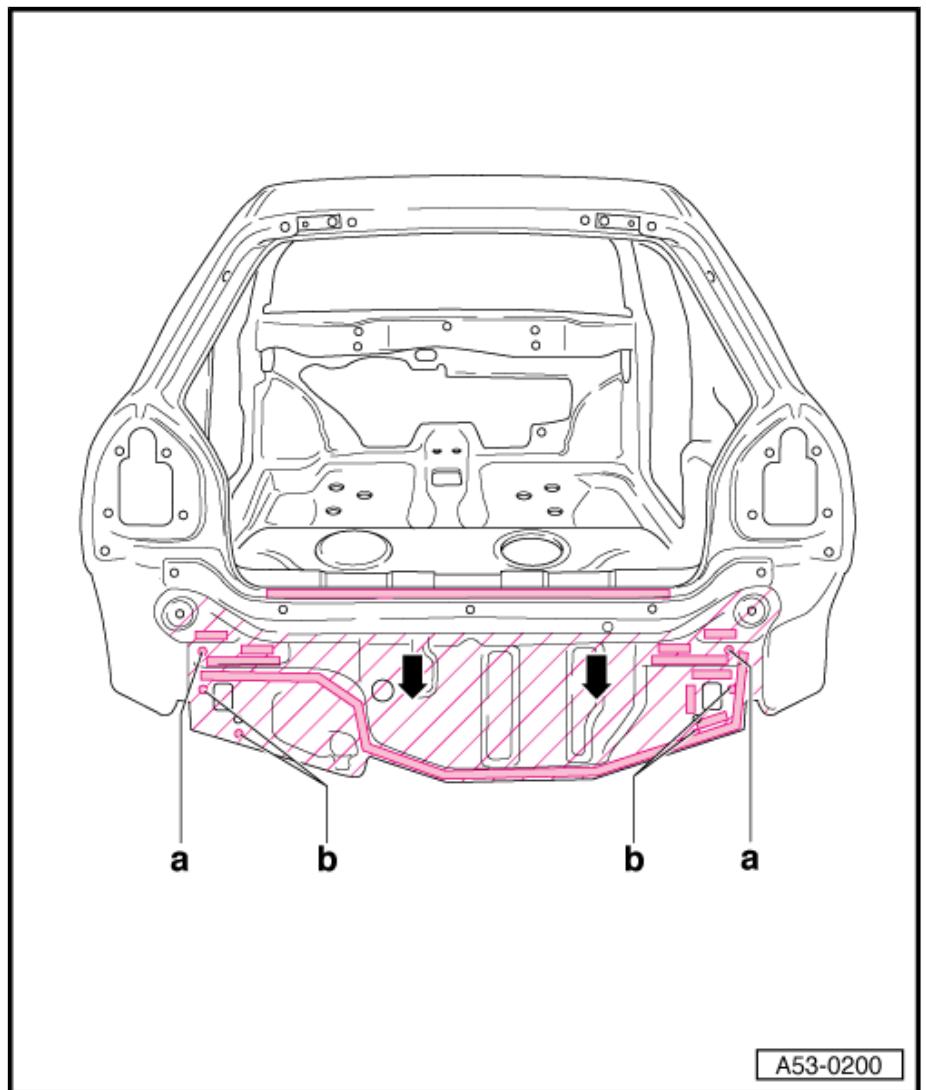
AP: 53 05 55 50

3 Rear cross panel (inner section) - Renewal

3.1 Procedure

3.1.1 Cutting locations

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- Separate original joint.
- Drill out spot welds -a- from inside.
- Grind off threaded rivets -b- with angle grinder.
- Pull out part downwards -arrow-.
- Remove remaining material.

**Note:**

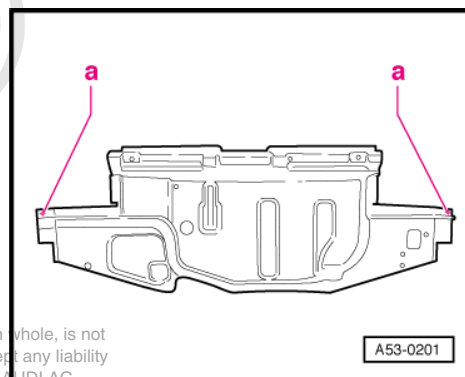
- ◆ *Top section of rear cross panel does not have to be removed.*
- ◆ *Set threaded rivets with riveting tool -V.A.G 1765 A- .*

3.1.2 Replacement part

- ◆ Rear cross panel

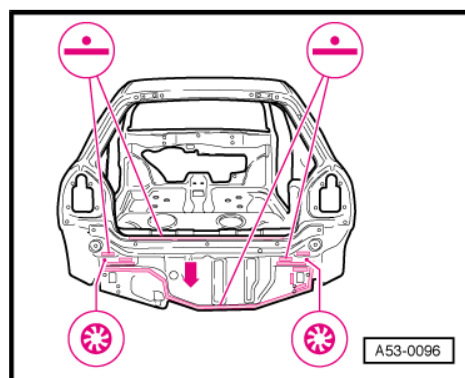
Preparing new part

- Drill dia. 7 mm holes for SG plug weld seam.



3.1.3 Welding in

- Insert part from below between tail light mounting and bottom reinforcement.
- Spot weld rear cross panel, RP spot weld seam.
- Weld in remaining joint, SG plug weld seam.

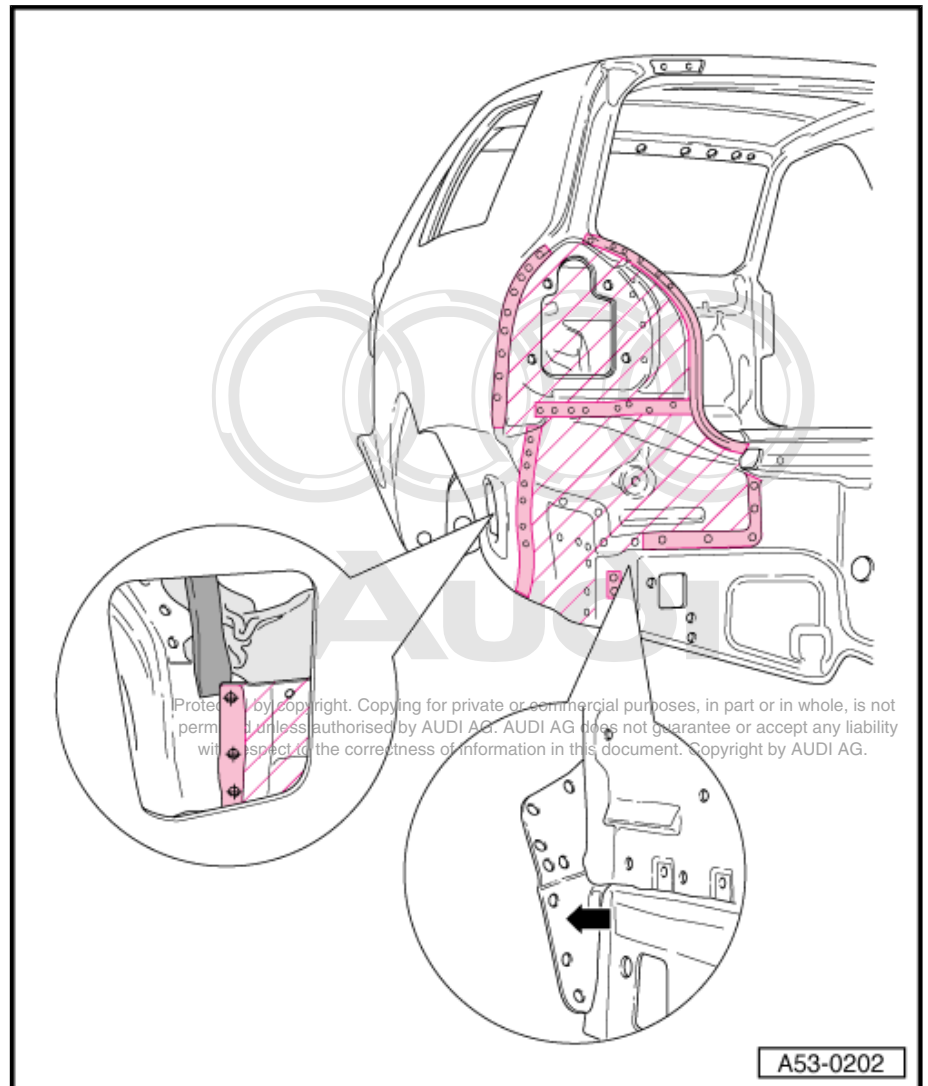


AP: 53 10 55 00

4 Tail light mounting - Renewal

4.1 Procedure

4.1.1 Cutting locations



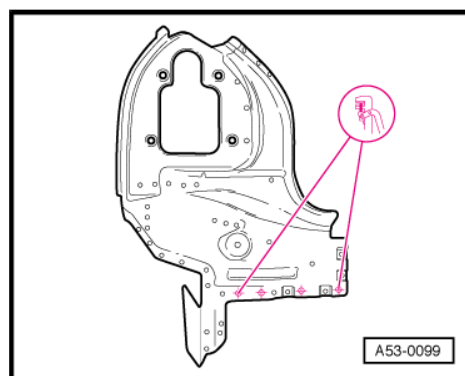
- Top section of rear cross panel already removed
- Separate original joint.
- Bend open side panel in direction of arrow.
- Separate spot welds between side panel and wheel housing using a chisel.
- Remove remaining material.

4.1.2 Replacement part

- ◆ Tail light mounting

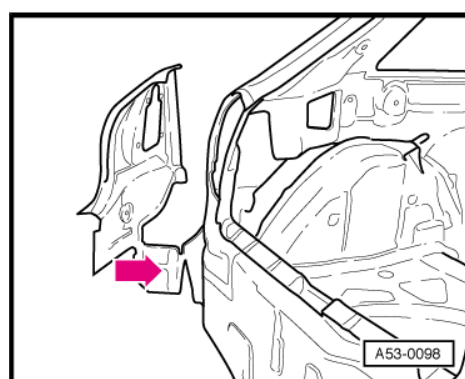
Preparing new part

- Make holes in outer joint surface of new part.

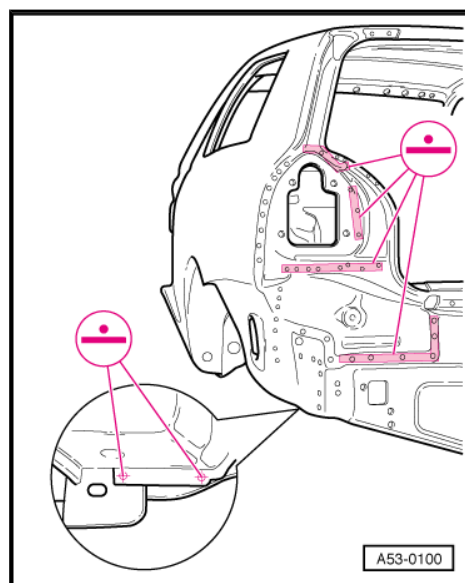


4.1.3 Welding in

- Insert part. To do this, first slide part at bottom between side panel and wheel housing and slide upwards. Align part above hole in longitudinal member.

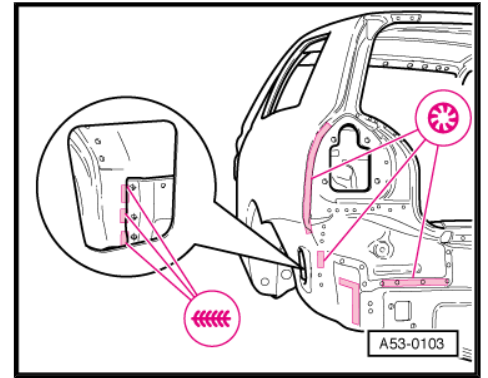


- Match up and fix new part in position.
- Weld in mounting plate, RP spot weld seam.



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- Weld in remaining joint, SG plug weld seam.
- Weld in mounting plate, 3x15 mm SG continuous seam



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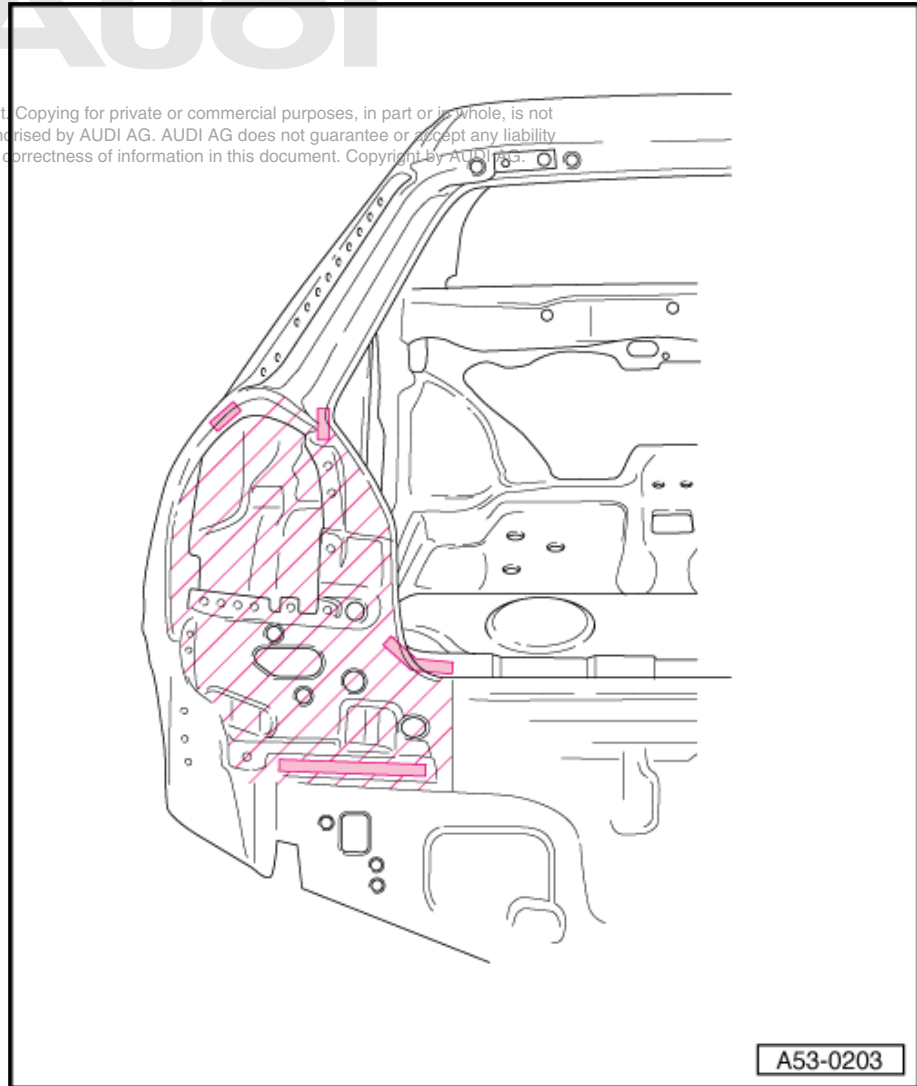
AP: 53 10 55 50

5 Reinforcement for tail light mounting

5.1 Procedure

5.1.1 Cutting locations

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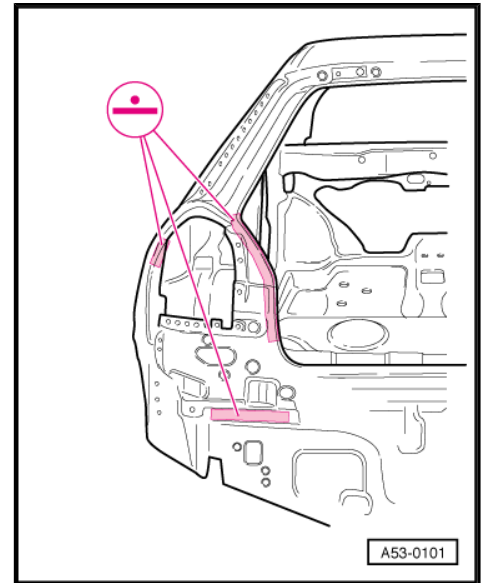
- Separate original joint.
- Remove remaining material.

5.1.2 Replacement part

- ◆ Reinforcement

5.1.3 Welding in

- Fix reinforcement in position and weld in, RP spot weld seam.



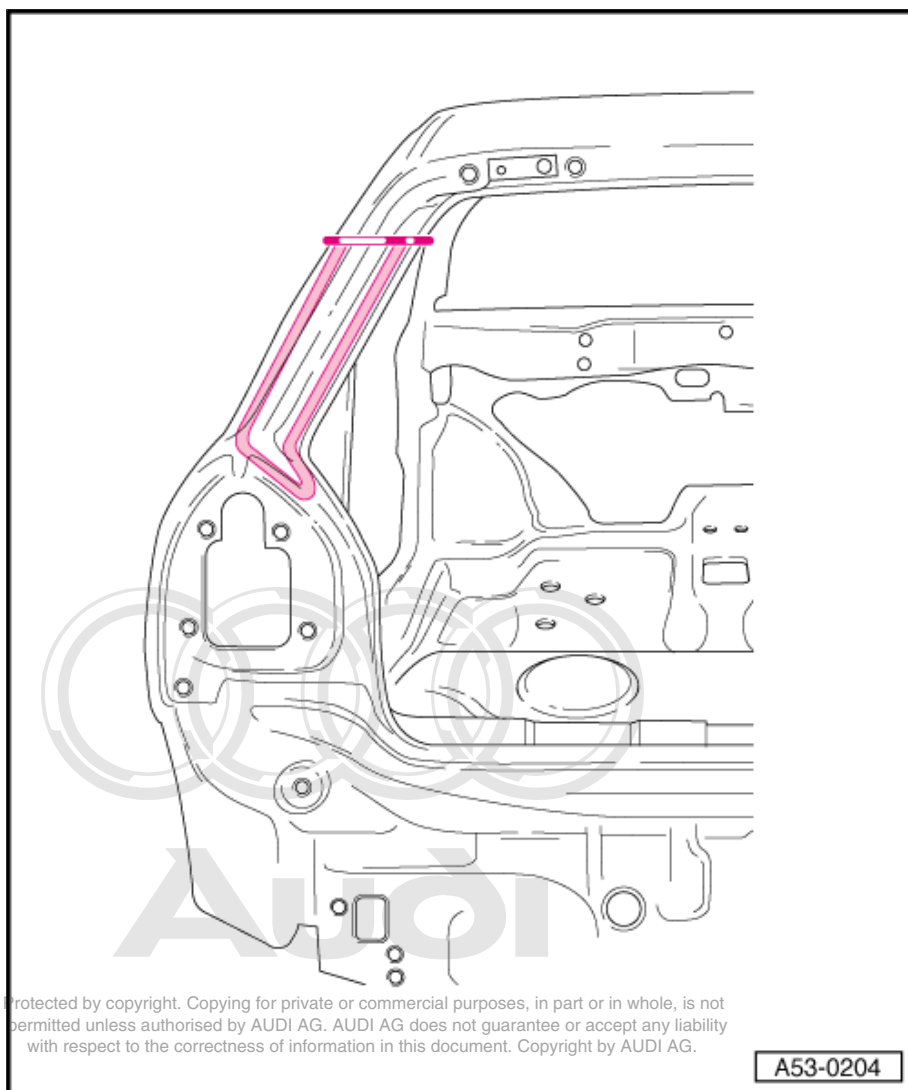
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AP: 53 14 55 12

6 Rain channel - Renewal

6.1 Procedure

6.1.1 Cutting locations



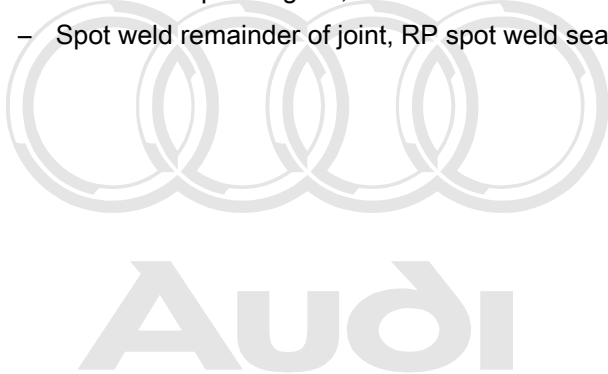
- Separating cut for rain channel 20 mm below mounting point for gas-filled strut
- Separate original joint.
- Remove remaining material.

6.1.2 Replacement part

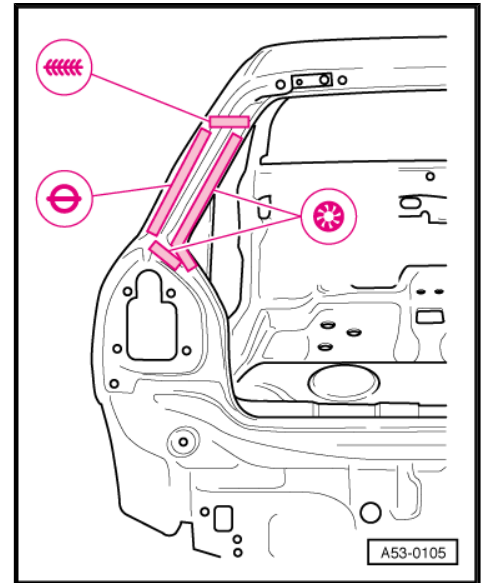
- ◆ Rain channel

6.1.3 Welding in

- Weld in sealing channel, SG plug weld seam.
- Butt weld separating cut, SG continuous seam.
- Spot weld remainder of joint, RP spot weld seam.



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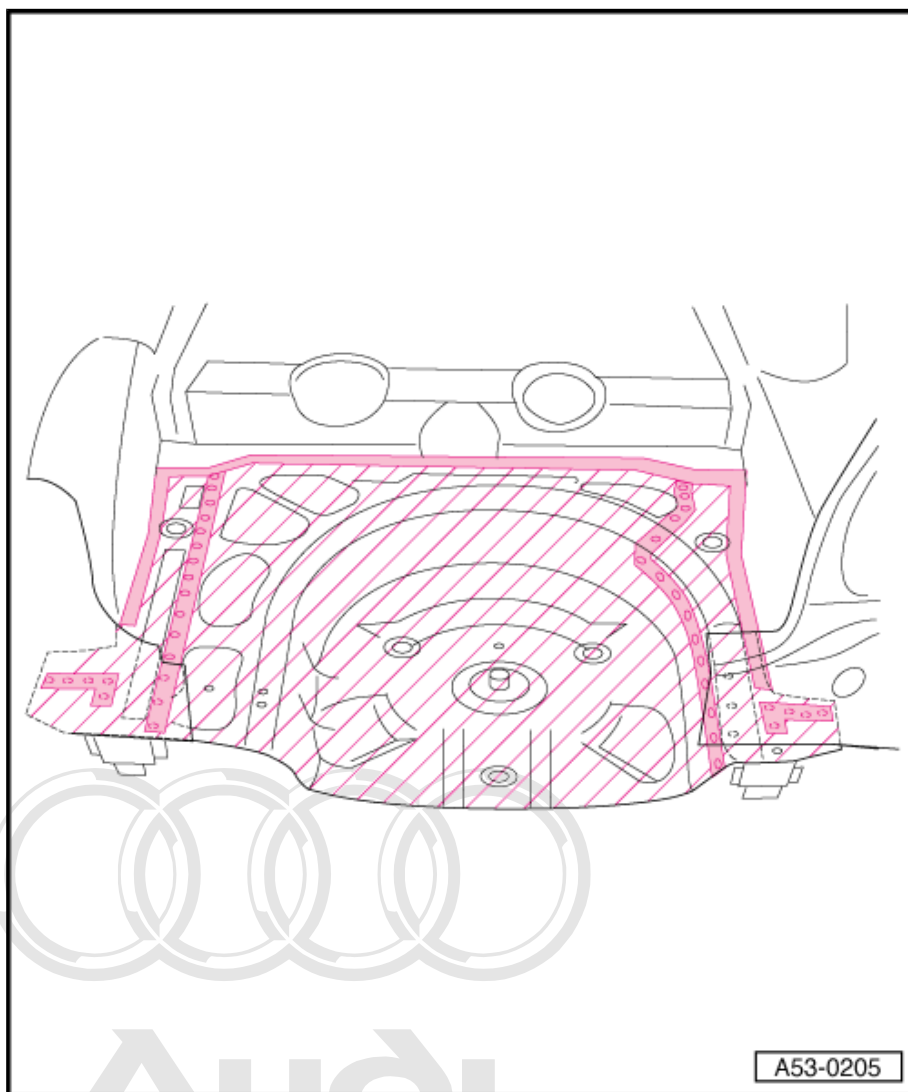


AP: 53 24 55 56

7 Luggage compartment floor - Renewal

7.1 Procedure

7.1.1 Cutting locations



- Rear cross panel sections and mounting plate already removed.

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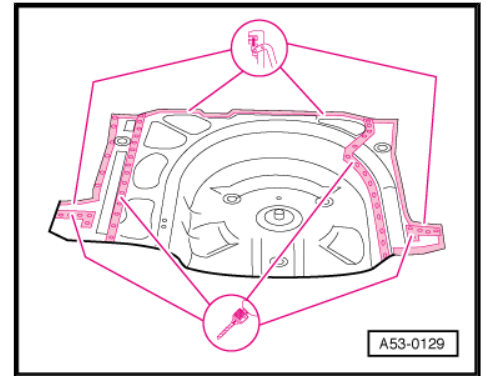
- Separate original joint.
- Remove remaining material.

7.1.2 Replacement part

- ◆ Spare wheel well

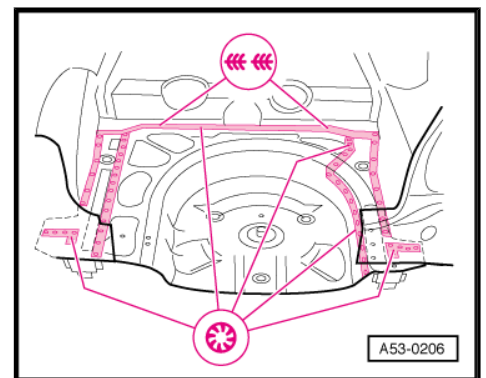
Preparing new part

- Make holes in outer joint surface of new part.
- Drill dia. 7 mm holes for SG plug weld seam.



7.1.3 Welding in

- Align luggage compartment floor with no load on vehicle and check panel gaps with rear cross panel and rear lid in position.
- Weld in luggage compartment floor, SG continuous seam (staggered).
- Weld in luggage compartment floor, SG plug weld seam.



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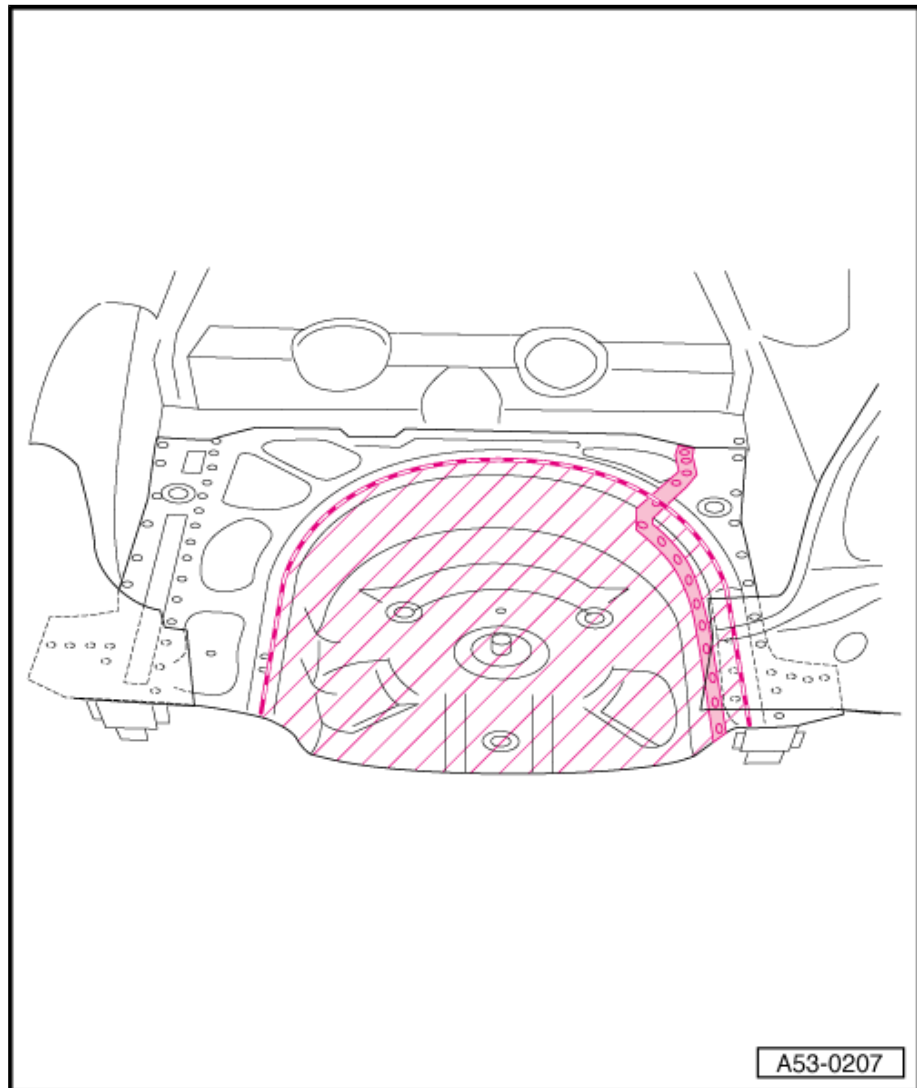
AP: 53 24 55 62

8 Luggage compartment floor - Partial renewal

8.1 Procedure

8.1.1 Cutting locations

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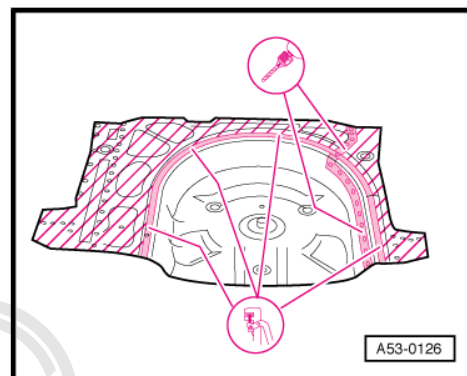
- Rear cross panel sections and mounting plate already removed.
- Make separating cut 20 mm in front of stamped area.
- Separate original joint.
- Remove remaining material.

8.1.2 Replacement part

- ◆ Spare wheel well

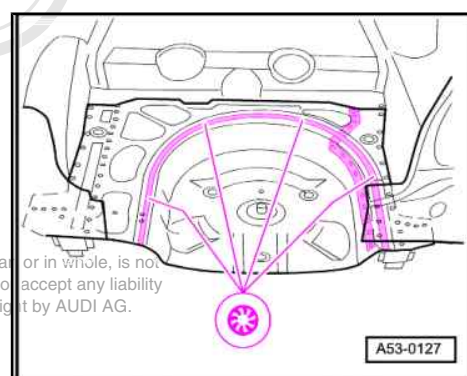
Preparing new part

- Transfer separating cut to new part plus 15 mm for overlap.
Cut off hatched area.
- Make holes in outer joint surface of new part.
- Drill dia. 7 mm holes for SG plug weld seam.



8.1.3 Welding in

- Match up and fix luggage compartment floor in position.
- Weld overlap, SG plug weld seam.
- Weld in luggage compartment floor, SG plug weld seam.



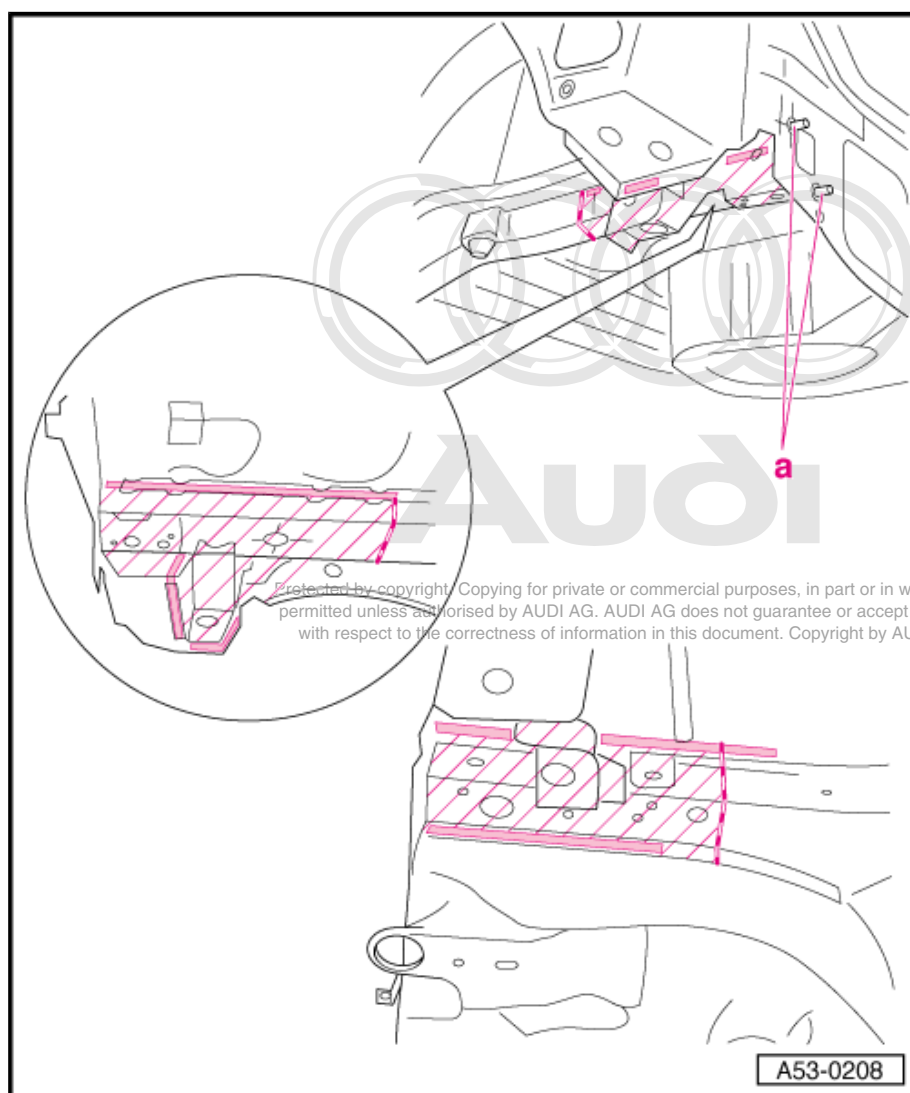
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AP: 53 48 55 62

9 Rear longitudinal member - Partial renewal

9.1 Procedure

9.1.1 Cutting locations



- Rear cross panel sections and mounting plate already removed.
- Cut out longitudinal member.
- Grind off threaded rivets -a- with angle grinder.
- Separate original joint.
- Remove remaining material.



Note:

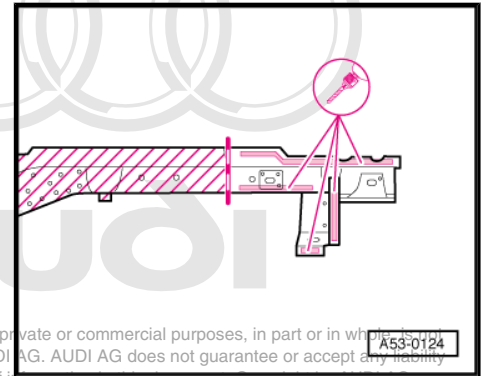
Set threaded rivets with riveting tool -V.A.G 1765 A- .

9.1.2 Replacement part

- ◆ Longitudinal member part section

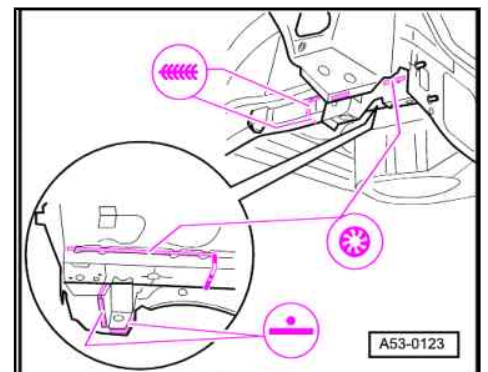
Preparing new part

- Drill dia. 7 mm holes for SG plug weld seam.



9.1.3 Welding in

- Locate and secure section of longitudinal member on alignment bracket.
- Weld in longitudinal member, SG plug weld seam.
- Spot weld rear longitudinal member, RP spot weld seam.
- Butt weld longitudinal member, SG continuous seam.

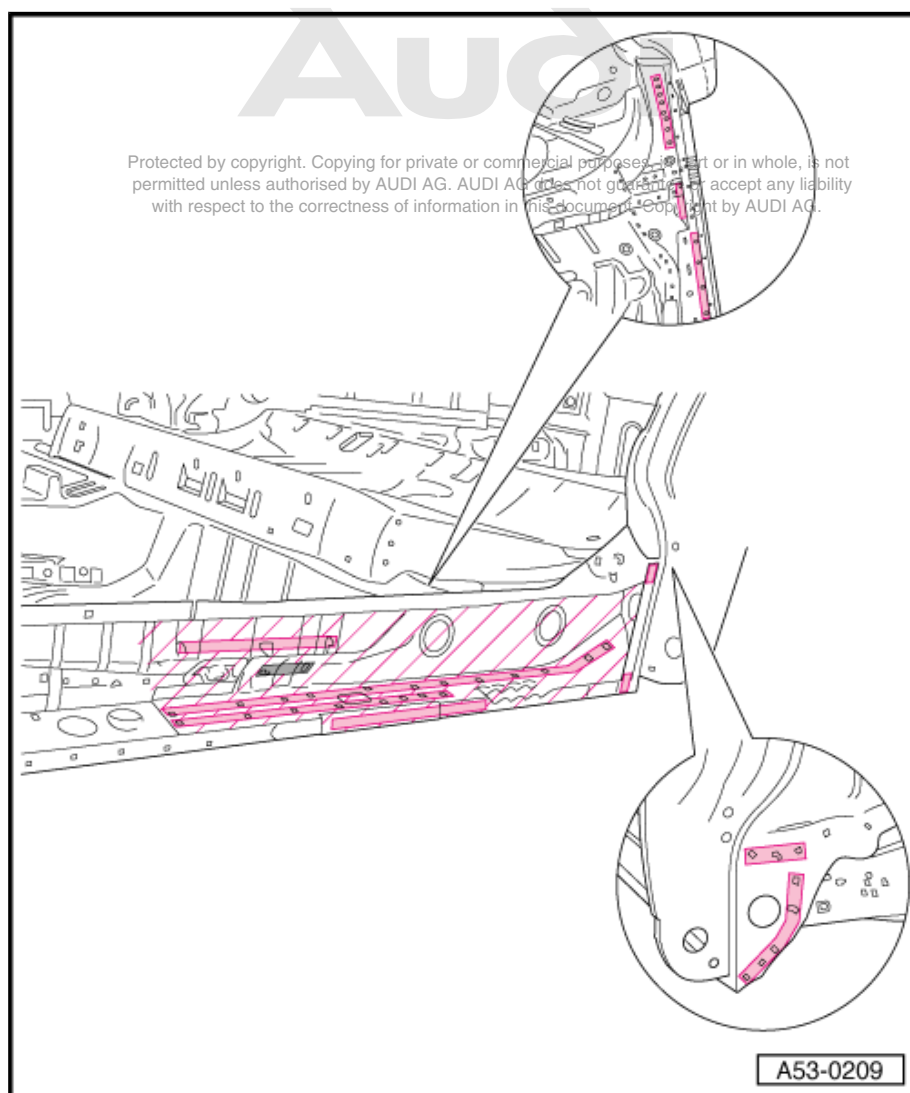


AP: 53 48 55 62

10 Rear longitudinal member reinforcement - Renewal

10.1 Procedure

10.1.1 Cutting locations



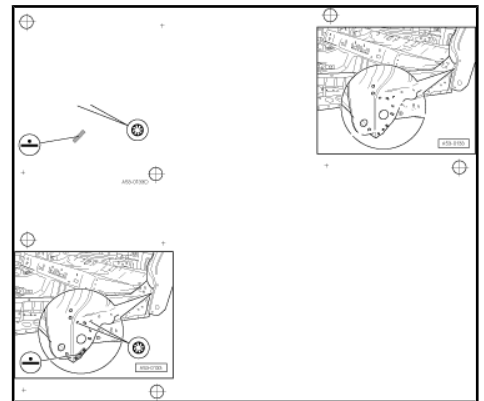
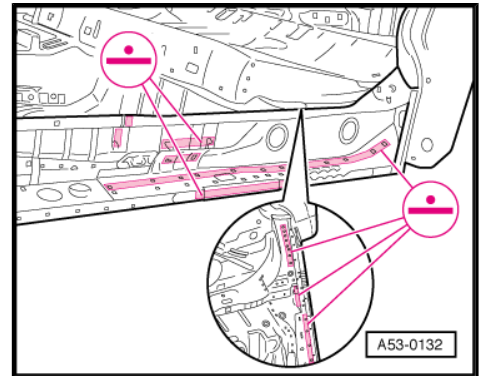
- Side panel already cut out
- Inner B-pillar already cut out
- Separate original joint.
- Remove remaining material.

10.1.2 Replacement part

- ◆ Support plate

10.1.3 Welding in

- Spot weld rear longitudinal member reinforcement, RP spot weld seam.
- Weld outer longitudinal member, SG plug weld seam.
- Spot weld remainder of joint, RP spot weld seam.



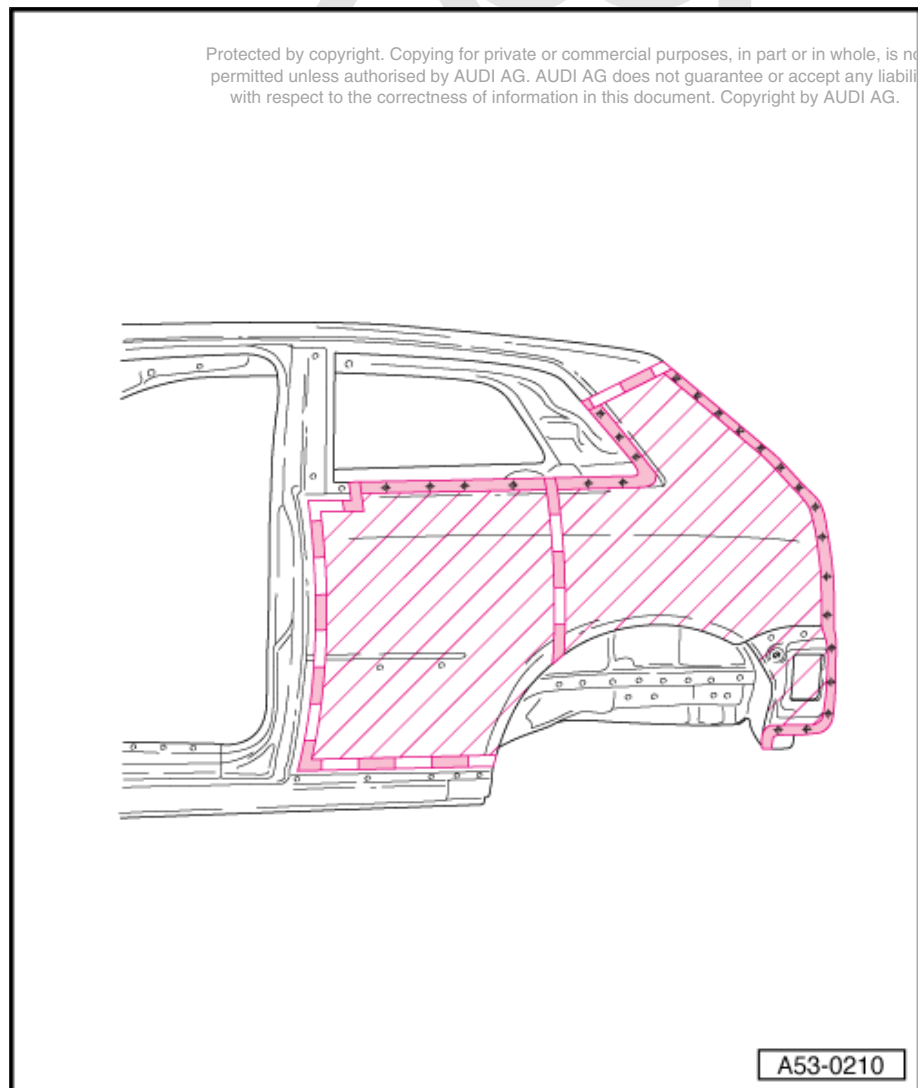
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AP: 53 55 55 00

11 Side panel (3-door) - Renewal

11.1 Procedure

11.1.1 Cutting locations

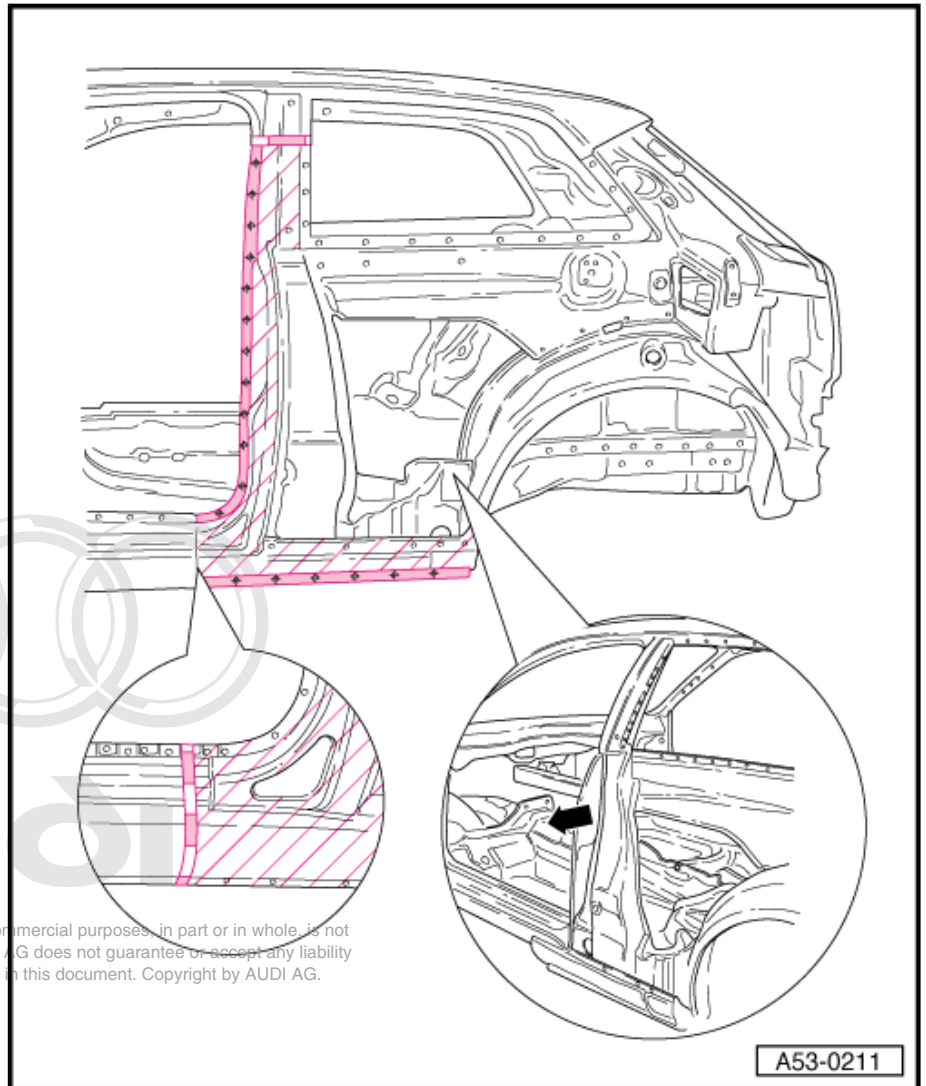


- Roughly cut out side panel.
- Grind through outer edge of wheel housing.
- Separate original joint.
- Remove remaining material.



Note:

Partial replacement is possible with the separating cuts illustrated. Place an additional thickness of the same material behind the separation area and SG stepped seam. Make separating cut C on right-hand side behind filler neck compartment.



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- Take care not to damage inner reinforcement when making separating cut in sill.
- Make separating cut on B-pillar according to degree of damage.
- Bend open side panel as necessary.
- Perform separating cut with body saw -V.A.G 1523- .
- Detach part.

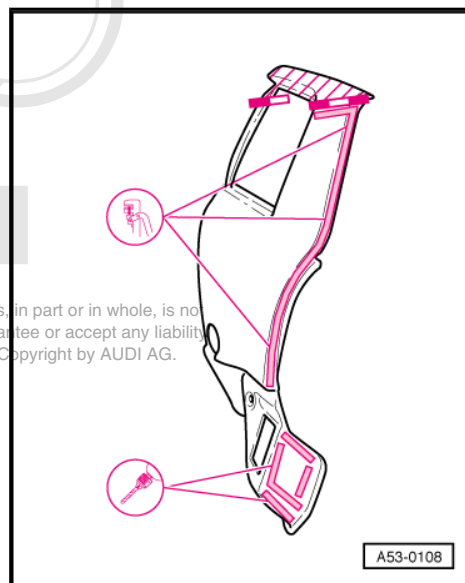
11.1.2 Replacement parts

- ◆ Side panel
- ◆ Body adhesive

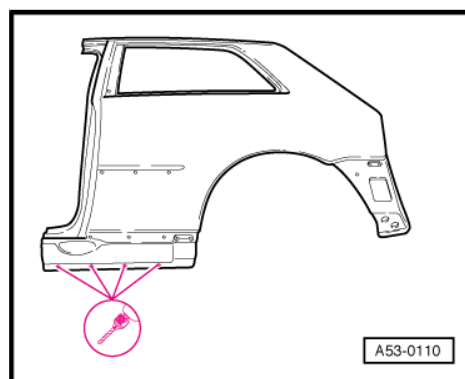
Preparing new part

- Transfer separating cut to new part plus 10 mm for overlap. Cut off hatched area.
- Make holes in outer joint surface of new part.
- Drill dia. 7 mm holes for SG plug weld seam.

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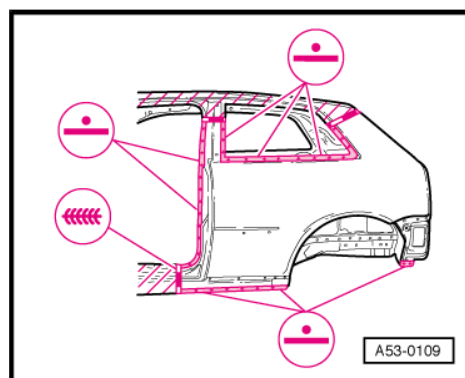


- Drill dia. 7 mm holes for SG plug weld seam.
- Clean beaded area (it must be free of dust and grease).

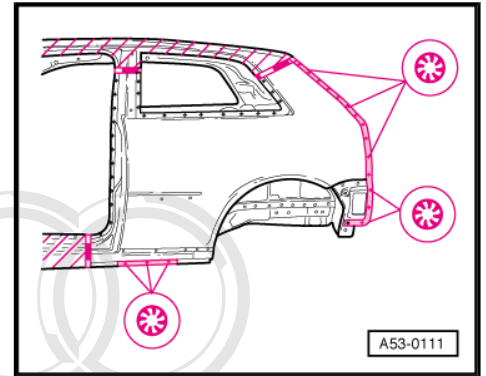


11.1.3 Welding in

- Align side panel with no load on vehicle and check panel gaps.
- Apply adhesive to beaded area. Two beads of adhesive: 3.5 mm diameter.
- Weld in side panel, RP spot weld seam.
- Butt weld separating cuts, SG continuous seam.
- Bead over wheel housing flange. Wipe off emerging adhesive and seal joint.



- Weld roof, tail light and sill panel area, SG plug weld seam.
- Place an additional thickness of the same material behind the B + C-pillar separating cuts.



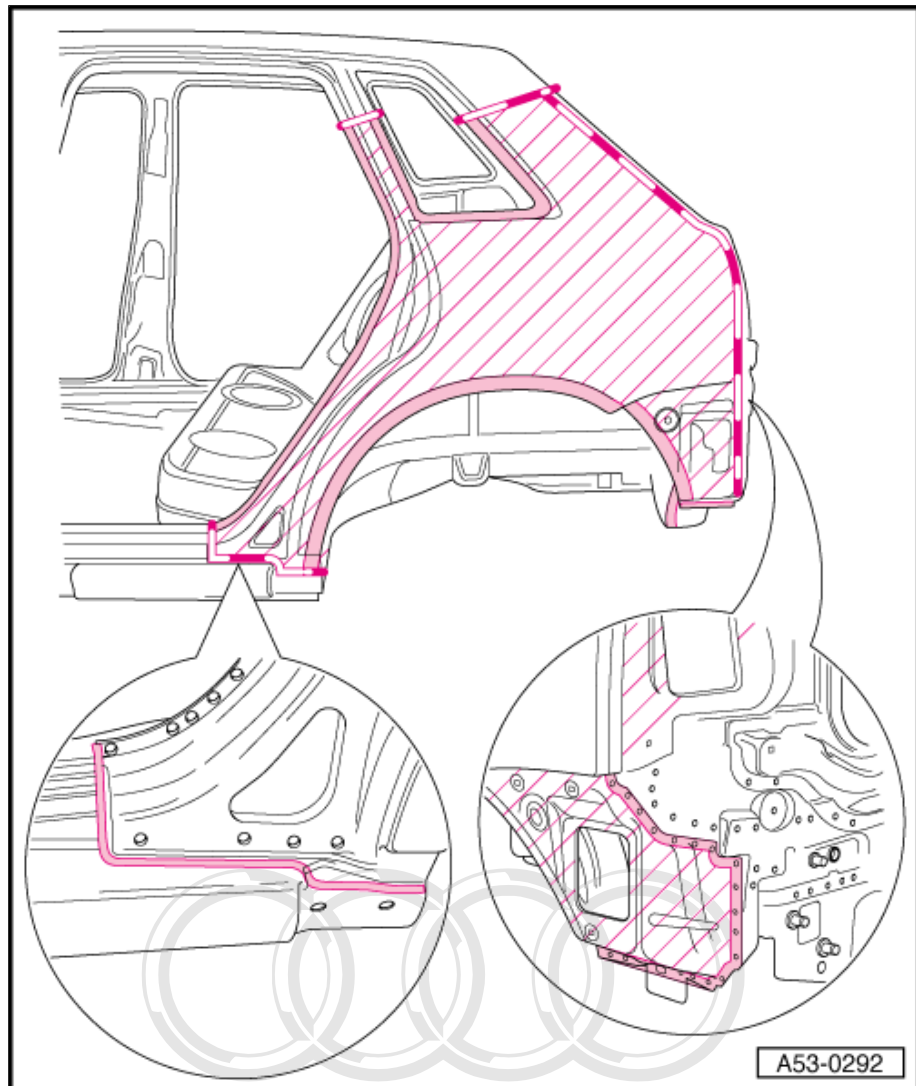
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AP: 53 55 55 00

12 Side panel (5-door) - Renewal

12.1 Procedure

12.1.1 Cutting locations



Locate side panel on portal gauge supplement -VAS 5007/3A- .

- Roughly cut out side panel.
- Grind through outer edge of wheel housing.
- Separate original joint.
- Take care not to damage inner reinforcement when making separating cut in sill.
- Detach part.
- Remove remaining material.

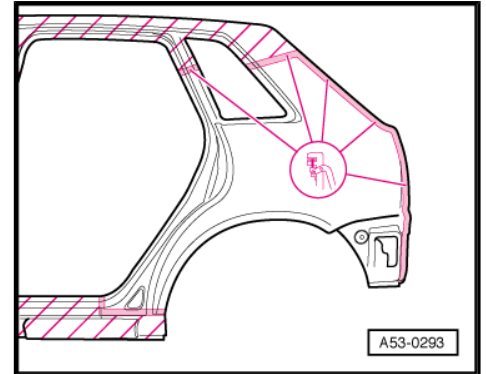
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12.1.2 Replacement parts

- ◆ Side frame (sub-part)
- ◆ Body adhesive DA 001 730 A1

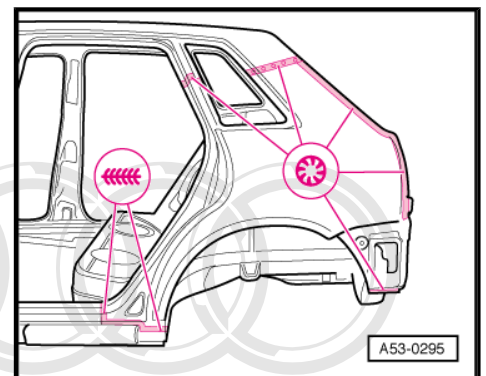
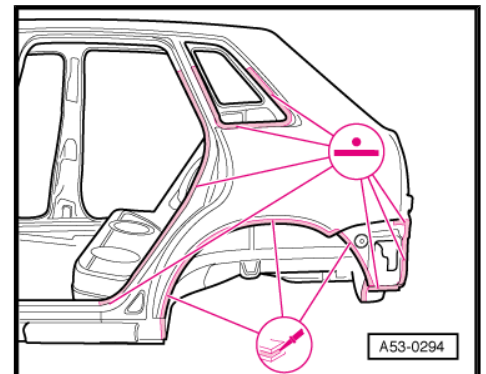
Preparing new part

- Transfer separating cut to new part and cut to size.
- Make holes in outer joint surface of new part.



12.1.3 Welding in

- Place an additional thickness of the same material behind the C + D-pillar separating cuts.
- Align side panel with no load on vehicle and check panel gaps.
- Apply adhesive to beaded area. Two beads of adhesive: 3.5 mm diameter.
- Weld in side panel, RP spot weld seam.
- Bead over wheel housing flange. Wipe off emerging adhesive and seal joint.
- Weld roof, tail light and C-pillar area, SG plug weld seam.
- Butt weld separating cut, SG continuous seam.
- Tin overlap area.



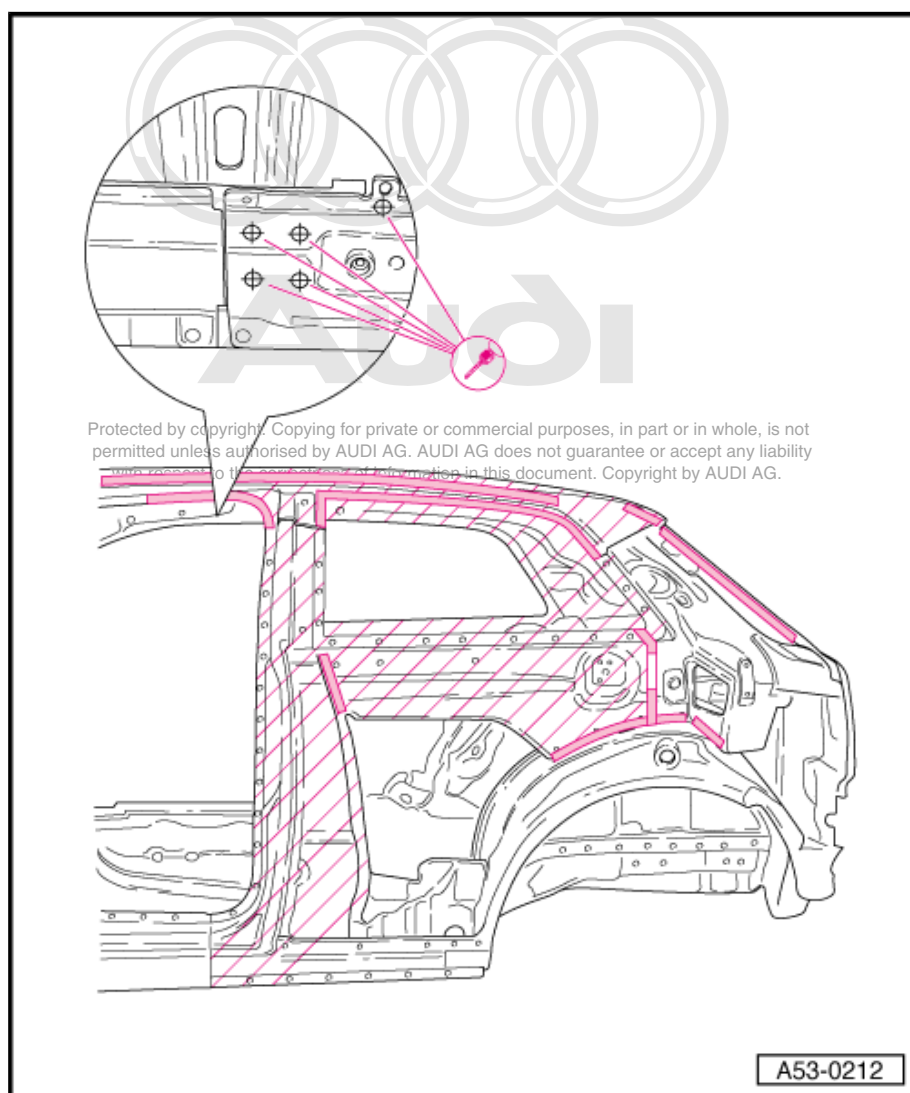
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AP: 53 67 55 50

13 Wheel housing reinforcement - Renewal

13.1 Procedure

13.1.1 Cutting locations



- Side panel already cut out
- Drill out inner side panel tongue (2 metal thicknesses) and pull out part.
- Separate original joint.
- Remove remaining material.
- Remove adhesive remnants with knife and scraper.
- Drill 4 holes in A-pillar reinforcement for SG plug weld seam.



Note:

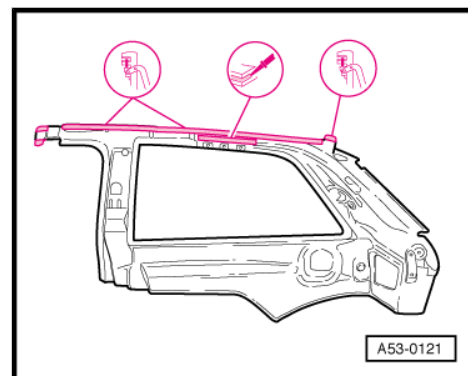
Partial renewal is possible with the separating cut shown. Joddle-join in separation area and SG stepped seam on both sides.

13.1.2 Replacement parts

- ◆ Inner side panel
- ◆ Assembly adhesive D 190 MKD A3

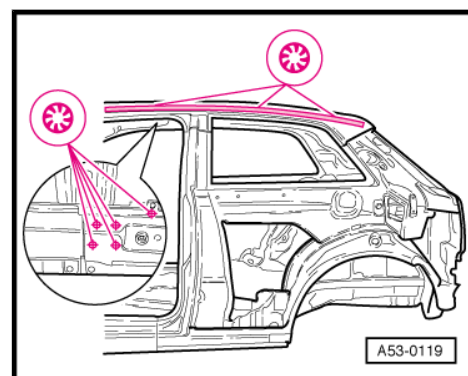
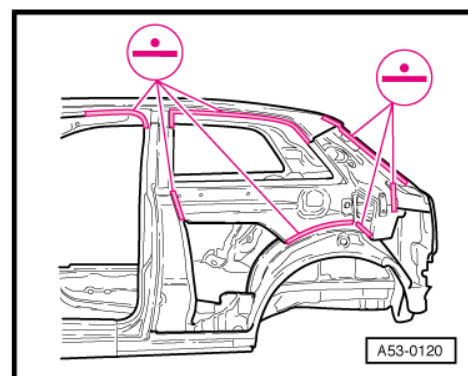
Preparing new part

- Make holes in outer joint surface of new part.
- Apply adhesive D 190 MKD A3.



13.1.3 Welding in

- Weld in side panel, RP spot weld seam.
- Weld in inner side panel, SG plug weld seam.



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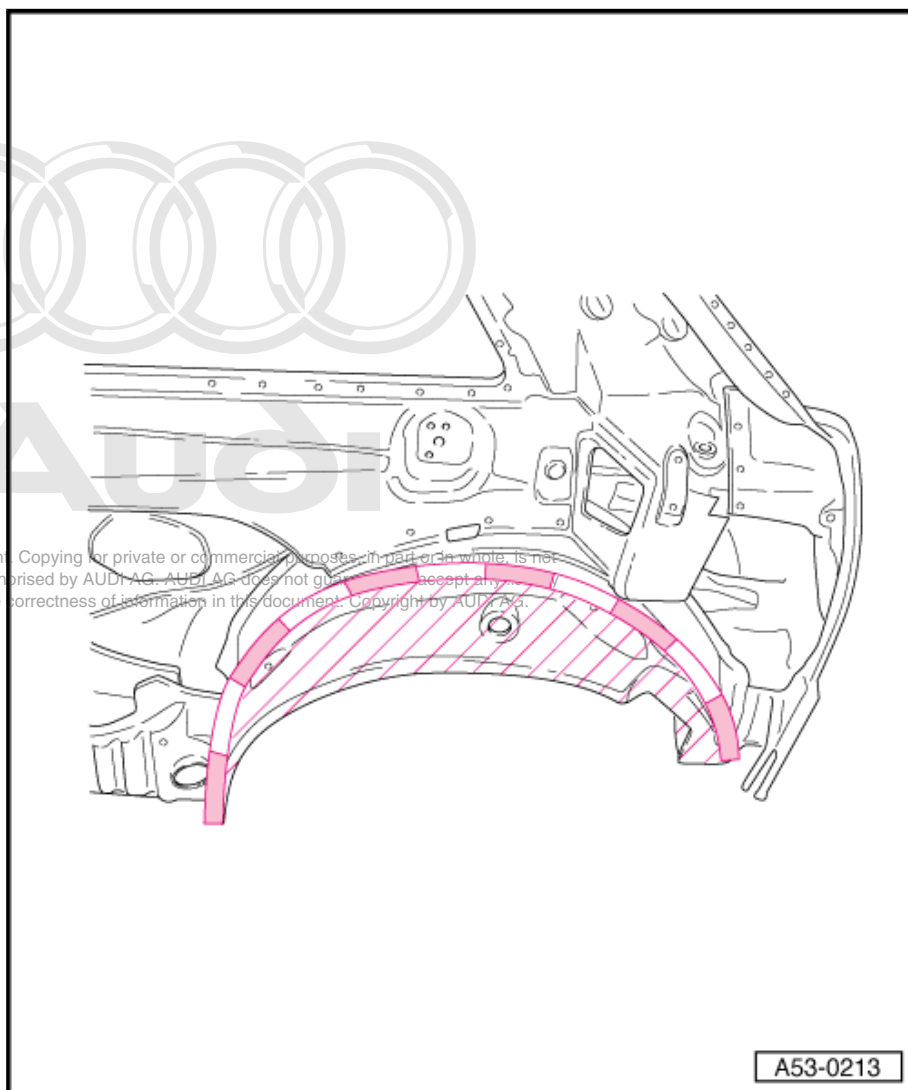
AP: 53 68 55 62

14 Rear wheel housing (3-door) - Partial renewal

14.1 Procedure

14.1.1 Cutting locations

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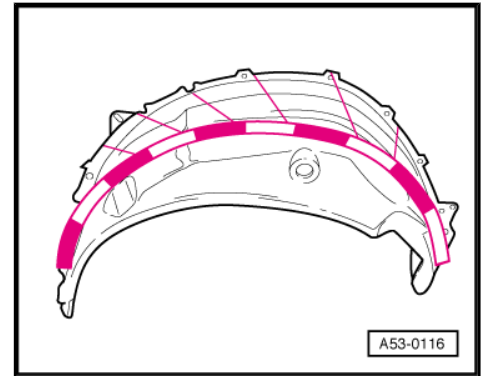
- Side panel already cut out
- Make separating cut such that the body side can be stepped.
- Separate original joint.

14.1.2 Replacement part

- ◆ Wheel housing liner

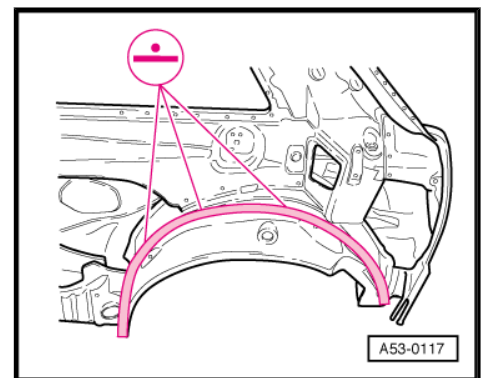
Preparing new part

- Joggle-join on body side.
- Transfer separating cut to new part plus 15 mm for overlap.
Cut off hatched area.



14.1.3 Welding in

- Spot weld wheel housing liner, RP spot weld seam.



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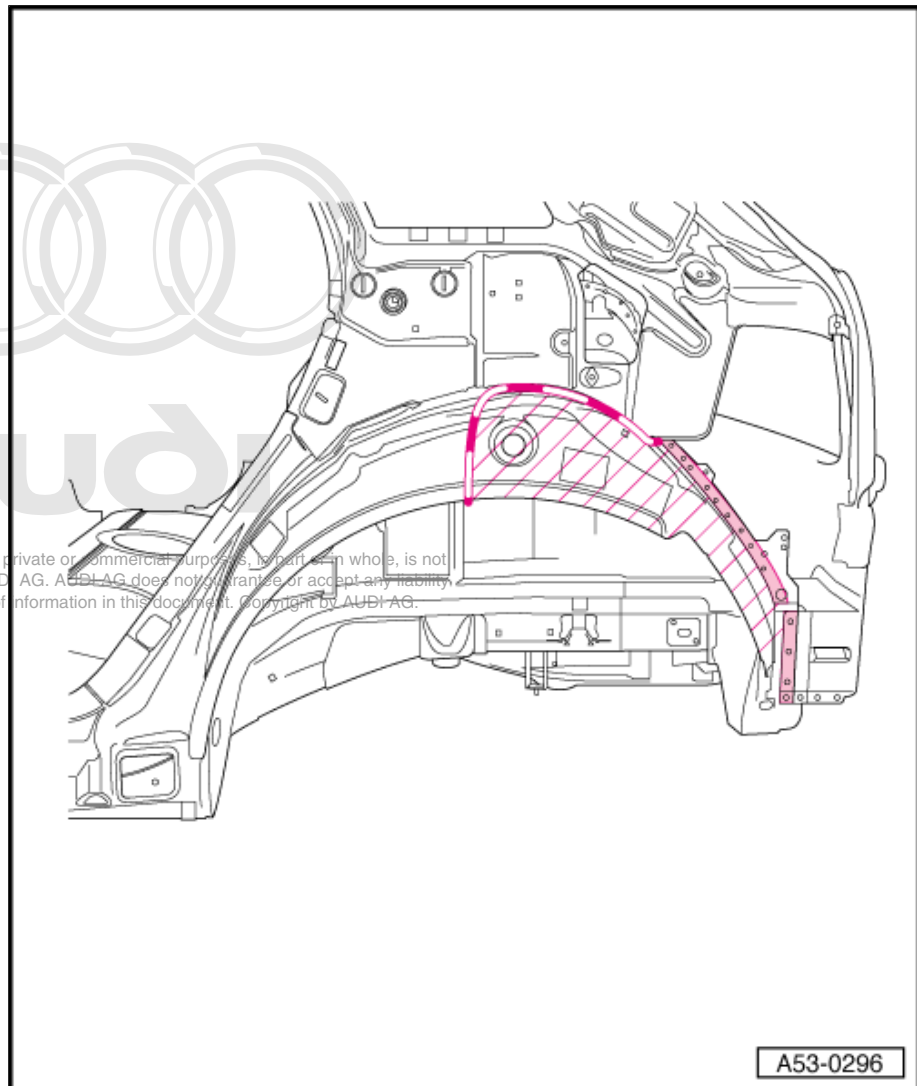
AP: 53 68 55 62

15 Rear wheel housing - Partial renewal

15.1 Procedure

15.1.1 Cutting locations

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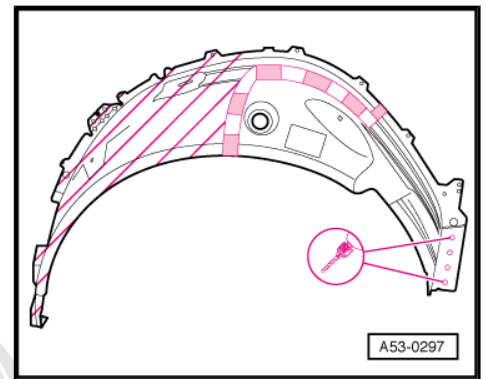
- Side panel already cut out
- Make separating cut such that the body side can be stepped.
- Separate original joint.

15.1.2 Replacement part

- ◆ Wheel housing liner

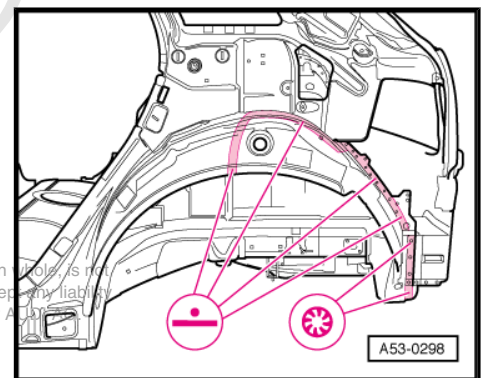
Preparing new part

- Joggle-join on body side.
- Transfer separating cut to new part plus 15 mm for overlap.
Cut off hatched area.
- Drill dia. 7 mm holes for SG plug weld seam.



15.1.3 Welding in

- Spot weld wheel housing liner, RP spot weld seam.
- Weld in wheel housing, SG plug weld seam.



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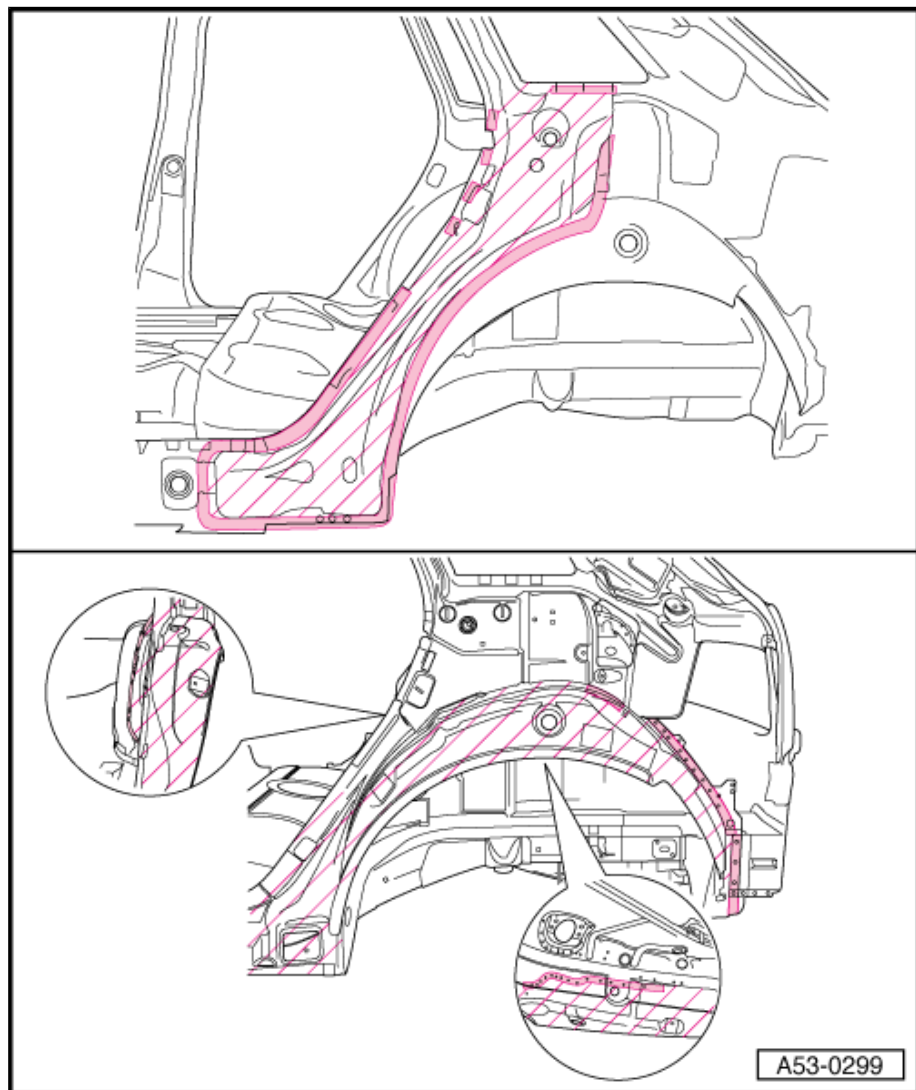
AP: 53 69 55 50

16 Rear wheel housing liner (5-door) - Renewal

16.1 Procedure

16.1.1 Cutting locations

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Includes: Wheel housing reinforcement

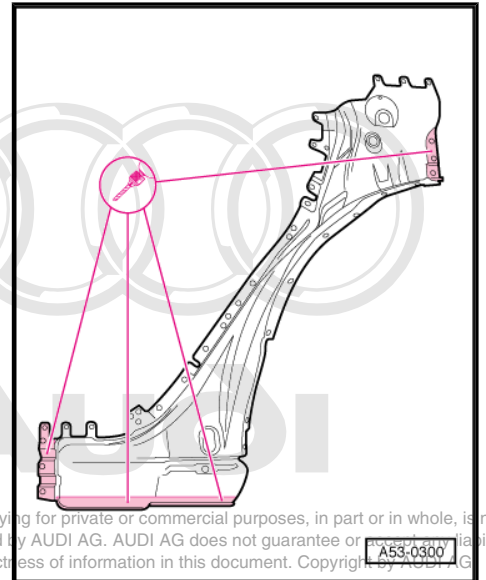
- Side panel already cut out
- Outer side member (part section) already removed
- Inner side member (part section) already removed
- Cut out lock carrier
- Drill out spot welds on inner wheel housing.
- Separate original joint.

16.1.2 Replacement part

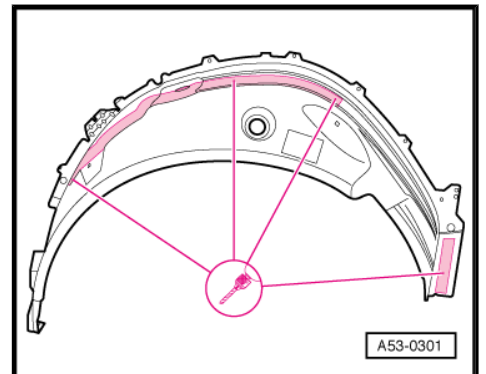
- ◆ Wheel housing liner
- ◆ Side member
- ◆ Lock carrier

Preparing new part

- Drill dia. 7 mm holes for SG plug weld seam.

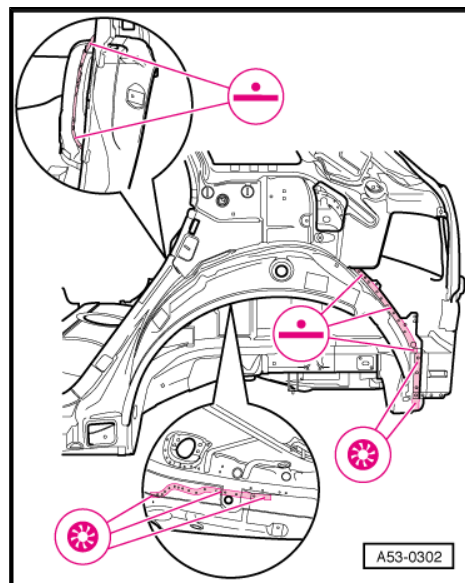


- Drill dia. 7 mm holes for SG plug weld seam.

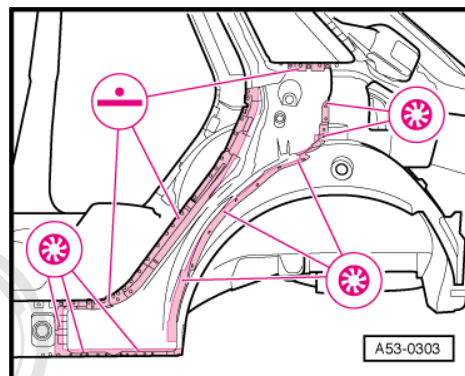


16.1.3 Welding in

- Spot weld wheel housing liner, RP spot weld seam.
- Weld in wheel housing, SG plug weld seam.



- Weld in lock carrier, SG plug weld seam.
- Spot weld remainder of joint, RP spot weld seam.



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