



Workshop Manual
Golf Variant 2007 ▶
Jetta 2005 ▶

General body repairs, exterior

Edition 10.2009





List of Workshop Manual Repair Groups

Repair Group

- 50 - Body - front
- 55 - Bonnet, rear lid
- 57 - Front doors, door components, central locking
- 58 - Rear doors, door components
- 60 - Sunroof
- 63 - Bumpers
- 64 - Glazing
- 66 - Exterior equipment



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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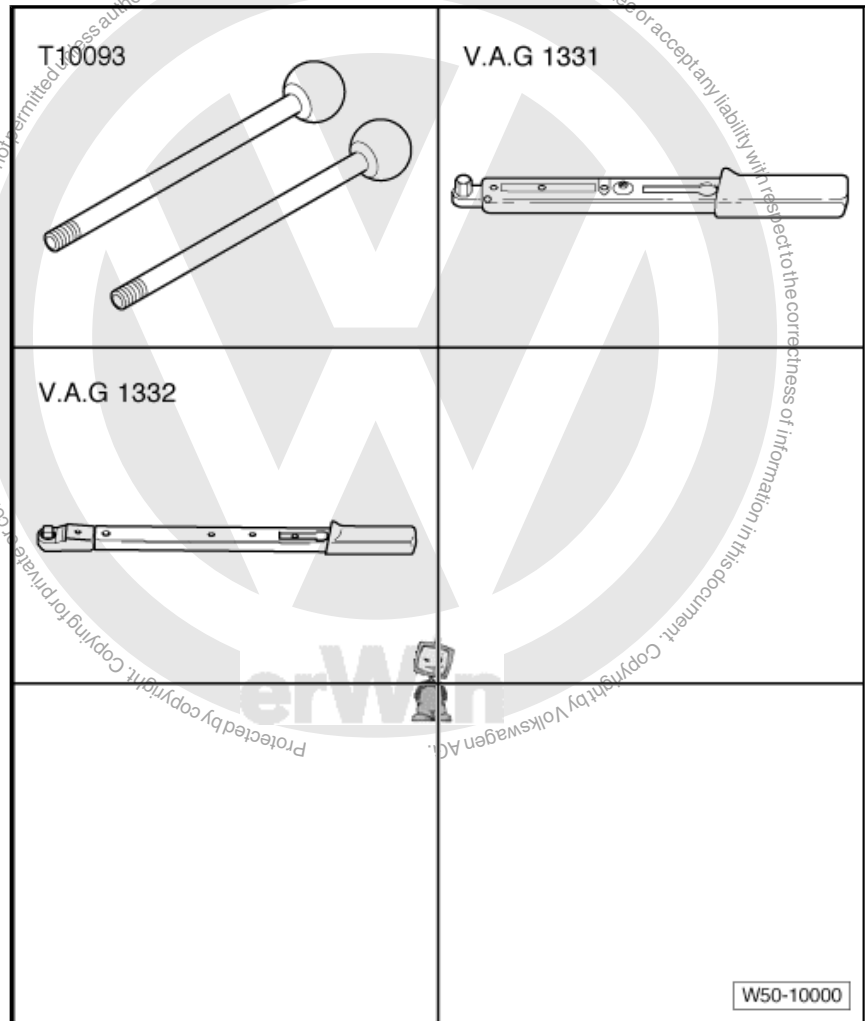
50 – Body - front

1 Lock carrier

1.1 Tools

Special tools and workshop equipment required

- ◆ Guide pins -T10093-
- ◆ Torque wrench -V.A.G 1331-
- ◆ Torque wrench -V.A.G 1332-





1.2 Assembly overview - lock carrier, service position

1 - Lock carrier with add-on parts

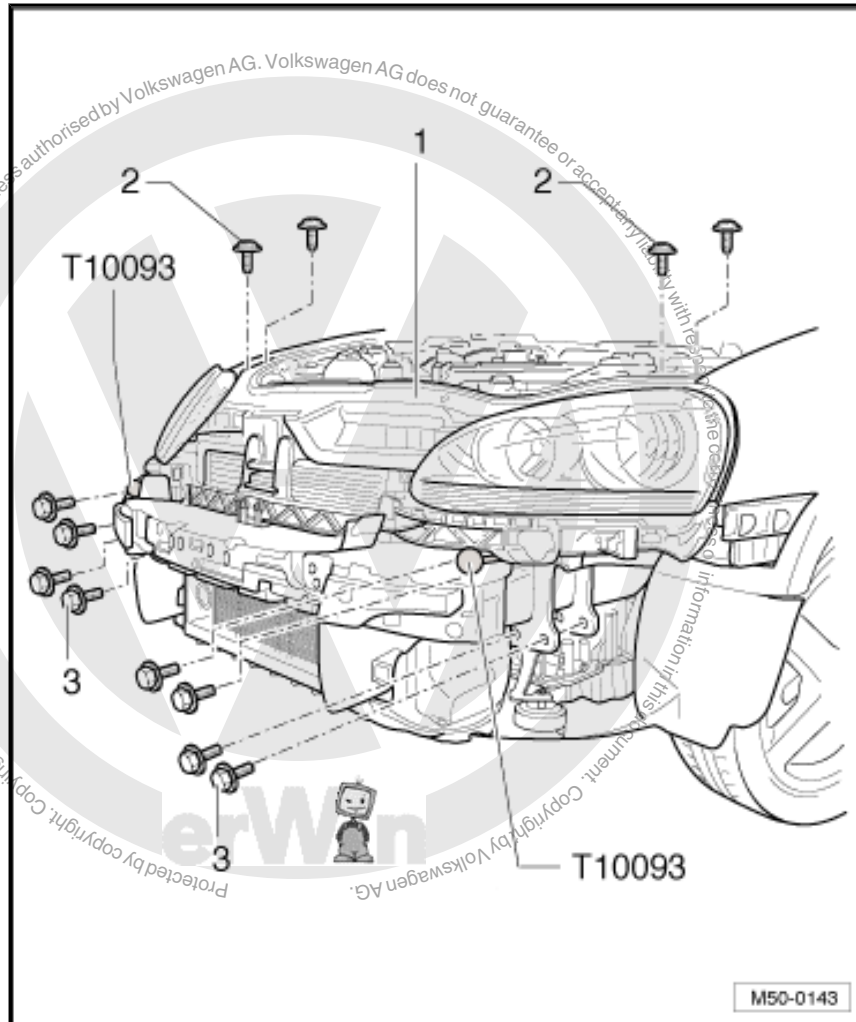
- Removing and installing
⇒ [page 4](#)
- Service position
⇒ [page 2](#)

2 - Bolt

- Qty. 4
- 8 Nm

3 - Bolt

- Qty. 8
- 60 Nm



1.3 Service position

1.3.1 Moving to service position

- Remove front bumper cover ⇒ [page 223](#) .
- Remove air duct from lock carrier -1- ⇒ Rep. Gr. 24 ; Repairing injection system .
- Unhook Bowden cable from coupling for bonnet release
⇒ [page 24](#)
- If vehicle has charge air cooler, disconnect pressure hoses
⇒ [page 4](#) .
- Unscrew horn -4- with bracket on right side of longitudinal member ⇒ Electrical system; Rep. Gr. 96 ; Horn .
- Pull connector off high-pressure sender -G65- ⇒ Heating, air conditioning system; Rep. Gr. 87 .
- Remove bolts -3- from left and right longitudinal members.

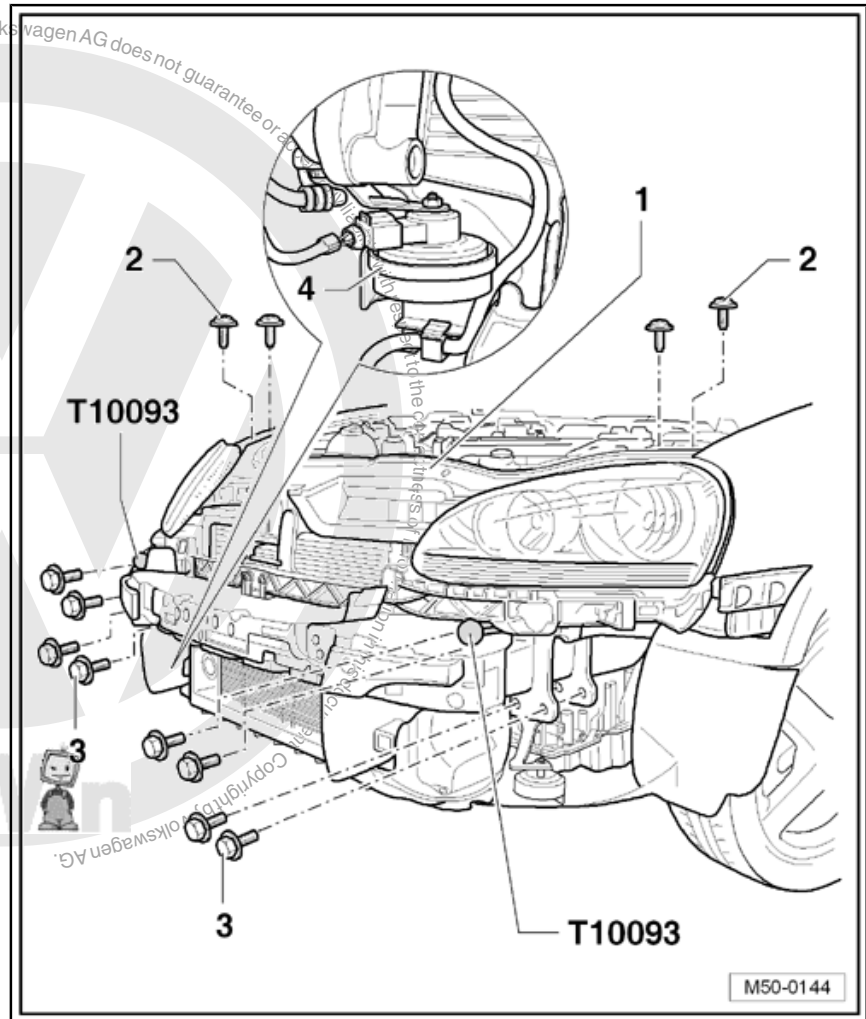


- Attach special tool guide pins -T10093- to left and right longitudinal members.
- Remove bolts -2- on left and right from upper part of lock carrier -1-.
- The lock carrier -1- can be pulled forwards on the guide pins -T10093- .



Note

If necessary, disconnect upper coolant hose from radiator, but drain coolant first => Rep. Gr. 19 ; Removing and installing parts of coolant system .



1.3.2 Moving from service position

Install in reverse order of removal.

- Align lock carrier on longitudinal members and between wings
=> Body Repairs; Rep. Gr. 00 ; Body dimensions .



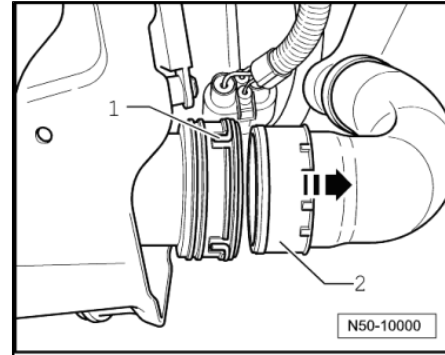
Note

- ◆ *Ensure that the charge air cooler pressure hoses are properly engaged again.*
- ◆ *Hoses and lines must not be pinched.*
- ◆ *If necessary, replenish coolant ⇒ Rep. Gr. 19 ; Removing and installing parts of coolant system .*

1.3.3 Releasing pressure hoses

- Release push-on coupling -1- and pull pressure hose -2- in direction of -arrow- out of coupling.

During installation of pressure hoses, ensure that push-on coupling engages audibly.



1.4 Removing and installing lock carrier with add-on parts

1.4.1 Removing



Note

- ◆ *Because the lock carrier is a safety-relevant component, it must not be repaired.*
- ◆ *If damaged, the lock carrier must be renewed.*
- Set lock carrier with add-on parts -1- to service position ⇒ [page 2](#) .
- Disconnect all electrical connectors.
- Drain coolant and disconnect coolant hoses ⇒ Rep. Gr. 19 ; Removing and installing parts of coolant system .
- Disconnect lines for condenser ⇒ Heating, air conditioning system; Rep. Gr. 87 .
- Together with a second mechanic, unscrew guide pins - T10093- from left and right longitudinal member and lift lock carrier out -1-.



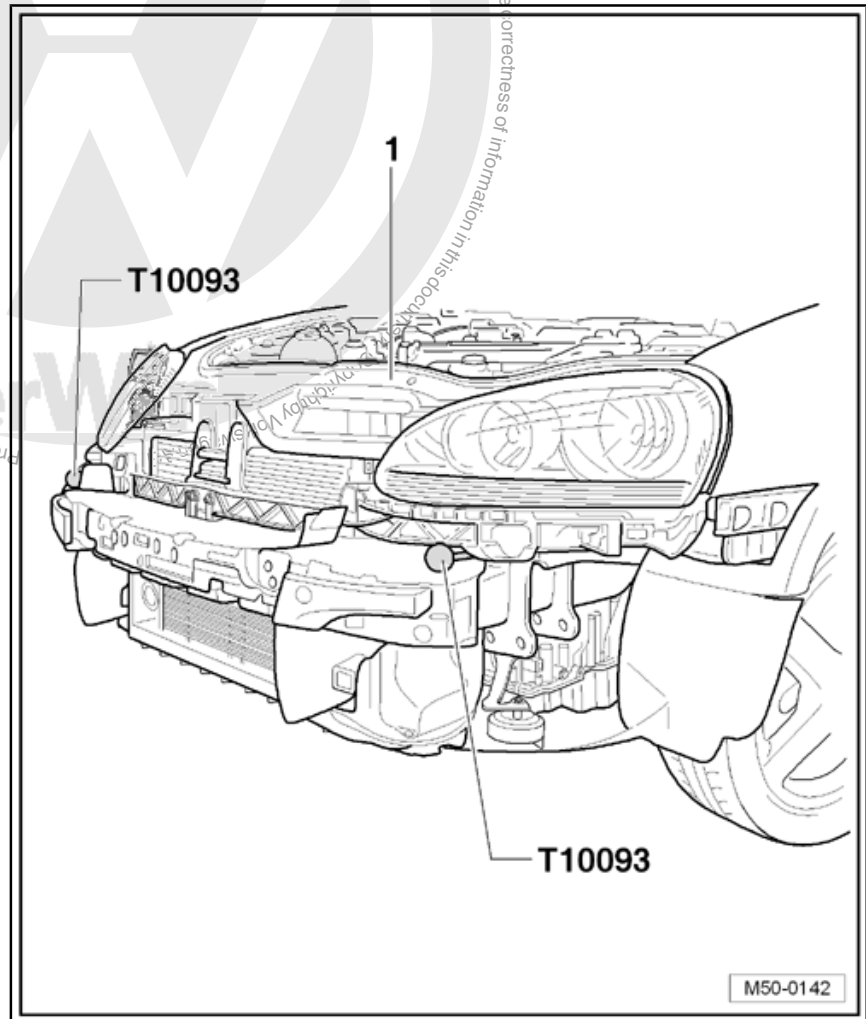
Caution

Do not start the engine if the air conditioning system and/or the coolant system lines are disconnected.



Note

- ◆ Do not hang condenser and hydraulic oil cooler from lines.
- ◆ Do not kink lines for condenser and hydraulic systems.



1.4.2 Installing

Install in reverse order of removal.

During assembly, ensure that all connectors and hose connections are properly installed.

- Align lock carrier on longitudinal members and between wings
⇒ Body Repairs; Rep. Gr. 00 ; Body dimensions .

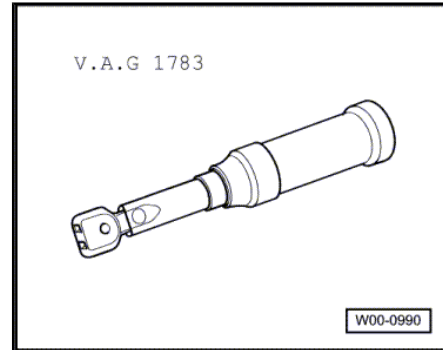


2 Wing

2.1 Tools

Special tools and workshop equipment required

- ◆ Torque wrench -V.A.G 1783-





2.2 Assembly overview - front wing



Note

Only the left side is shown. The right side is similar.

1 - Wing

- ❑ Removing and installing
⇒ [page 7](#)

2 - Bolt

- ❑ Qty. 2, A-pillar
- ❑ Qty. 2, side member
- ❑ Qty. 2, wing bracket
- ❑ Qty. 3, wing connection piece
- ❑ 6 Nm

3 - Foam element

- ❑ Loosely inserted between wing and top of longitudinal member

4 - Wing bracket

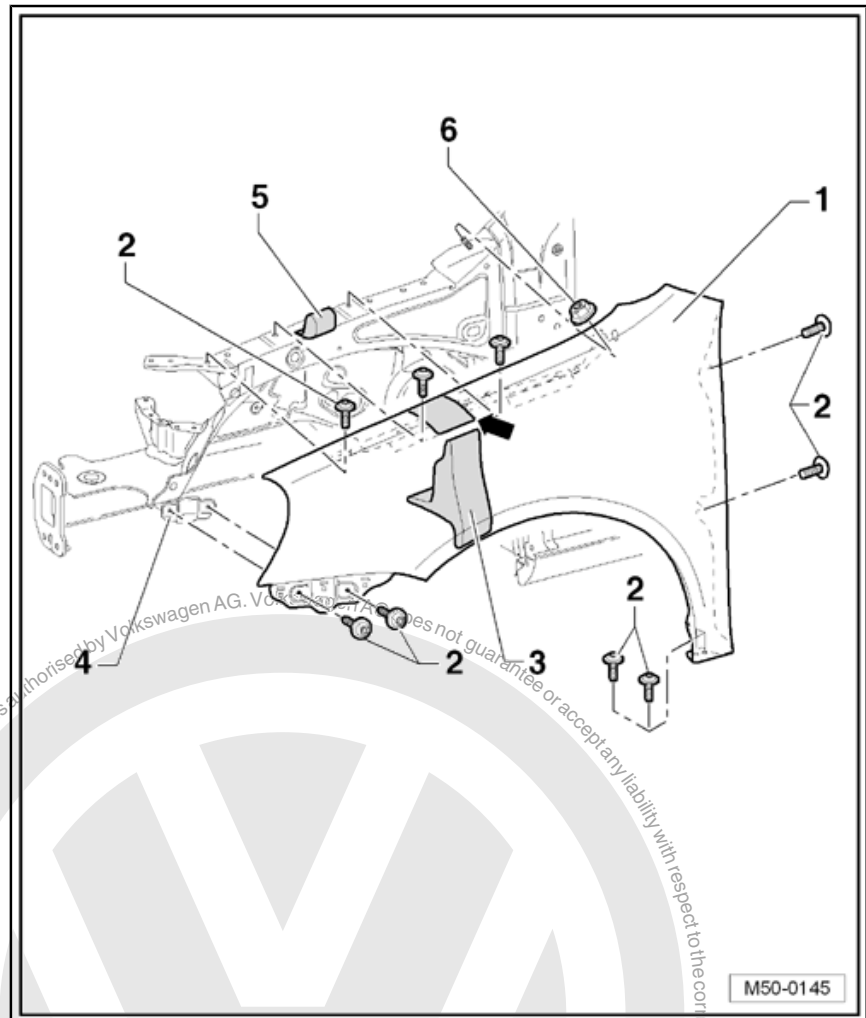
- ❑ Removing and installing
⇒ [page 8](#)

5 - Moulded foam element

- ❑ Inserted on top of longitudinal member
- ❑ Bonds to wing

6 - Hexagon nut

- ❑ Qty. 1, on wing connection piece
- ❑ 6 Nm



2.3 Removing and installing wing



Note

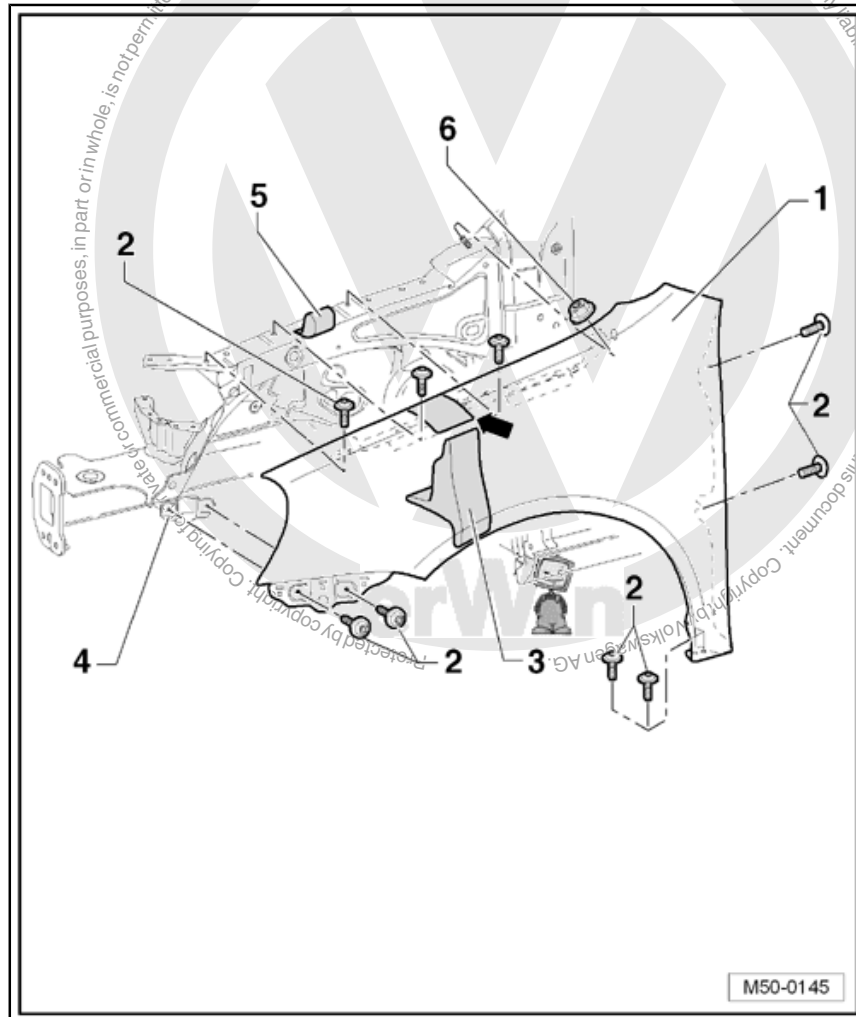
The removal and installation sequence is only described for the left wing. The removal and installation of the right wing is similar.

2.3.1 Removing

- Remove front bumper cover ⇒ [page 223](#) .
- Remove front and rear parts of wheel housing liner ⇒ [page 321](#) .
- Remove guide ⇒ [Item 4 \(page 227\)](#) .



- Loosen hexagon nut -6- and remove bolts -2-.
- Pull out foam element -3- between wing and longitudinal member and remove wing -1-.



2.3.2 Installing

Install in reverse order of removal.

Ensure parallelism and gap dimensions are maintained ⇒ Body Repairs; Rep. Gr. 00 ; Body dimensions .

2.4 Removing and installing wing bracket



Note

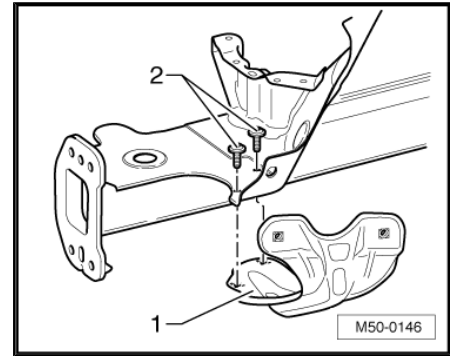
The removal and installation sequence is described for the left wing bracket. The removal and installation of the right wing bracket is similar.

2.4.1 Removing

- The wing has been removed.



- Remove bolts -2- and remove wing bracket -1-.

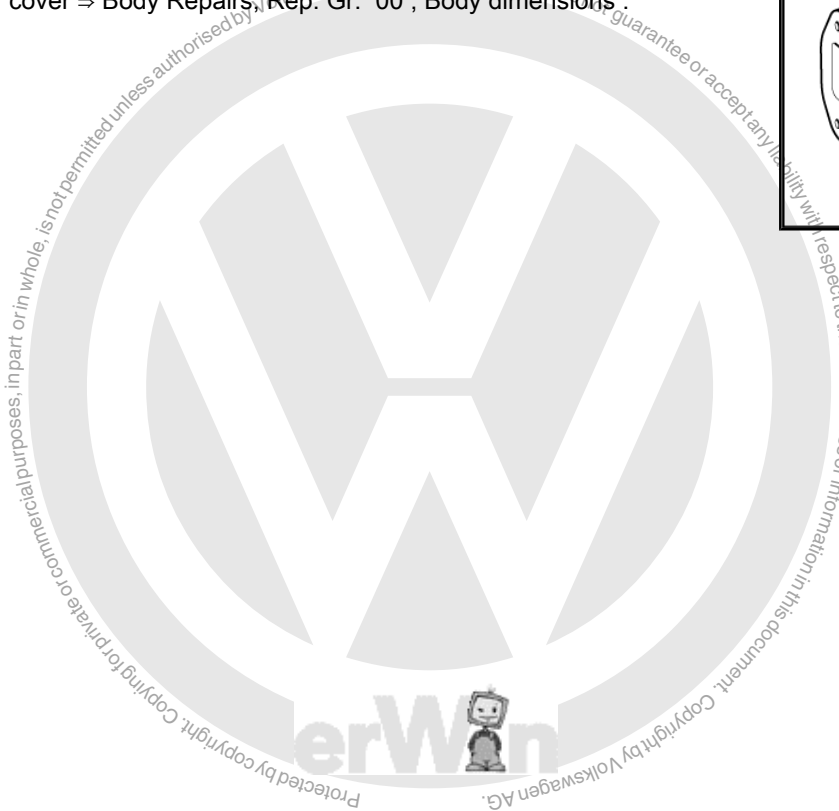
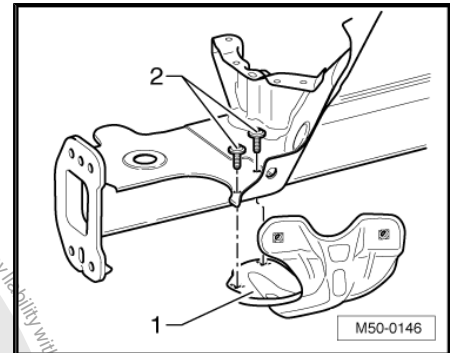


2.4.2 Installing

- Install wing bracket -1-.

Specified torque for bolts -2-: 6 Nm.

Wing and wing bracket must be aligned with bonnet and bumper cover → Body Repairs; Rep. Gr. 00 ; Body dimensions.



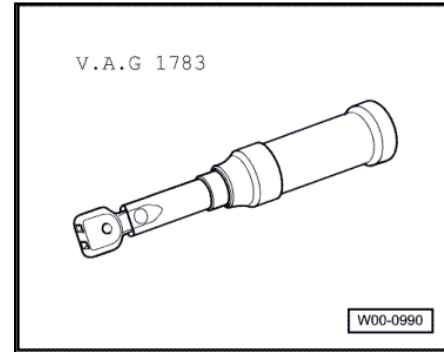


3 Noise insulation

3.1 Tools

Special tools and workshop equipment required

- ◆ Torque wrench -V.A.G 1783-





3.2 Assembly overview - noise insulation



Note

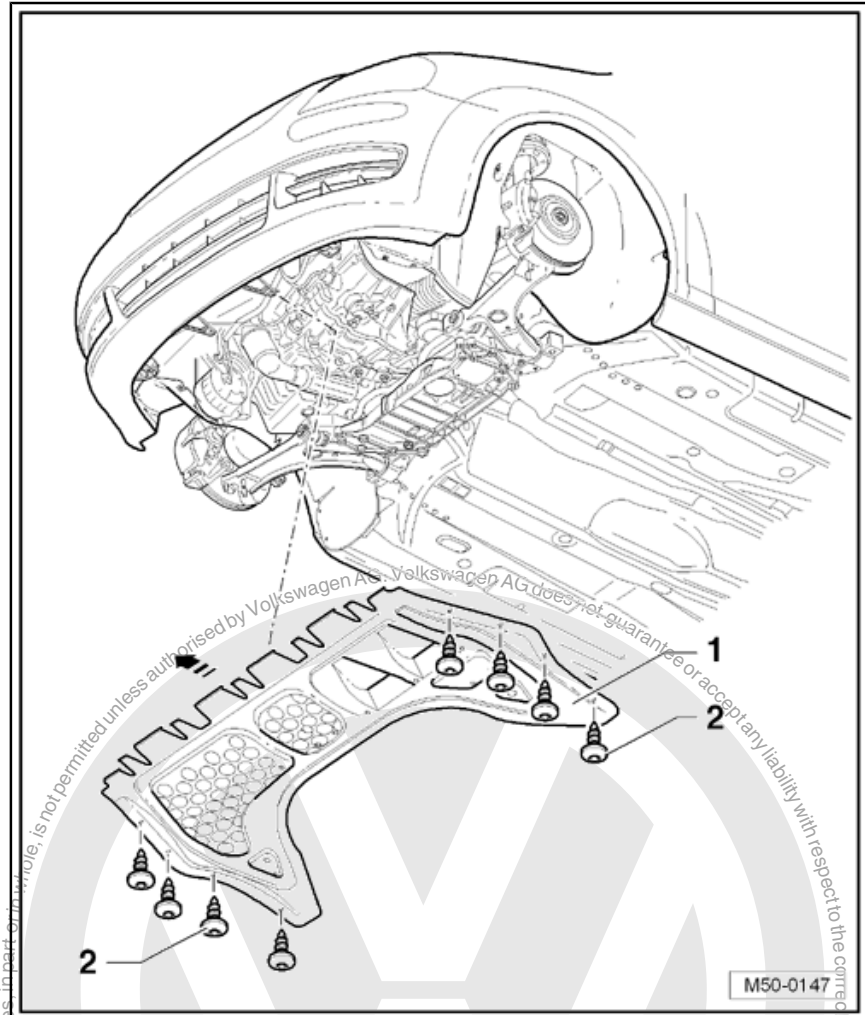
The removal and installation procedures may have to be modified slightly depending on engine fitted.

1 - Noise insulation

- Arrow- points forwards
- To remove, unbolt bolts
⇒ [Item 2 \(page 11\)](#)

2 - Bolt

- Qty. 8
- 2 Nm



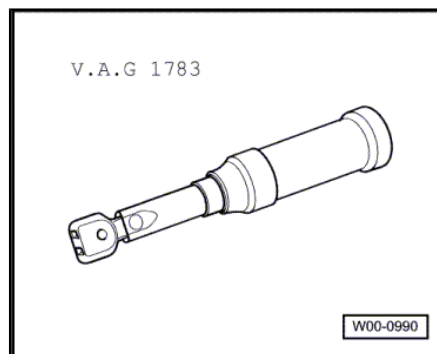


4 Underbody cladding

4.1 Tools

Special tools and workshop equipment required

- ◆ Torque wrench -V.A.G 1783-





4.2 Assembly overview - underbody cladding



Note

Only the left side is shown. The right side is similar.

1 - Underbody cladding

- Arrow- points forwards
- To remove, unbolt hexagon nuts
⇒ [Item 2 \(page 13\)](#)

2 - Hexagon nut

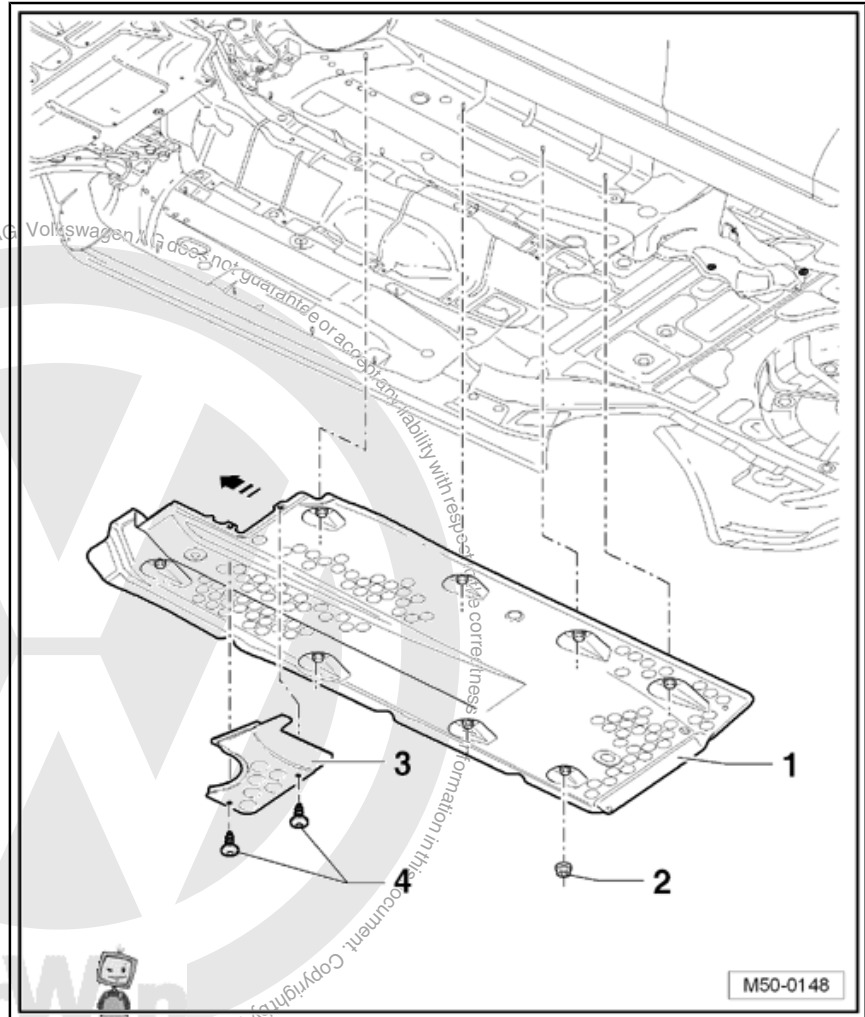
- Qty. 8
- 1.5 Nm

3 - Cover

- To remove, unbolt bolts
⇒ [Item 4 \(page 13\)](#)

4 - Bolt

- Qty. 2
- 2 Nm





4.3 Assembly overview - rear underbody cladding

1 - Bolt

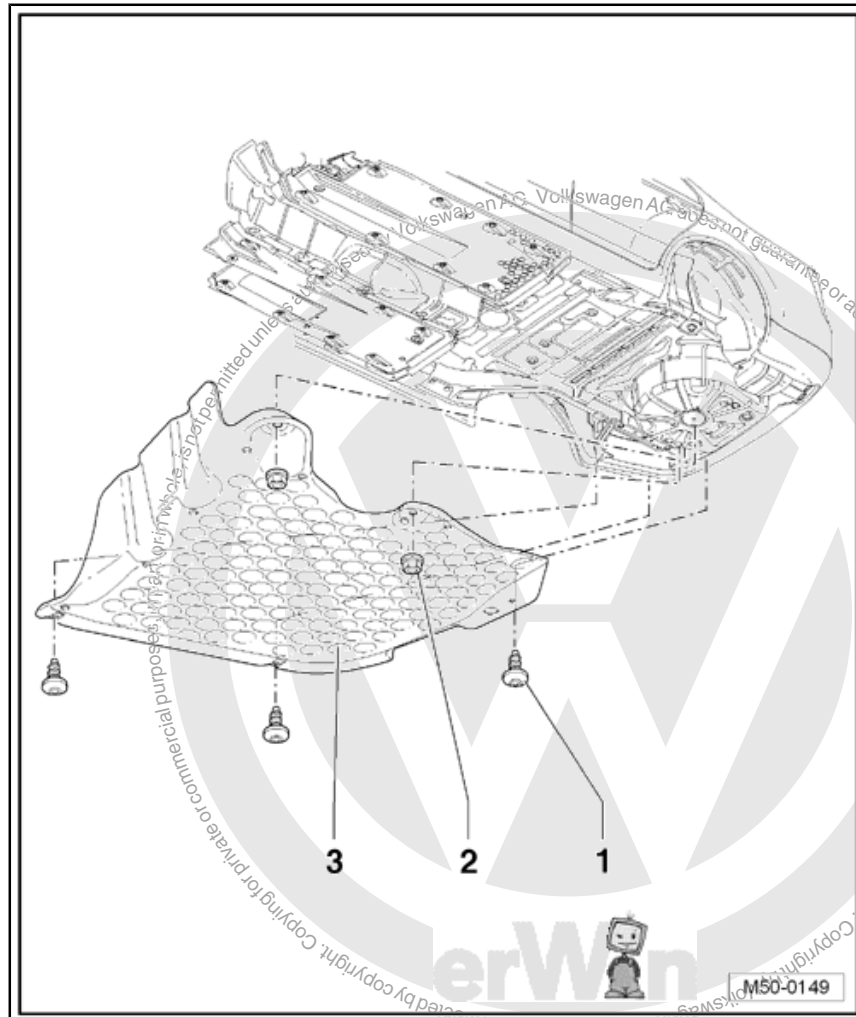
- Qty. 3
- 2 Nm

2 - Rear underbody cladding

- Installed only on right side.
- To remove, remove bolts
⇒ [Item 1 \(page 14\)](#) and
hexagon nuts
⇒ [Item 3 \(page 14\)](#)

3 - Hexagon nut

- Qty. 2
- 1.5 Nm



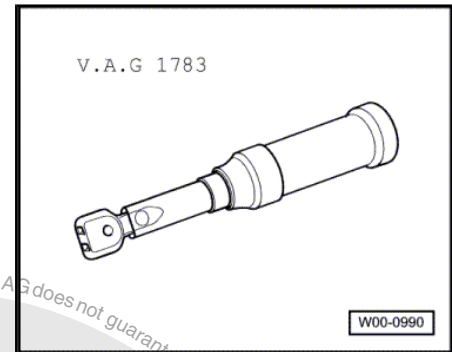


5 Plenum chamber bulkhead

5.1 Tools

Special tools and workshop equipment required

- ◆ Torque wrench -V.A.G 1783-



5.2 Assembly overview - plenum chamber bulkhead

1 - Plenum chamber bulkhead

2 - Hexagon nut

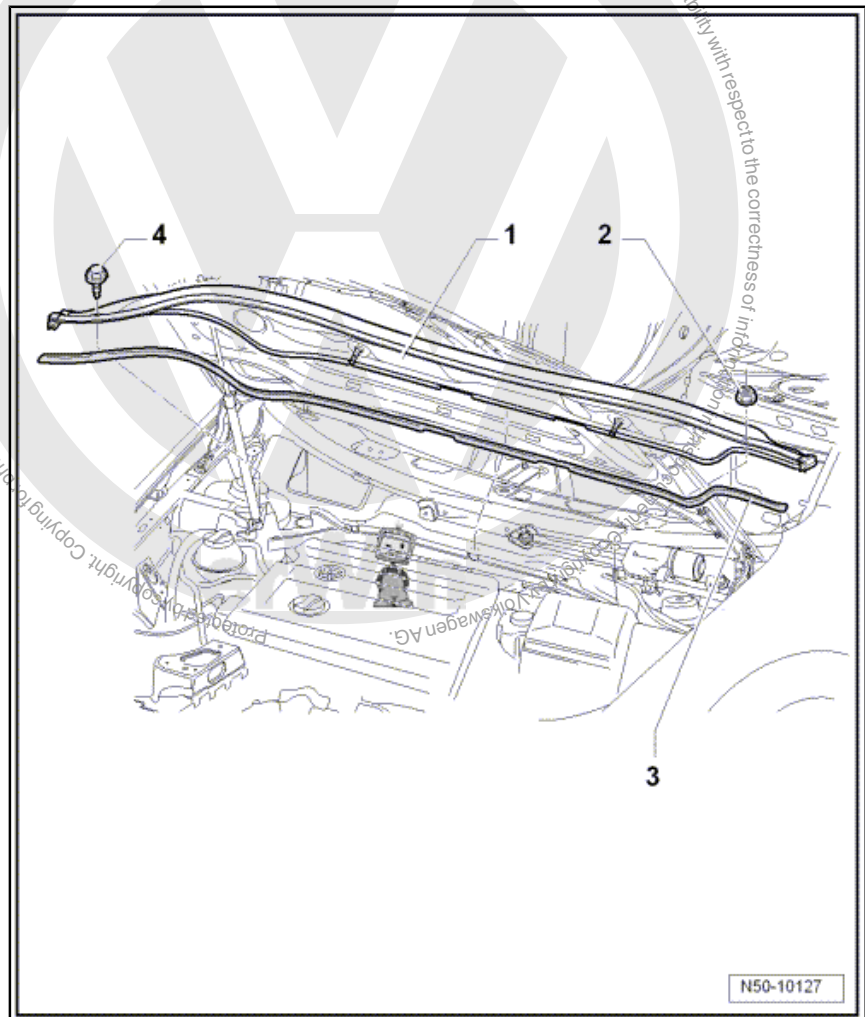
- 8 Nm

3 - Plenum chamber bulkhead seal

- When installing bulkhead, ensure seal is correctly seated.

4 - Bolt

- 8 Nm





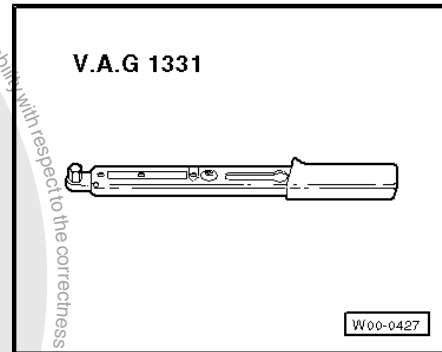
55 – Bonnet, rear lid

1 Bonnet

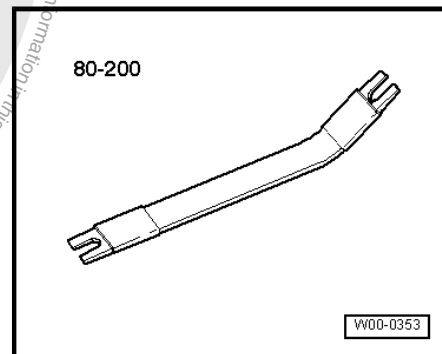
1.1 Tools

Special tools and workshop equipment required

- ◆ Torque wrench -V.A.G 1331-



- ◆ Removal lever -80-200-





1.2 Assembly overview - bonnet

1 - Bonnet

- Removing and installing
⇒ [page 17](#)
- Adjusting ⇒ [page 25](#)

2 - Adjustment buffer

- Qty. 2
- Adjusting ⇒ [page 25](#)

3 - Stop buffer

- Qty. 2

4 - Insulation

- Removing and installing
⇒ [page 20](#)

5 - Guide

- Qty. 2

6 - Lid hinge

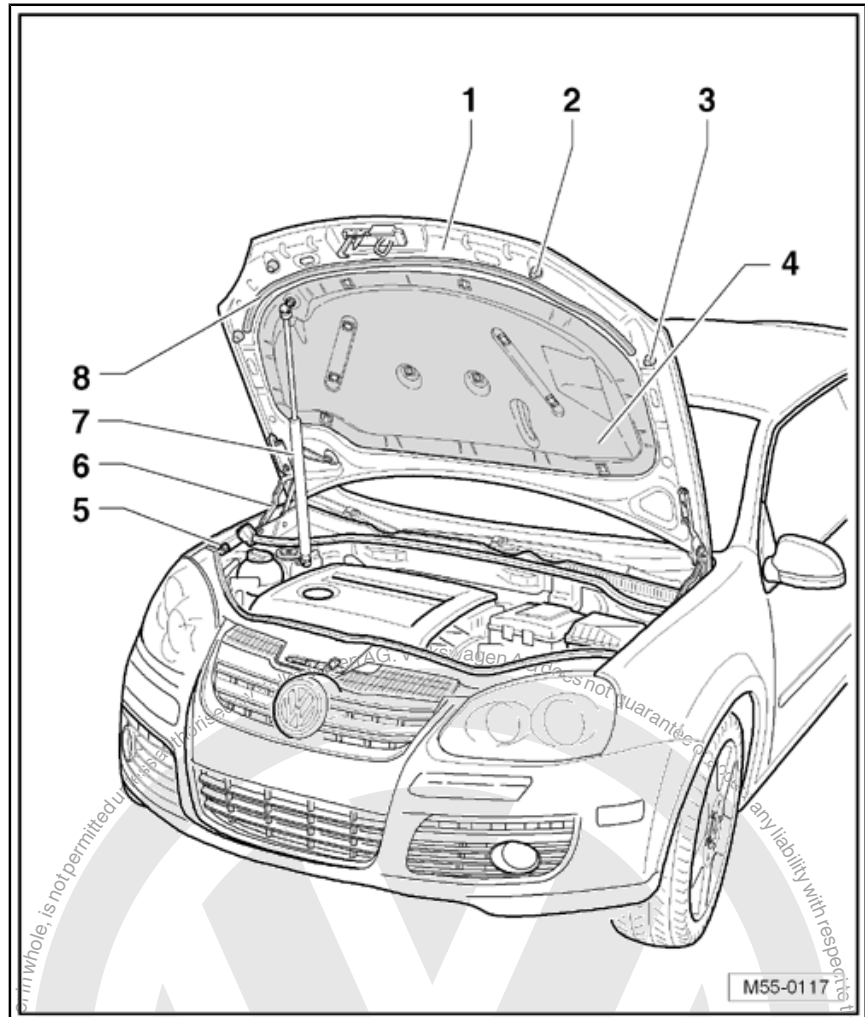
- Removing and installing
⇒ [page 19](#)
- Adjust bonnet
⇒ [page 25](#) .

7 - Gas strut

- Removing ⇒ [page 19](#)
- Releasing gas
⇒ [page 19](#)

8 - Seal

- Secured to inner bonnet
with clips



1.3 Removing and installing bonnet

1.3.1 Removing

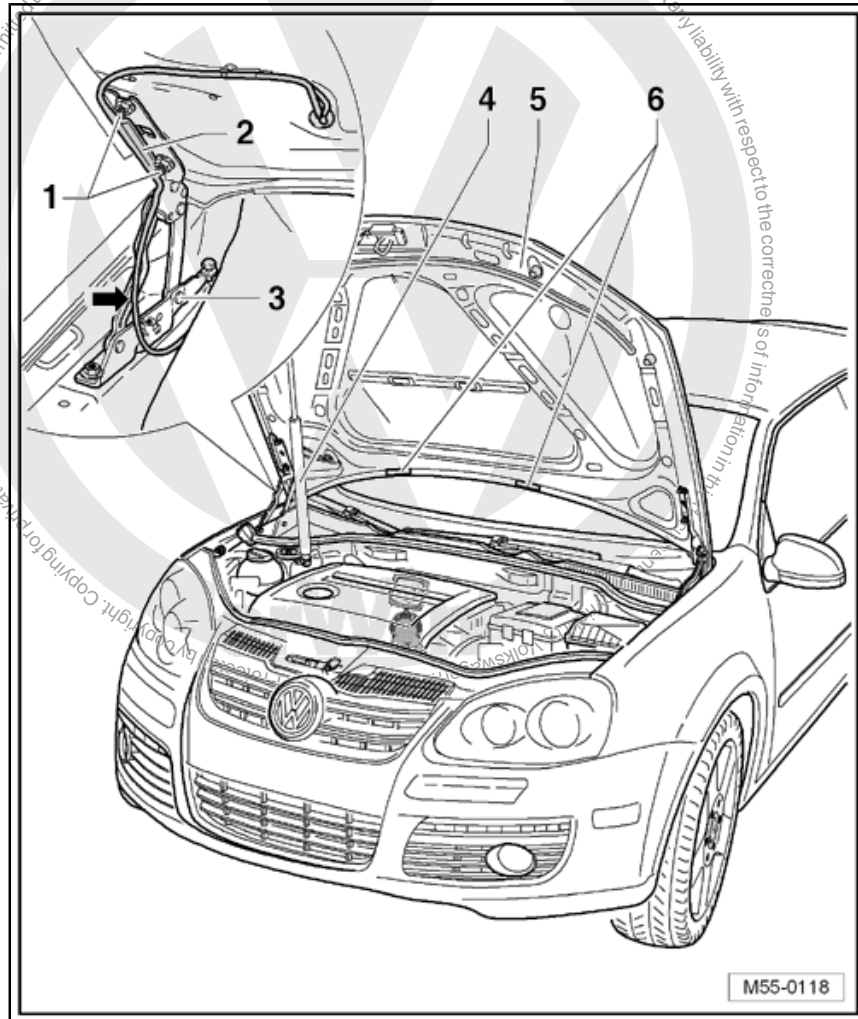
- Remove left and right washer jets -6- → Electrical system;
Rep. Gr. 92 ; Windscreen washer system .
- Unclip line -2- from bonnet hinge -3- and bonnet -5-.
- Pull line -2- out through aperture in bonnet -5-.
- Loosen hexagon nuts -1- on left and right (do not remove).

Further dismantling requires the assistance of a second mechanic.

- Disconnect gas strut -4- from bonnet -5- ⇒ [page 19](#) .



- Now remove hexagon nuts -1- and lift bonnet -5- out of bonnet hinges -3-.



1.3.2 Installing

Install in reverse order of removal.

Specified torque for bonnet hexagon nut: 22 Nm.

Adjusting bonnet -1- => [page 25](#) .

- Route line -2- in an arc -arrow-. If line is installed twisted it will kink.



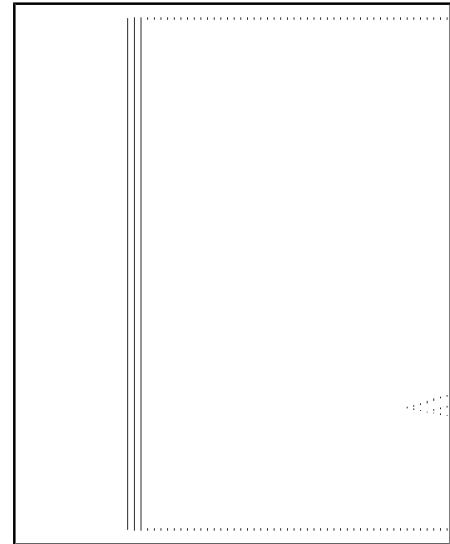
1.4 Removing gas strut

- Open bonnet and support it.
- Position a small screwdriver beneath spring clip -2-.
- Raise spring clip -2- until it can be moved over ball socket in direction of -arrow-.
- Pull gas strut -1- off ball-head pins -3- and -4-.
- Slide spring clip -2- back immediately after removing gas strut -1-.



WARNING

Proceed with care if gas strut is reused. Spring clip must not be levered completely out of ball socket, as it will otherwise be damaged. Gas strut will spring out of mounting, causing damage or injury to operator.



Specified torque for ball-head pins -3- and -4-: 22 Nm.

Releasing gas from gas strut ⇒ [page 19](#)

1.5 Releasing gas from gas strut

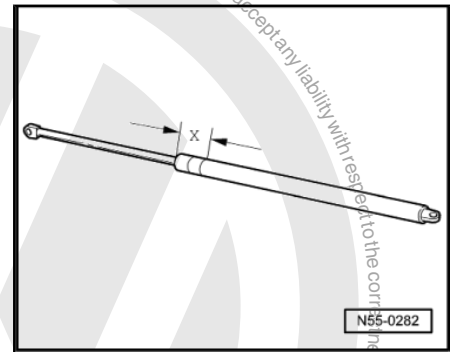
- Clamp gas strut in vice in area marked -x- = 50 mm (2 in).



WARNING

Clamp gas strut only within area -x-; otherwise danger of accident!

- Saw through cylinder of gas strut within first third of cylinder's overall length using piston rod end of cylinder as reference point.



Note

- ◆ *Wear eye protection when sawing.*
- ◆ *Cover area of saw cut with a cloth.*
- ◆ *Dispose of oil and cloth via existing disposal channels.*

1.6 Removing and installing lid hinge



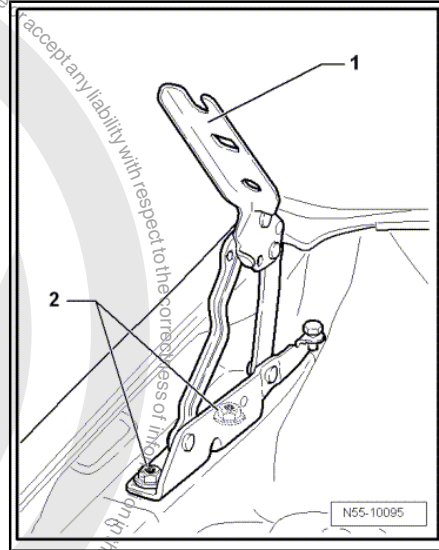
Note

The removal and installation sequence is only described for the left hinge. The removal and installation of the right hinge is similar.



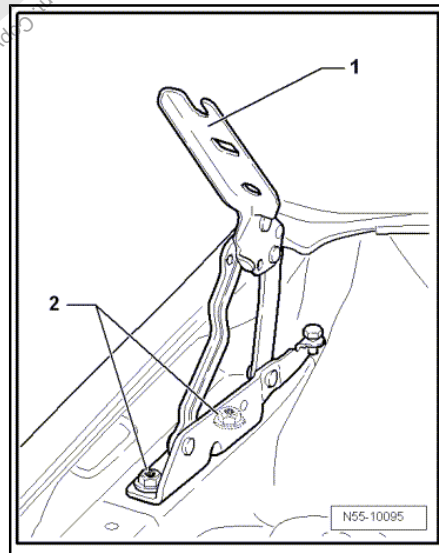
1.6.1 Removing

- Remove front bonnet ⇒ [page 17](#) .
- Remove bolts -2- and remove bonnet hinge -1-.



1.6.2 Installing

- Install lid hinge -1-
Specified torque for bolts -2-: 22 Nm.
- Install bonnet ⇒ [page 18](#) .



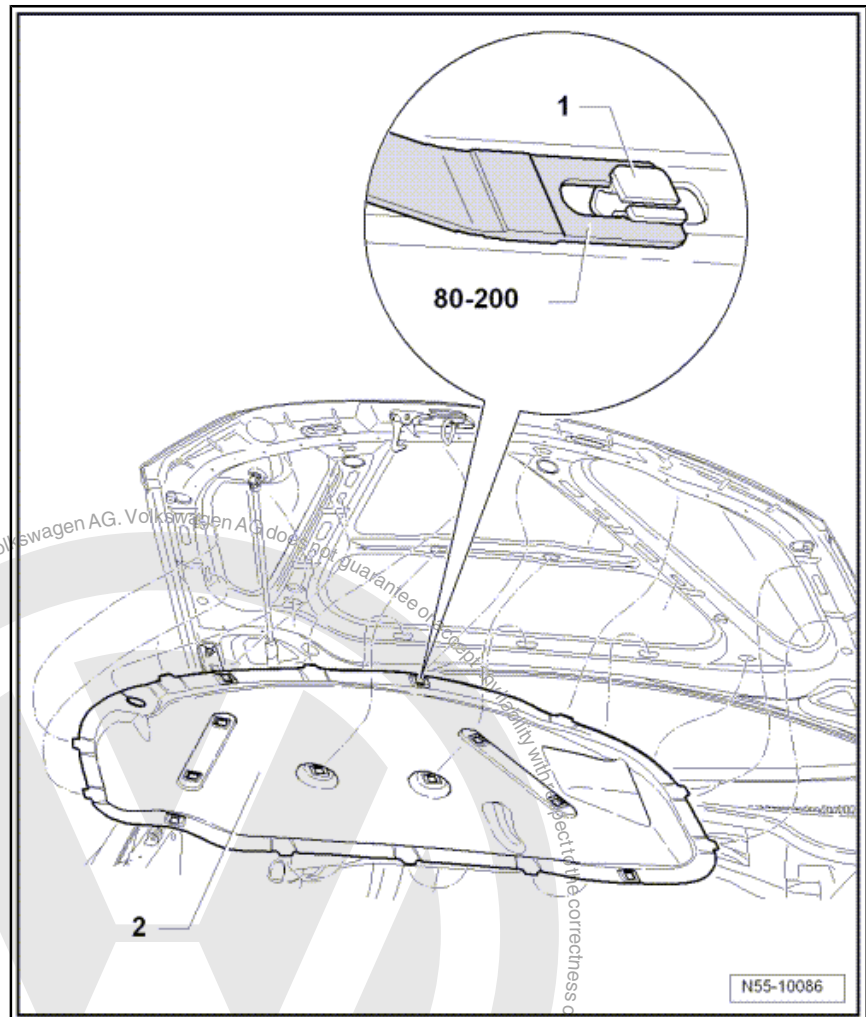
1.7 Removing and installing insulation

1.7.1 Removing

- Lever retaining clips -1- out of insulation -2- using removal lever -80-200- .



- Pull insulation -2- out of elongated holes.

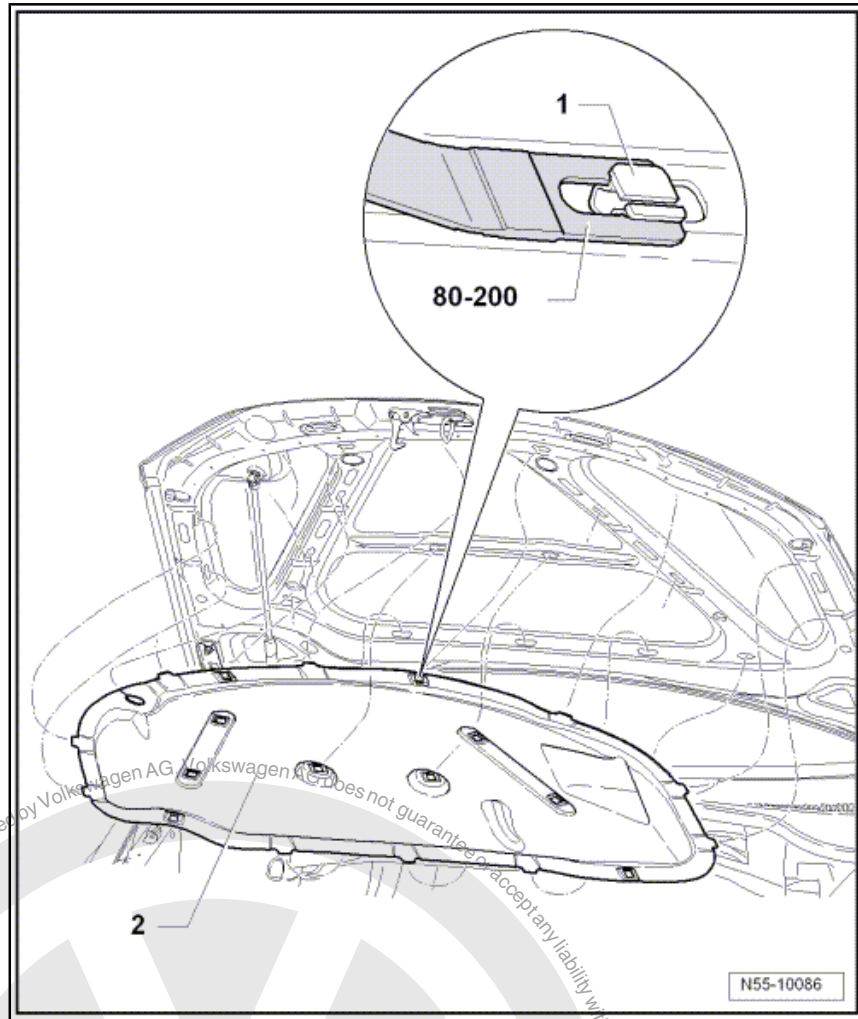


1.7.2 Installing

- Push insulation -2- underneath gas strut and place assembly tongues in elongated holes.
- Engage all retaining clips -1- in insulation -2-.



When installing insulation -2- ensure that retaining clips -1- are fitted with wider side outwards.





1.8 Assembly overview - bonnet latch and release components

1 - Arrester

- To remove, unbolt bolts
 ⇒ [Item 2 \(page 23\)](#)
- Adjustment is carried out by moving arrester to left or right in elongated holes.

2 - Bolt

- Qty. 3
- 10 Nm

3 - Expanding nut

- Qty. 2

4 - Mounting bracket

5 - Bowden cable

- Clipped into bearing bracket

6 - Bolt

- Qty. 2
- 1.5 Nm

7 - Release lever

- Removing and installing
 ⇒ [page 27](#)

8 - Bowden cable

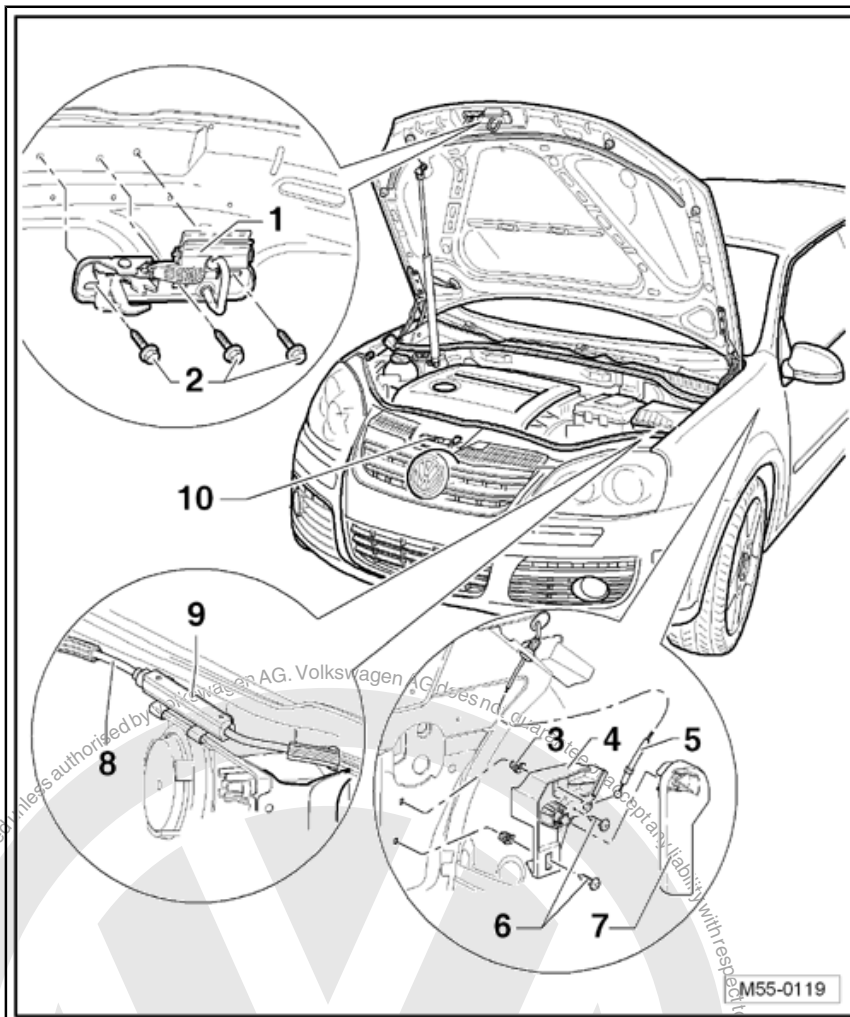
- Clipped onto wheel housing and lock carrier

9 - Bowden cable coupling

- Separating Bowden cable
 ⇒ [page 24](#)

10 - Lid lock

- Removing and installing
 ⇒ [page 23](#)
- Adjusting ⇒ [page 26](#)



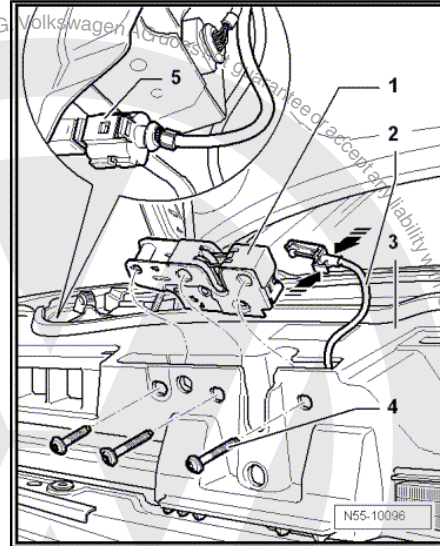
1.9 Removing and installing bonnet lock

1.9.1 Removing

- Open bonnet.
- Remove radiator grille ⇒ [page 337](#).
- Disconnect Bowden cable ⇒ [page 24](#).



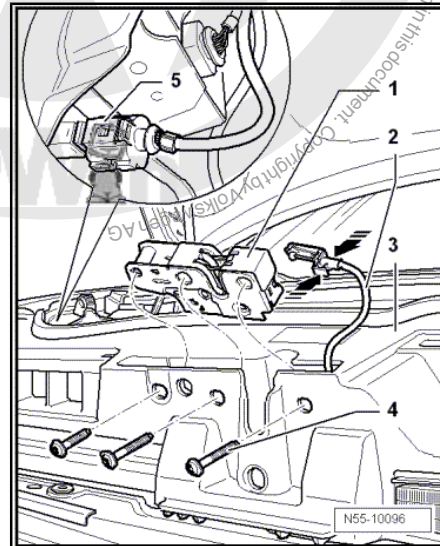
- Disconnect connector -5- for bonnet contact switch -F266- .
The connector is secured over the right headlight.
- Unclip wiring for bonnet contact switch -F266- on lock carrier -3-.
- Remove bolts -4- (Qty. 3) on lock carrier -3- and remove bonnet lock -1- upwards.
- To unclip Bowden cable -2-, press tabs on Bowden cable together -arrows-.
- Fastener is released and Bowden cable -2- can be removed from bonnet lock -1-.



1.9.2 Installing

- Clip Bowden cable -2- into bonnet lock -1-.
- Install bonnet lock -1- into lock carrier -3-.
- Specified torque for bolts -4-: 12 Nm
- Reconnect connector -5- for bonnet contact switch -F266- and clip wiring onto lock carrier -3-.
- Install Bowden cable -2- ⇒ [page 24](#) .
- Adjust bonnet lock ⇒ [page 26](#) .

Before closing bonnet, check function of release lever and Bowden cable.



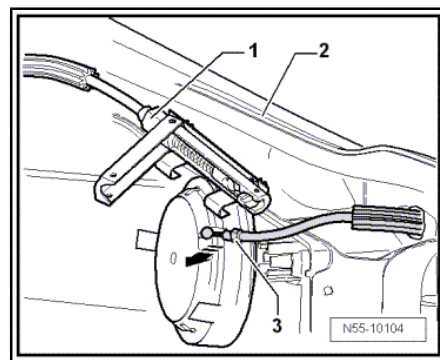
1.10 Disconnecting Bowden cable

- Open bonnet.
- Unclip Bowden coupling -1- above right headlight for lock carrier -2-.
- Open Bowden cable coupling -1- upwards and remove Bowden cable -3- in direction of -arrow- out of Bowden cable coupling.

Note

When installing, ensure that the Bowden cable sleeve is inserted correctly and the coupling engages.

Before closing bonnet, check function of release lever and Bowden cable.





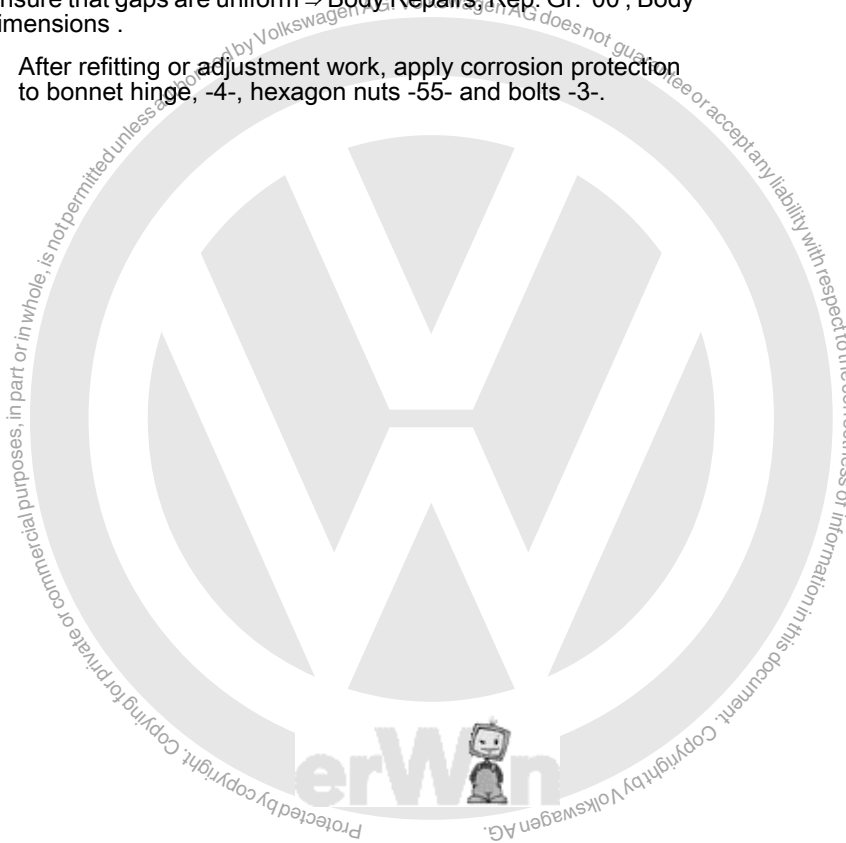
1.11 Adjusting bonnet

For initial adjustment of bonnet, -1-, the vehicle must be standing on the ground and the arrester be removed.

- Remove latch hook -9- ⇒ [Item 1 \(page 23\)](#) .
- Disconnect gas strut -2- from bonnet -1- ⇒ [page 19](#) .
- Bonnet -1- can be centred between wings by loosening hexagon nuts -5- and bolt -3- (do not remove) on left and right bonnet hinges -4-.
- Bonnet -1- can be adjusted in height to wings at rear by means of adjustment screw -6- on left and right.
- The stop buffers -7- (Qty. 2) are not used for adjustment. They have the function of stabilising and damping the bonnet -1-.
- The front part of the bonnet -1- can be adjusted to wing height by using the adjustment buffers -8- (Qty. 2).

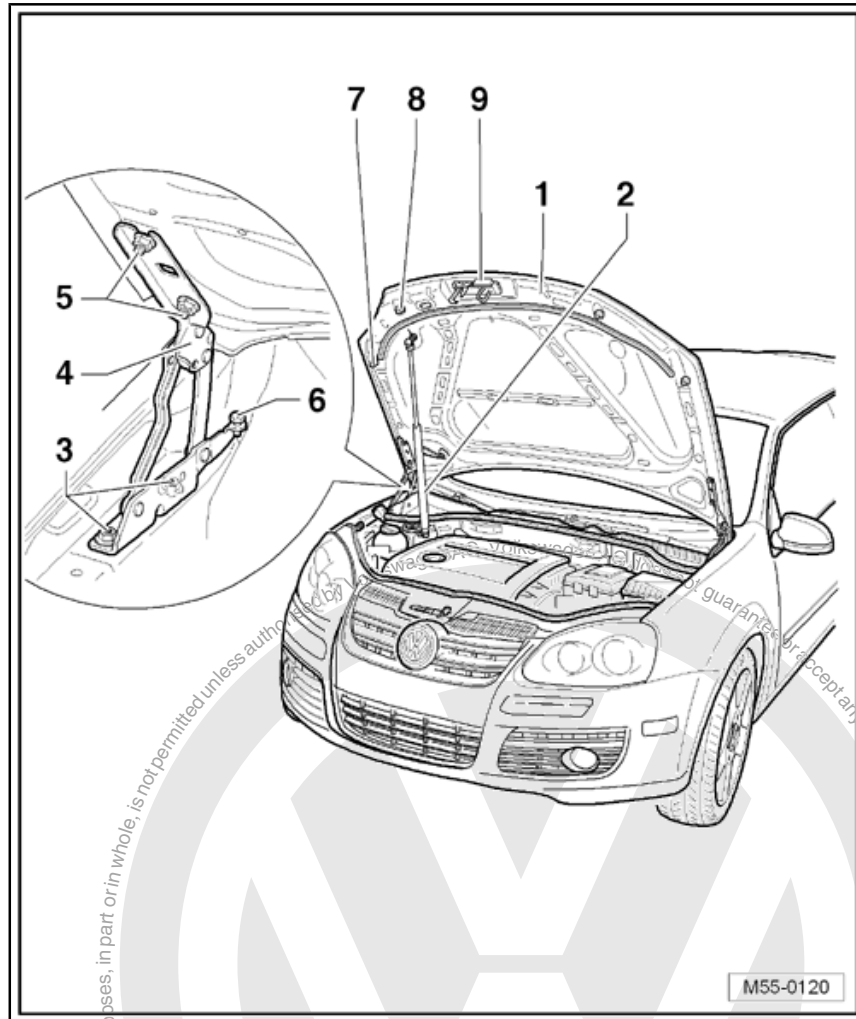
Ensure that gaps are uniform ⇒ Body Repairs; Rep. Gr. 00 ; Body dimensions .

- After refitting or adjustment work, apply corrosion protection to bonnet hinge, -4-, hexagon nuts -5- and bolts -3-.





- After adjusting bonnet -1-, install and adjust arrester
⇒ [Item 1 \(page 23\)](#) .



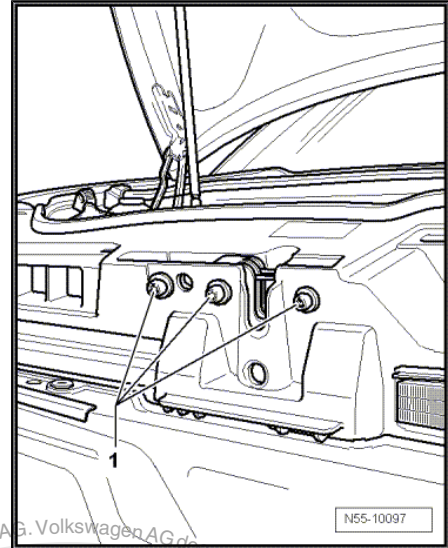
1.11.1 Adjusting bonnet lock

If gaps change when bonnet is closed, minor corrections can be made via bonnet lock and arrester.

- Remove radiator grille ⇒ [page 337](#) .



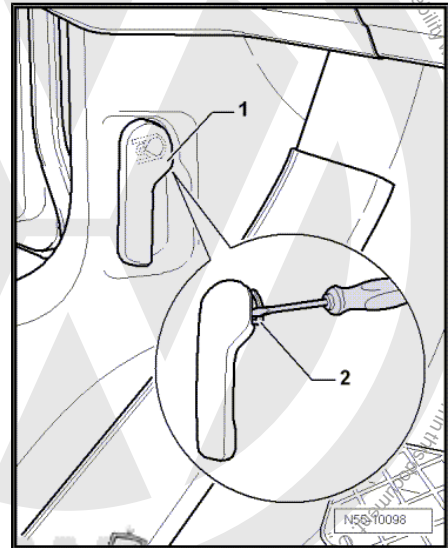
- Now loosen bolts -1- to correct or adjust gaps at front of bonnet
⇒ Body Repairs; Rep. Gr. 00 ; Body dimensions .
Specified torque for bolts -1-: 12 Nm.
- Adjust arrester ⇒ [Item 1 \(page 23\)](#) .



1.12 Removing and installing release lever

1.12.1 Removing

- Pull operating lever -1- and release bonnet.
- Insert a small screwdriver in gap between release lever -1- and clip -2-.
- Lever clip -2- out of release lever -1- and pull off release lever.

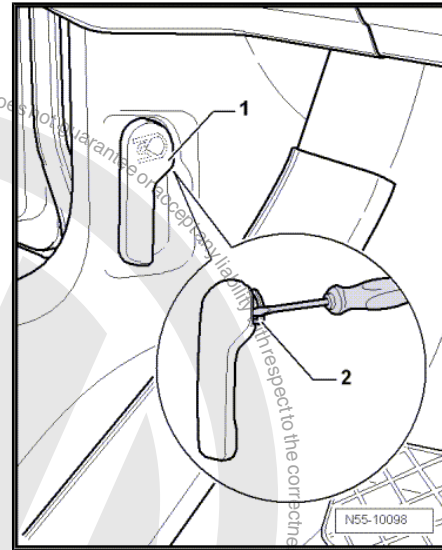




1.12.2 Installing

- Slide clip -2- completely into release lever -1-.
- Then press release lever -1- onto mounting in mounting bracket and fasten release lever.

Before closing bonnet, check function of release lever and Bowden cable.



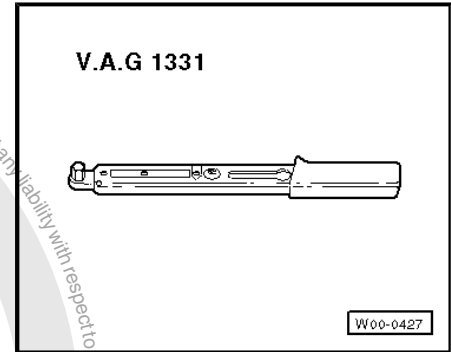


2 Rear lid (saloon)

2.1 Tools

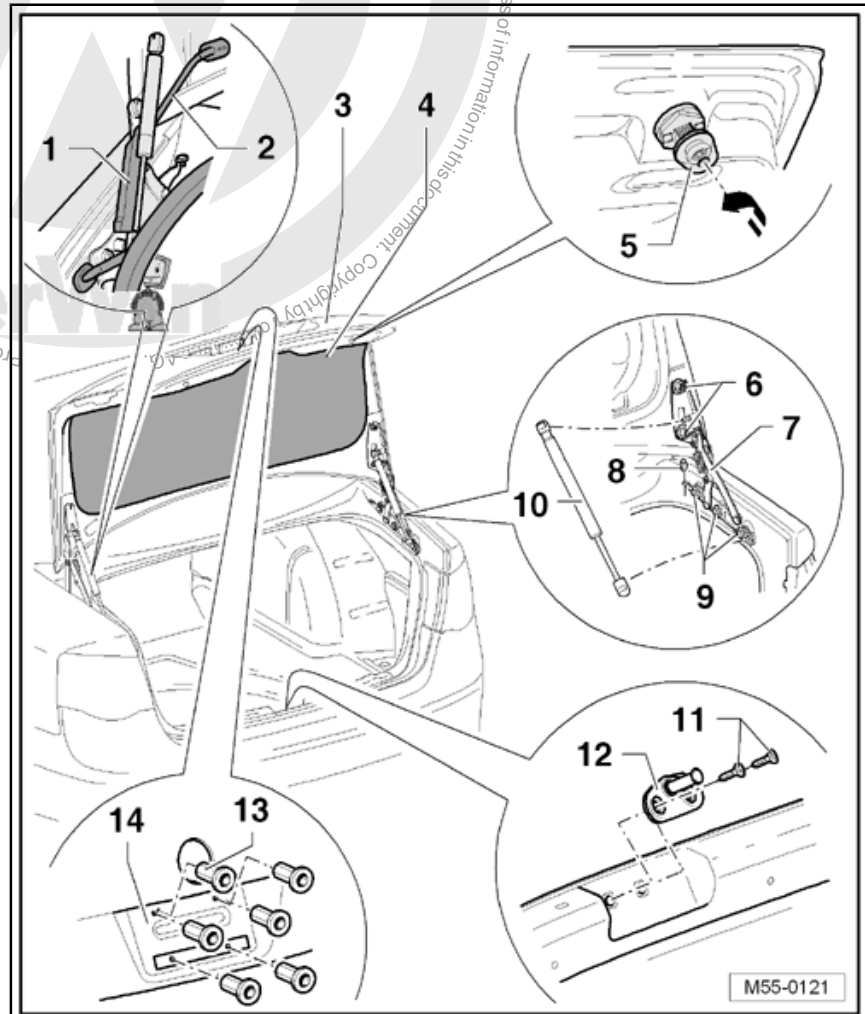
Special tools and workshop equipment required

- ◆ Torque wrench -V.A.G 1331-



2.2 Assembly overview - rear lid

- 1 - Hinge cover
- 2 - Wiring harness
- 3 - Rear lid
 - Removing and installing ⇒ [page 30](#)
 - Adjusting ⇒ [page 33](#)
- 4 - Rear lid trim
 - Removing and installing ⇒ General body repairs, exterior; Rep. Gr. 70 ; Removing and installing rear lid trim
- 5 - Adjustment buffer
 - Left and right
 - When installing, turn 90° anti-clockwise -arrow-
 - Adjusting ⇒ [page 33](#)
- 6 - Hexagon nut
 - Qty. 2
 - 22 Nm
- 7 - Lid hinge
 - Removing and installing ⇒ [page 31](#)
- 8 - Rubber buffer
- 9 - Bolt
 - Qty. 3
 - 22 Nm
- 10 - Gas strut
 - Removing ⇒ [page 30](#)
 - Releasing gas ⇒ [page 31](#)





11 - Bolt

- Qty. 2
- 23 Nm

12 - Locking wedge

- Removing and installing ⇒ [page 32](#)

13 - Pop rivet nut

14 - Base for registration plate

- Different versions are possible.
- Assignment ⇒ Parts catalogue "ETKA"

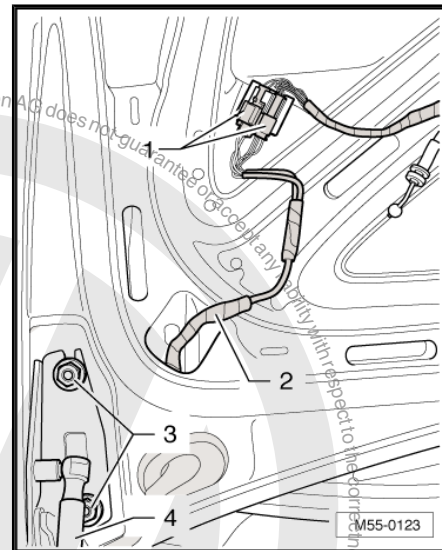
2.3 Removing and installing rear lid

2.3.1 Removing

- Open rear lid.
- Remove rear lid trim ⇒ General body repairs, interior; Rep. Gr. 70 ; Rear lid trim .
- Disconnect connectors -1- and pull wiring -2- with rubber grommet out of lid.
- Loosen hexagon nuts -3- on left and right lid hinges (do not unbolt completely).

Further dismantling requires the assistance of a second mechanic.

- Detach gas struts -4- on left and right of rear lid ⇒ [page 30](#) .
- Now, and only now, unbolt bolts -3- and remove rear lid.



2.3.2 Installing

Install in reverse order of removal.

Specified torque for rear lid hexagon nut: 22 Nm.

Adjust rear lid ⇒ [page 33](#) .

Before closing rear lid, check function of lid release components.

2.4 Removing gas strut

- Open rear lid and support it.



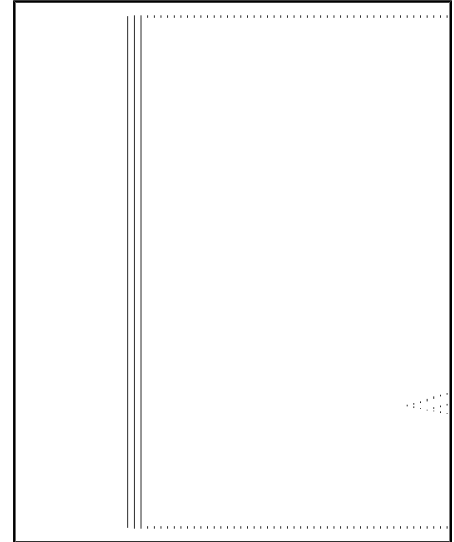
- Position a small screwdriver beneath spring clip -2-.
- Raise spring clip -2- until it can be moved over ball socket in direction of -arrow-.
- Pull gas strut -1- off ball-head pins -3- and -4-.
- Slide spring clip -2- back immediately after removing gas strut -1-.



WARNING

Proceed with care if gas strut is reused. Spring clip must not be levered completely out of ball socket, as it will otherwise be damaged. Gas strut will spring out of mounting, causing damage or injury to operator.

Releasing gas from gas strut ⇒ [page 31](#)



2.5 Releasing gas from gas strut

- Clamp gas strut in vice in area marked -x- = 50 mm (2 in).



WARNING

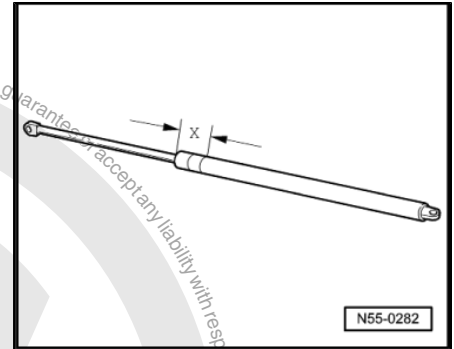
Clamp gas strut only within area -x-; otherwise danger of accident!

- Saw through cylinder of gas strut within first third of cylinder's overall length using piston rod end of cylinder as reference point.



Note

- ◆ *Wear eye protection when sawing.*
- ◆ *Cover area of saw cut with a cloth.*
- ◆ *Dispose of oil and cloth via existing disposal channels.*



2.6 Removing and installing lid hinge



Note

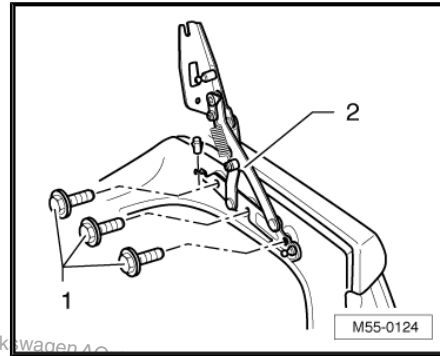
Removal and installation is described for hinge on right of lid. Follow same instructions for hinge on left of lid as appropriate.

2.6.1 Removing

- Remove rear lid ⇒ [page 30](#)



- Remove bolts -1- and remove lid hinge -2-.



2.6.2 Installing

Install in reverse order of removal.

Specified torque for lid hinge bolts: 22 Nm

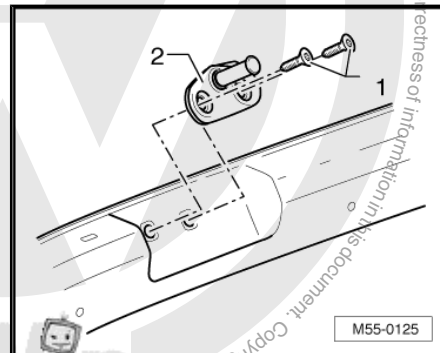
Adjust rear lid ⇒ [page 33](#) .

Before closing rear lid, check function of lid release components.

2.7 Removing and installing striker pin

2.7.1 Removing

- Remove lock carrier cover ⇒ General body repairs, interior; Rep. Gr. 70 ; Luggage and load compartment trim .
- Remove bolts -1- and remove striker pin -2-.

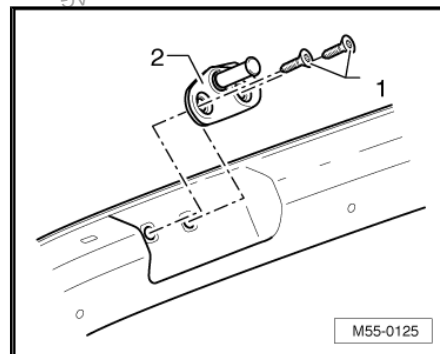


2.7.2 Installing

- Install striker pin -2-.

Specified torque for bolts -1-: 23 Nm.

Further installation is performed in reverse order of removal.





2.8 Adjusting rear lid



Note

- ◆ *Vehicle must be standing on the ground to perform the basic adjustment of the rear lid.*
- ◆ *The rear lid lock is bolted directly to the rear lid. It does not have elongated holes, so it cannot be adjusted.*
- ◆ *Adjusting buffers cannot be used to adjust rear lid as they are in some other vehicles. They have the function of stabilising and damping the rear lid.*

The rear lid adjustment is described step by step below.

Use setting gauge -3371- ⇒ Body Repairs; Rep. Gr. 00 ; Body dimensions to check or set gap dimensions.

- Remove gas strut ⇒ [page 30](#) .
- Adjust rear lid on rear lid hinges by loosening bolts ⇒ [Item 9 \(page 29\)](#) .
- Adjust rear lid with rear lid hinges by loosening hexagon nut ⇒ [Item 6 \(page 29\)](#) .
- Adjust adjustment buffer ⇒ [page 33](#) .



Note

The rear lid is correctly adjusted if, when closed, it is not sunken or raised, the gap is uniform all around and the contours align.

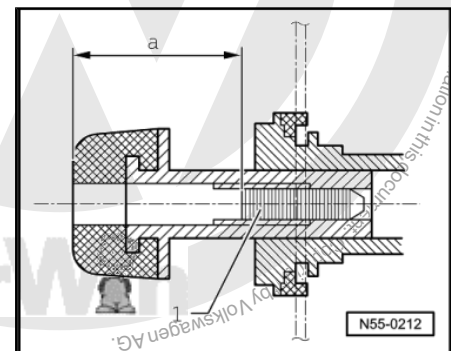
2.8.1 Adjusting adjustment buffer



Note

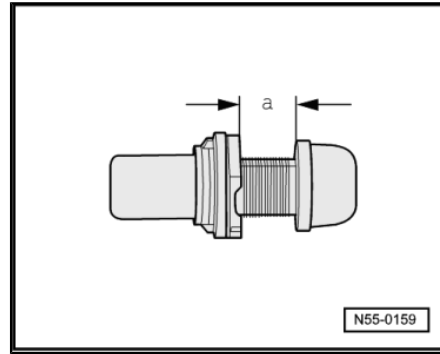
Only the adjustment for the right adjustment buffer is described. The adjustment for the left adjustment buffer is similar.

- Loosen grub screw -1- until it is visible in rubber buffer.
- Now pull detent slide out of adjustment buffer.

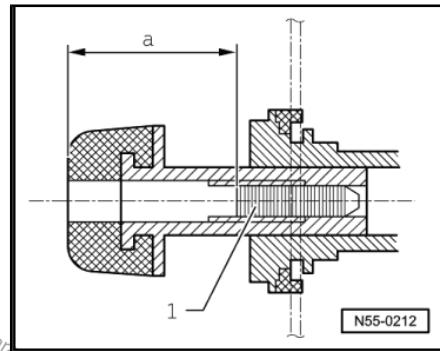




- Adjust detent slide to dimension -a- = 12.5 mm.
- Close rear lid to detent position with light pressure at centre of lid.



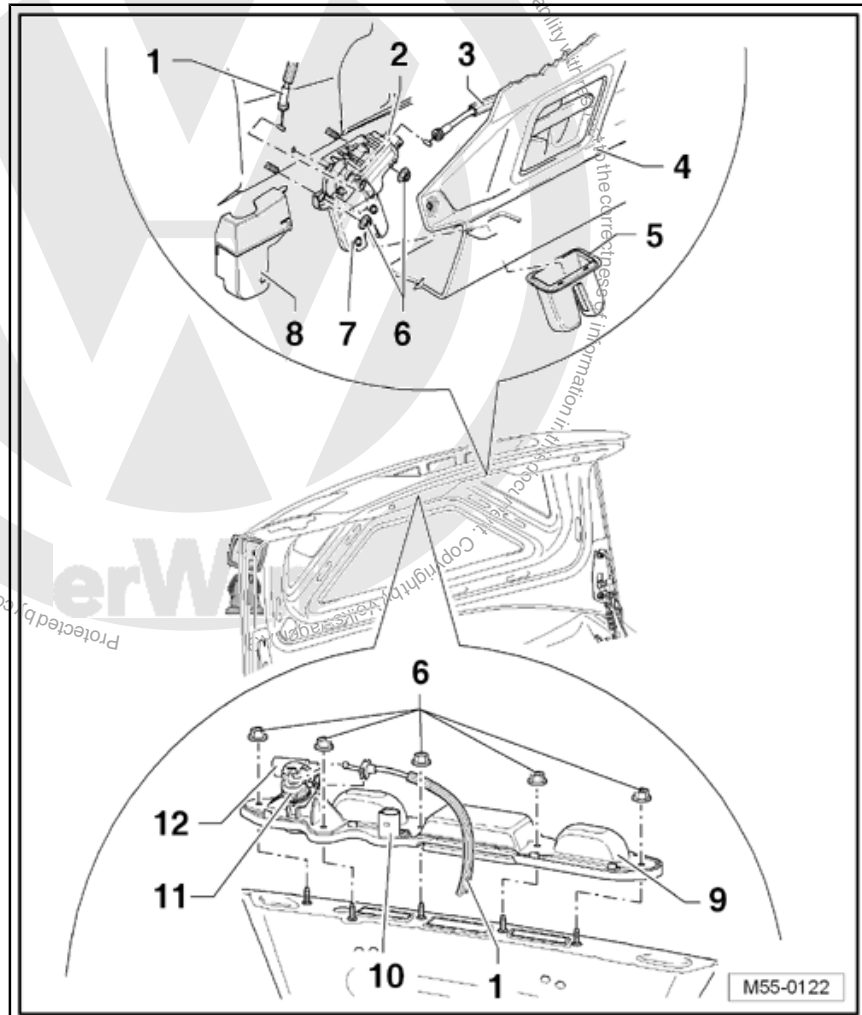
- Open rear lid again.
- Screw in adjustment buffer clamping screw -1- to a depth of dimension -a - = 25 mm.
- Check setting.





2.9 Assembly overview - lid lock and lock cylinder carrier

- 1 - Bowden cable**
 - From lid lock to lock cylinder
- 2 - Connector**
 - For bonnet lock
- 3 - Bowden cable**
 - From lid lock to emergency release lever in interior
 - Only vehicles with emergency release from interior
- 4 - Rear lid trim**
- 5 - Lock cover**
- 6 - Hexagon nut**
 - 8 Nm
- 7 - Lid lock**
 - Removing and installing ⇒ [page 36](#)
- 8 - Cover**
 - Not supplied with lid lock
 - Secured on lid lock with locking lugs
- 9 - Handle trim**
 - Removing and installing ⇒ [page 36](#)
- 10 - Connector**
 - For registration plate lighting and release button on vehicles with a release button
- 11 - Lock cylinder**
 - Removing and installing ⇒ [page 35](#)
- 12 - Connector**
 - For lock cylinder



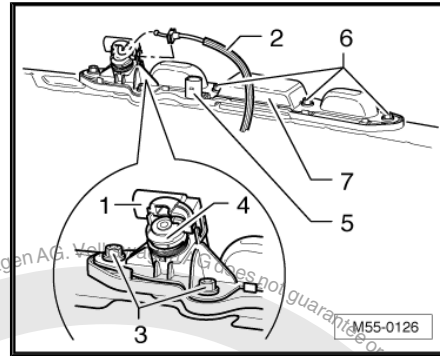
2.10 Removing and installing lock cylinder

2.10.1 Removing

- Removing rear lid trim ⇒ General body repairs, interior; Rep. Gr. 70 ; Rear lid trim .



- Disconnect connections -1- on lock cylinder.
- Unhook Bowden cable -2-.
- Remove nuts -3- and remove lock cylinder -4-.



2.10.2 Installing

Install in reverse order of removal.

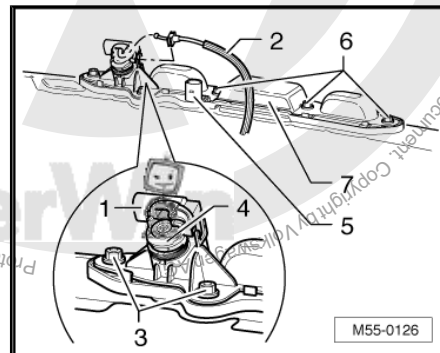
Specified torque for hexagon nuts: 8 Nm

Before closing rear lid, check function of lid release components.

2.11 Removing and installing handle trim

2.11.1 Removing

- Removing rear lid trim ⇒ General body repairs, interior; Rep. Gr. 70 ; Rear lid trim .
- Remove lock cylinder ⇒ [page 35](#) .
- Disconnect connector -5-.
- Remove nuts -6- and remove handle trim -7-.



2.11.2 Installing

Install in reverse order of removal.

Specified torque for hexagon nuts: 8 Nm

Before closing rear lid, check function of lid release components.

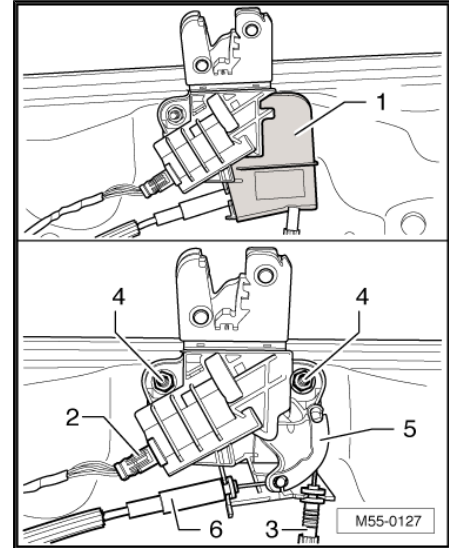
2.12 Removing and installing lid lock

2.12.1 Removing

- Remove lock cover ⇒ [Item 5 \(page 35\)](#) .
- Removing rear lid trim ⇒ General body repairs, interior; Rep. Gr. 70 ; Rear lid trim .



- Remove cover cap -1-.
- Disconnect connector -2- from lid lock -5-.
- Unhook Bowden cable -3-.
- Remove hexagon nuts -4- and remove lid lock -5-.
- If lid lock -5- is renewed, Bowden cable -6- must be unhooked.



2.12.2 Installing

Install in reverse order of removal.

Specified torque for hexagon nuts: 8 Nm

Before closing rear lid, check function of lid release components.

2.13 Rear lid seal

During production, a sealant is applied to the rear lid seals, the seal is then placed on the rear lid flange and rolled on.



Note

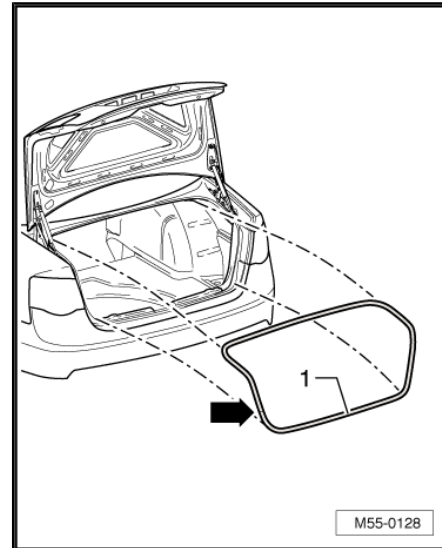
- ◆ *When seals are removed, the sealant will spread to the inside of the seal and the flanks will be bent out slightly. If the seal is then refitted, a leak-free tight seal is not guaranteed.*
- ◆ *Therefore each seal which is removed completely should be replaced by a so-called "tap-on" seal.*
- ◆ *If a seal has been partially removed, squeeze sides of seal together before refitting.*



2.14 Removing and installing rear lid seal

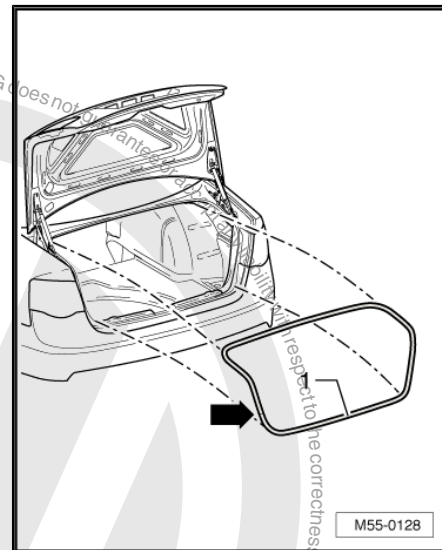
2.14.1 Removing

- Pull rear lid seal -1- off body flange.



2.14.2 Installing

- Align rear lid seal -1- so that the vulcanised point -arrow- is located to the middle of the left tail light cluster.



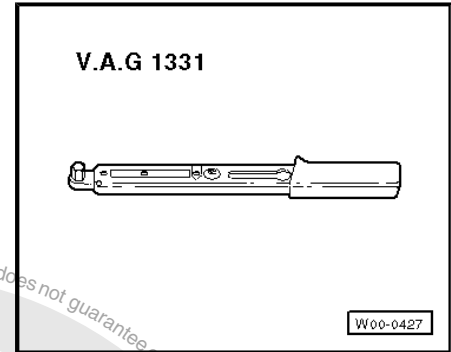


3 Rear lid (Variant)

3.1 Tools

Special tools and workshop equipment required

- ◆ Torque wrench 5...50 Nm -V.A.G 1331-



3.2 Assembly overview - rear lid

1 - Rear lid

- Removing and installing
⇒ [page 40](#)
- Adjusting ⇒ [page 44](#)

2 - Lid lock

- Removing and installing
⇒ [page 48](#)

3 - Stop

4 - Striker pin

- Adjusting ⇒ [page 45](#)

5 - Hinge

- Removing and installing
⇒ [page 42](#)

6 - Gas strut

- Removing and installing
⇒ [page 41](#)
- Releasing gas
⇒ [page 42](#)

7 - Adjustment buffer

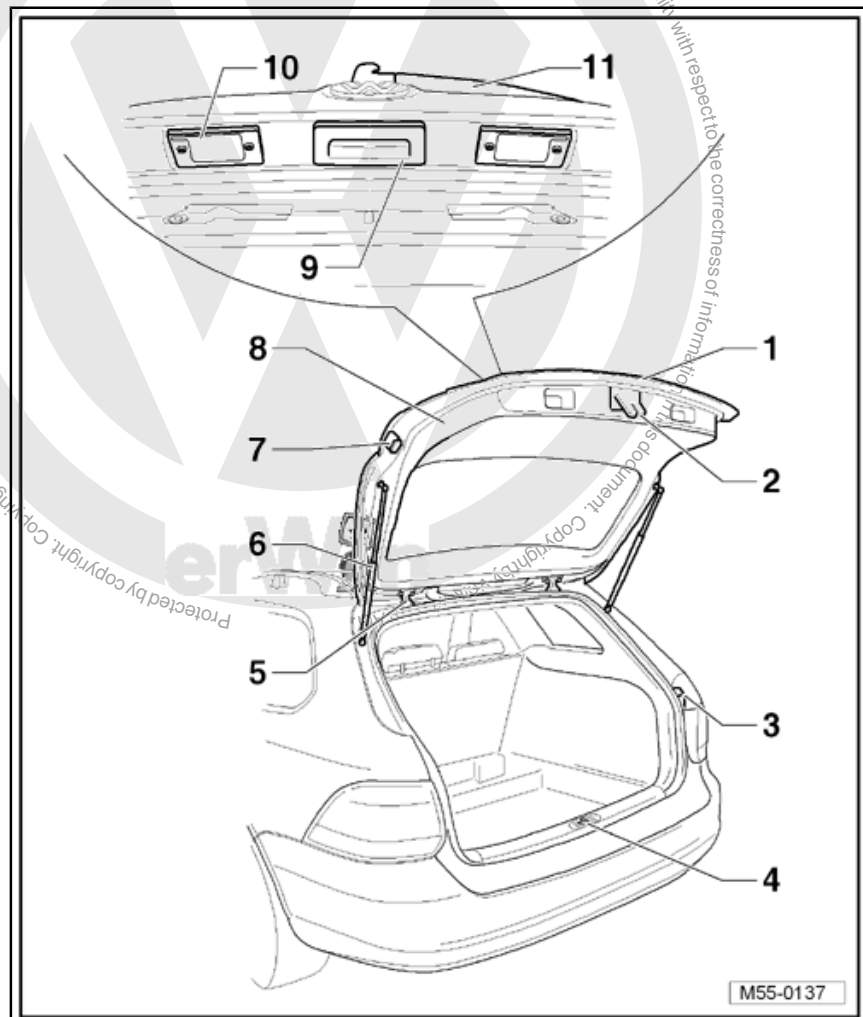
- Adjusting ⇒ [page 46](#)

8 - Rear lid trim

- Removing and installing
⇒ General body repairs,
interior; Rep. Gr. 70 ;
Removing and installing
rear lid trim

9 - Button to release rear lid

- Removing and installing
⇒ [page 47](#)





10 - Registration plate light

- ❑ Removing and installing
⇒ Electrical system; Rep. Gr. 94 ; Lights, bulbs, switches - exterior

11 - Rear window wiper

- ❑ Removing and installing ⇒ Electrical system; Rep. Gr. 92 ; Window washer/wiper system

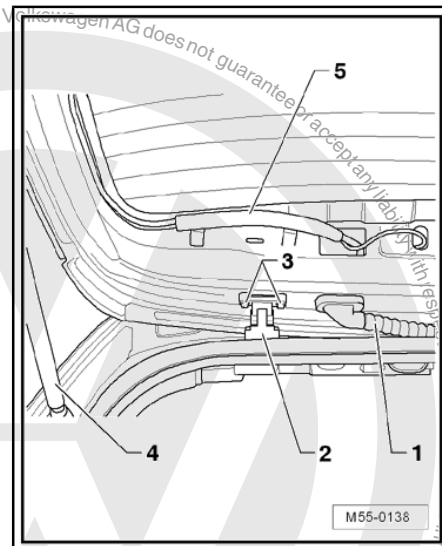
3.3 Removing and installing rear lid

3.3.1 Removing

- Remove rear lid trim ⇒ General body repairs, interior; Rep. Gr. 70 ; Rear lid trim .
- Remove rear lid window frame trim ⇒ General body repairs, interior; Rep. Gr. 70 ; Rear lid trim .
- Disconnect all connections in rear lid.
- Release bellows -1- and guide electrical wiring -5- through opening in rear lid.
- Loosen bolts -3- on hinge -2- (do not remove).

Further dismantling requires the assistance of a second mechanic.

- Remove gas strut -4- ⇒ [page 41](#) .
- Remove bolts -3-.
- Remove rear lid from hinge.



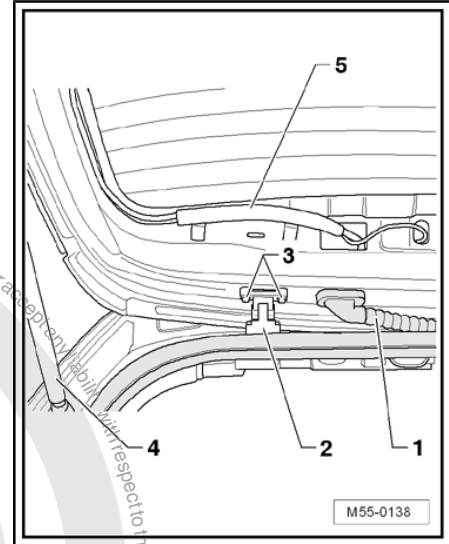
3.3.2 Installing

Further installation is possible only with the help of a second mechanic.

- Position rear lid carefully on hinges.




- Install bolts -3-.
- Guide electrical wiring -5- through opening in rear lid and secure bellows -1-.
- Adjust rear lid => [page 44](#) and tighten bolts -3-, specified torque: 10 Nm.
- Install gas strut -4-.
- Install rear lid trim => General body repairs, interior; Rep. Gr. 70 ; Rear lid trim
- Install rear lid window frame trim => General body repairs, interior; Rep. Gr. 70 ; Rear lid trim .
- Check adjustment of rear lid => [page 44](#) .



3.4 Removing and installing gas strut

- Open rear lid and support it.
- Position a small screwdriver beneath spring clip -2-.
- Raise spring clip -2- until it can be moved over ball socket in direction of -arrow-.
- Pull gas strut -1- off ball-head pins -3- and -4-.

After removing gas strut -1-, slide spring clip -2- back immediately.

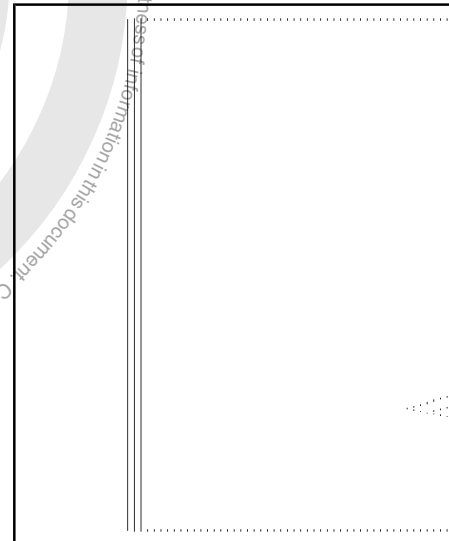
 **WARNING**

Proceed with care if gas strut is reused. Spring clip must not be levered completely out of ball socket, as it will otherwise be damaged. Gas strut will spring out of mounting, causing damage or injury to operator.

 **Note**

Ball sockets -3- and -4- are screwed into rear lid or body, specified torque: 20 Nm.

- Releasing gas from gas strut => [page 42](#)





3.5 Releasing gas from gas strut

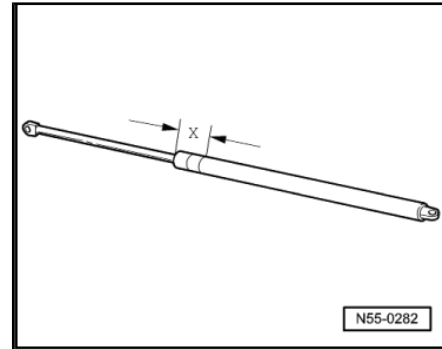
- Clamp gas strut in vice in area marked -x- = 50 mm.



WARNING

Clamp gas strut only within area -x-; otherwise danger of accident!

- Saw through cylinder of gas strut within first third of cylinder's overall length using piston rod end of cylinder as reference point.



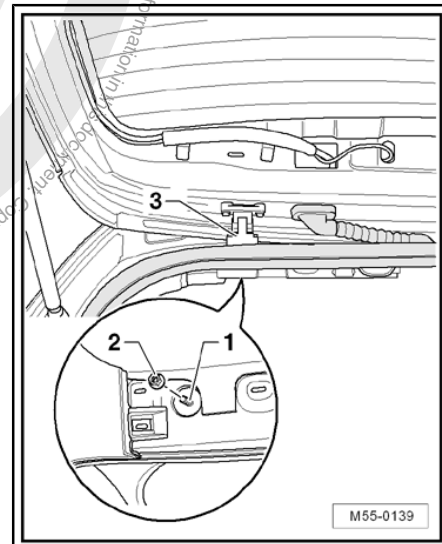
Note

- ◆ Wear eye protection when sawing.
- ◆ Cover area of saw cut with a cloth.
- ◆ Dispose of oil and cloth via existing disposal channels.

3.6 Removing and installing rear lid hinge

3.6.1 Removing

- Remove rear lid ⇒ [page 40](#) .
- Remove end strip for moulded headliner ⇒ General body repairs, interior; Rep. Gr. 70 ; Trim, insulation .
- Unscrew nuts -2- from studs -1-.
- Remove hinge -3- from exterior.

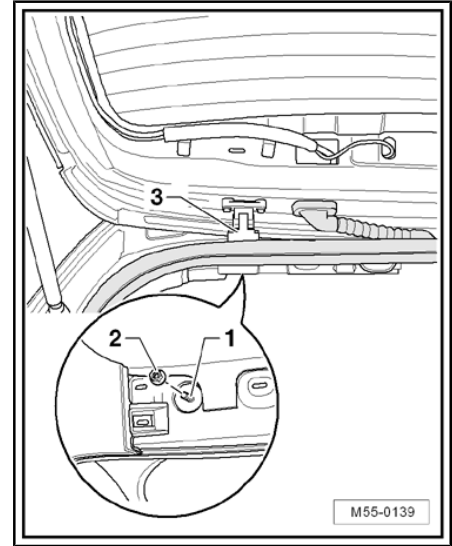




3.6.2 Installing

- Position hinge -3- in vehicle.
- Screw nuts -2- onto studs -1-.
- Install rear lid => [page 40](#) .
- Align hinge to rear lid.
- Specified torque for nuts -2-: 24 Nm
- Check adjustment of rear lid => [page 44](#) .

Further installation is performed in reverse order of removal.

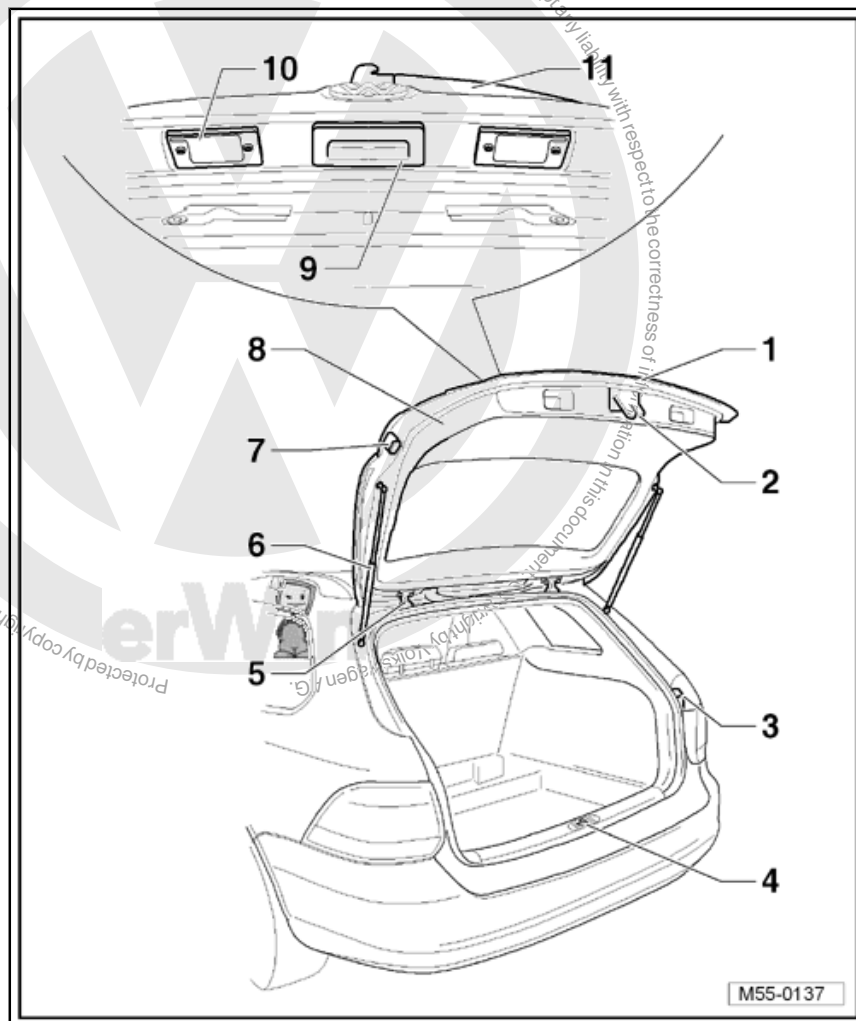




3.7 Adjusting rear lid

Note

- ◆ Vehicle must be on the ground to carry out rear lid adjustment.
- ◆ The rear lid lock -2- is bolted directly to the rear lid -1-. It does not have elongated holes, so it cannot be adjusted.
- ◆ The stop buffers -3- on the left and right are not a means of adjustment. Their purpose is to stabilise and dampen the rear lid -1-.
- ◆ The rear lid is adjusted correctly if the gaps/shut lines are even all around, the door is not too deep or does not stand proud and all contours align when the rear lid is closed.
- ◆ The rear lid must engage in the striker pin -4- without excessive force.

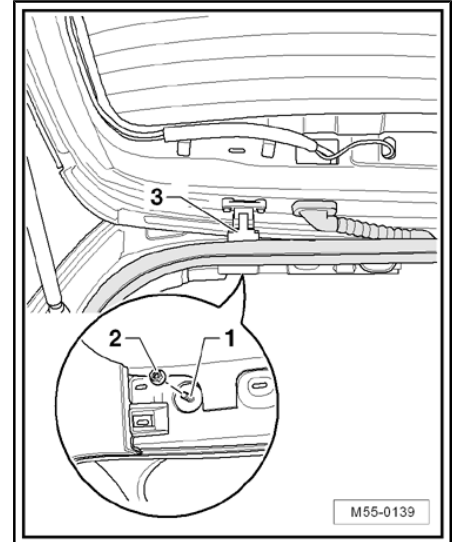


The rear lid adjustment is described step by step below.

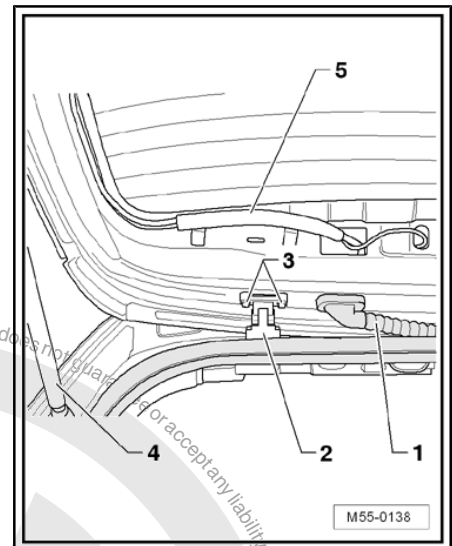
Use setting gauge -3371- ⇒ Body Repairs; Rep. Gr. 00 ; Technical data; Body gap dimensions to check or adjust the gap dimensions.



- Rear lid can be adjusted within oversized holes of hinge -3- by loosening nut -2-.



- Rear lid can be adjusted slightly at bolts -3-.
- After completing adjustments, perform corrosion protection measures on hinge and bolts.
- Adjusting rear lid at striker pin ⇒ [page 45](#) .
- Adjusting left and right adjustment buffer ⇒ [page 46](#) .



3.7.1 Adjusting striker pin



Note

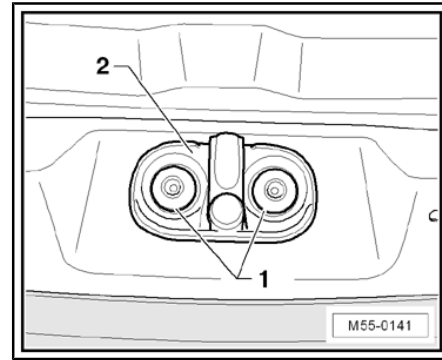
- ◆ Loosen bolts to slide striker pin in over-sized holes.
- ◆ Adjust striker pin so that recess of rear lid lock engages with rotary catch centrally to striker pin.
- Remove lock carrier cover ⇒ General body repairs, interior; Rep. Gr. 70 ; Luggage and load compartment trim .



- Loosen bolts -1-.
- Move striker pin -2- to upper position and tighten bolts -1-.
- Close rear lid and check adjustment.

The rear lid is adjusted correctly if the gaps/shut lines are even all around, the door is not too deep or does not stand proud and all contours align when the rear lid is closed.

- Specified torque for bolts -1-: 23 Nm



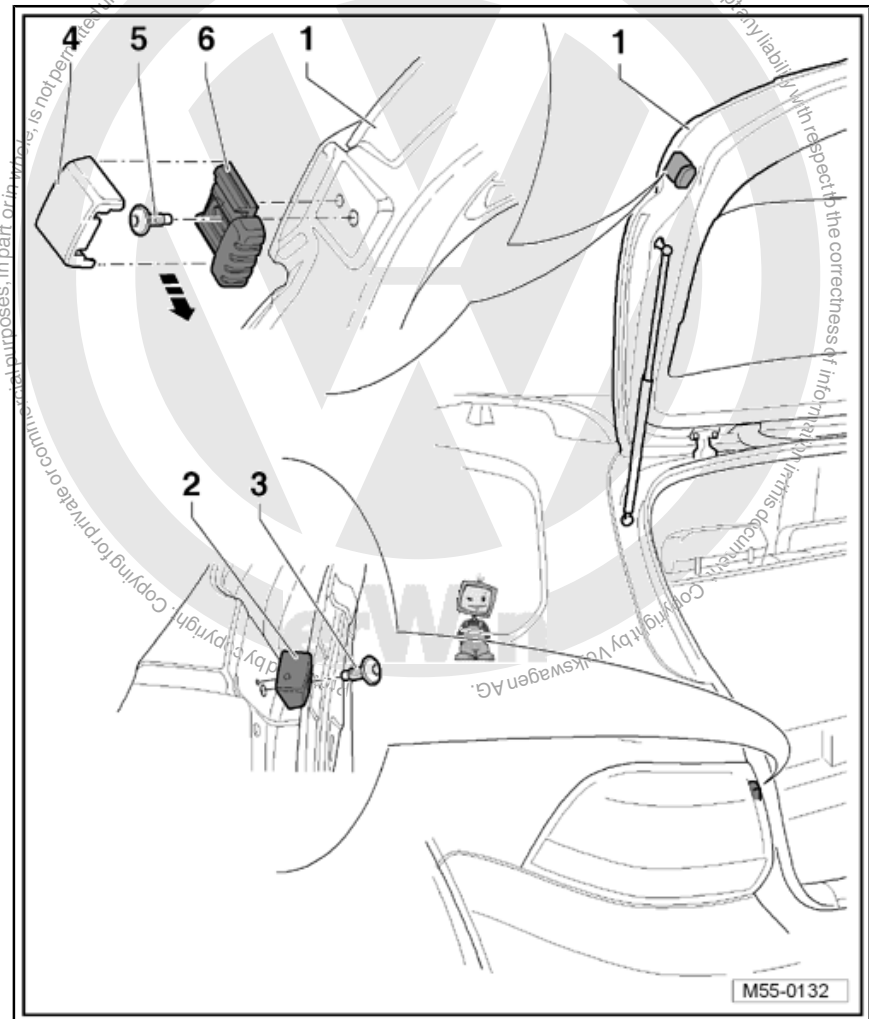
3.7.2 Adjusting adjustment buffer

- Tighten stop buffer -2-, specified torque for bolt -3-: 10 Nm.
- Pull cover -4- off adjustment buffer.
- Loosen bolt -5- on adjustment buffer -6- slightly until adjustment buffer can be moved onto stop in direction of -arrow-.
- Close rear lid -1- to first detent position by applying light pressure to centre area.
- Open rear lid again.
- Tighten bolt -5-, specified torque: 10 Nm.





- Press cover -4- onto adjustment buffer.



3.8 Removing and installing release button

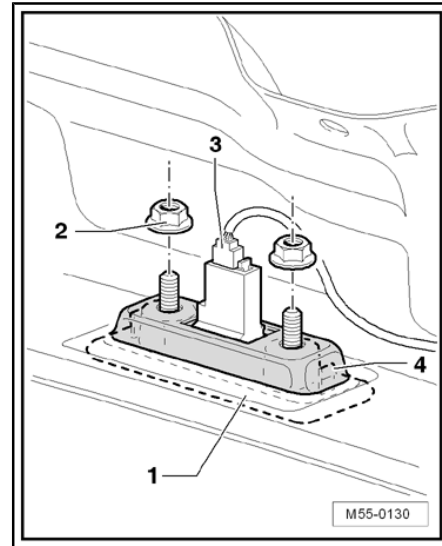
3.8.1 Removing

- Remove rear lid trim ⇒ General body repairs, interior; Rep. Gr. 70 ; Rear lid trim .



- Disconnect connector -3- from connection on release button -1-.
- Unscrew the two nuts -2- from studs for release button and take cover -4- off upwards.
- Remove release button -1- from rear lid.

In case of electrical malfunction, rear lid can be opened using lock emergency release ⇒ [page 48](#) . Emergency release is accessible through an aperture in rear lid trim.



3.8.2 Installing

Install in reverse order of removal.

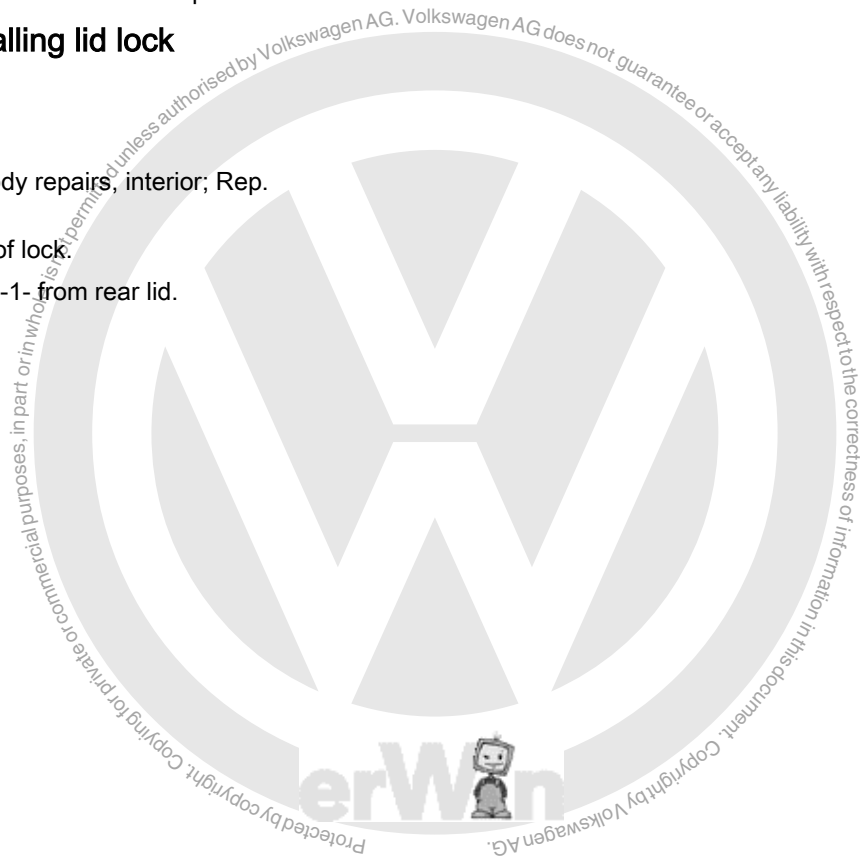
Specified torque for nuts: 8 Nm.

Before closing rear lid, check function of lid release components.

3.9 Removing and installing lid lock

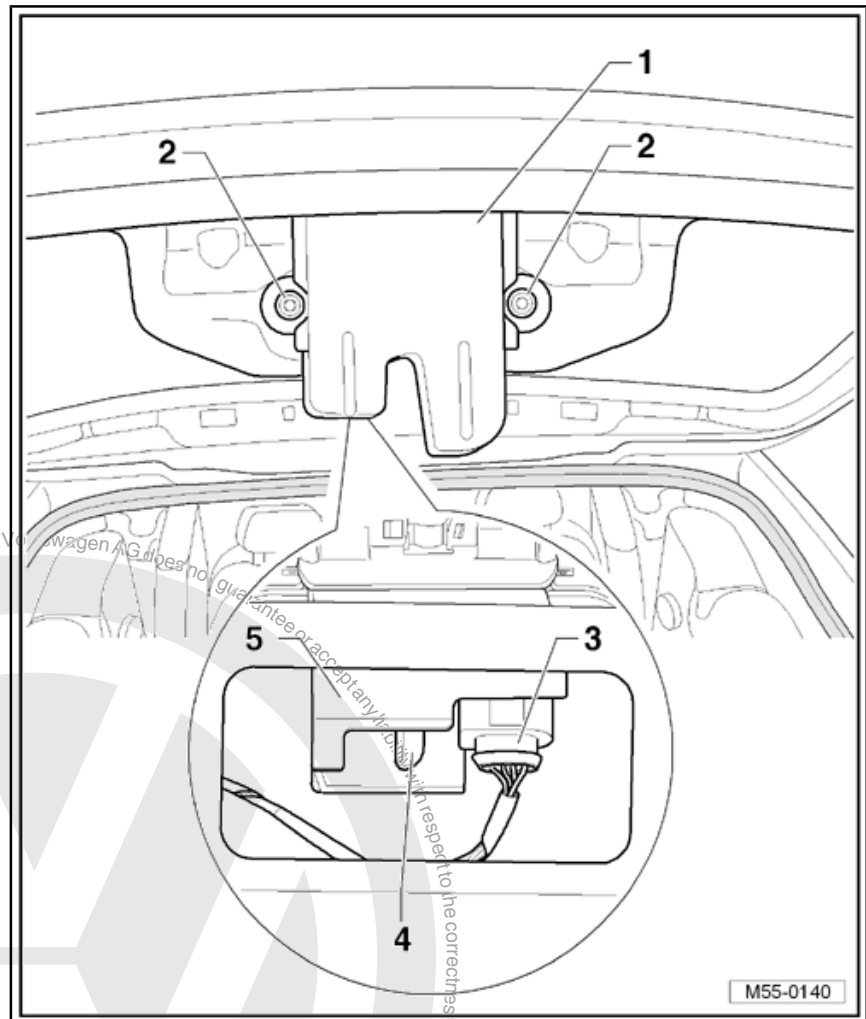
3.9.1 Removing

- Remove rear lid trim ⇒ General body repairs, interior; Rep. Gr. 70 ; Trim, insulation .
- Disconnect connector -3- on back of lock.
- Remove bolts -2- and take off lock -1- from rear lid.





The rear lid can be opened using emergency release -4- for electrical malfunctions. Emergency release is accessible through an aperture in rear lid trim.



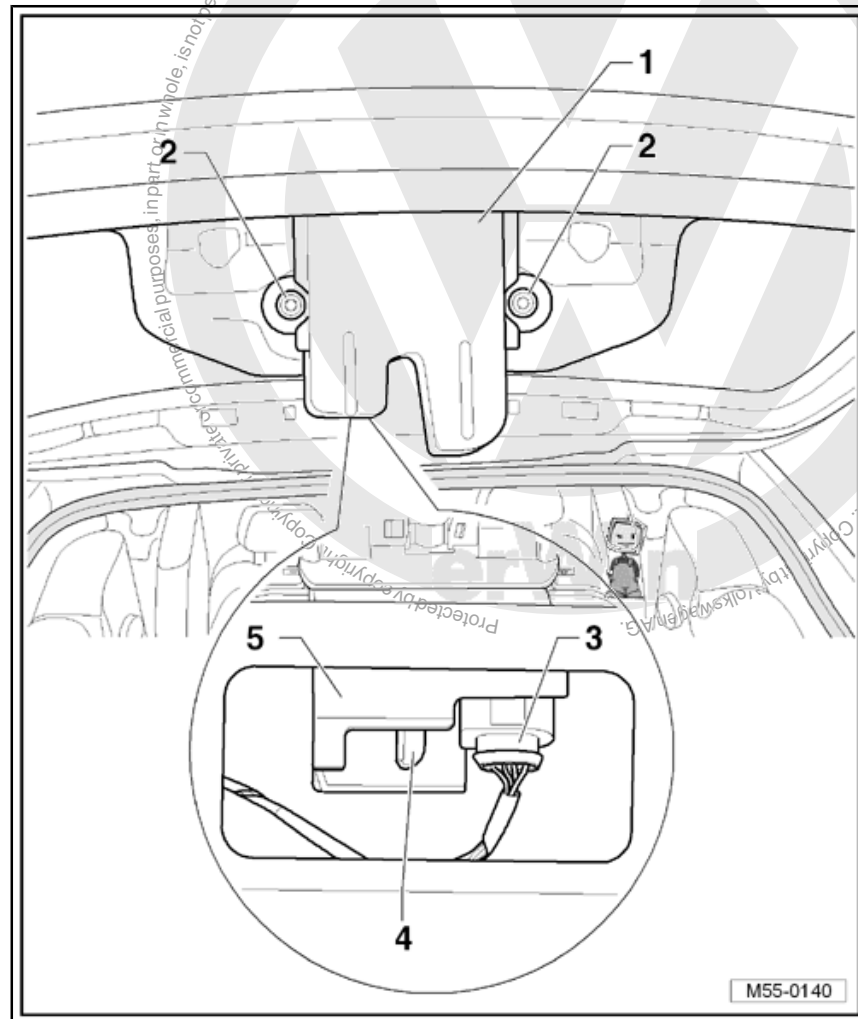
3.9.2 Installing

Reconnect connector -3- on back of lock.

- Insert lock -1- into rear lid and tighten bolts -2-, specified torque: 24 Nm.
- Install rear lid trim => General body repairs, interior; Rep: Gr. 70 ; Trim, insulation .



Before closing rear lid, check function of lid release components.



3.10 Rear lid seal

During production a sealant is applied to the rear lid seals, the seal is then placed on the body flange and rolled on.



Note

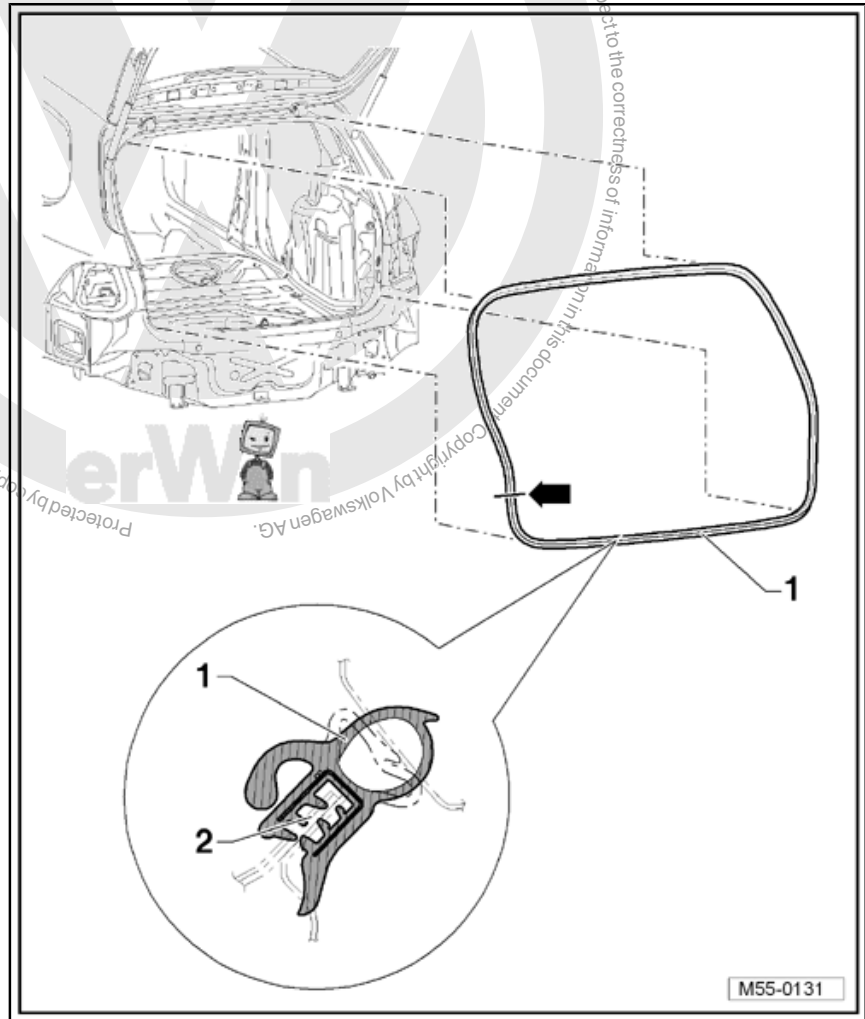
- ◆ *When seals are removed, the sealant will spread to the inside of the seal and the flanks will be bent out slightly. If the seal is then refitted, a leak-free tight seal is not guaranteed.*
- ◆ *Therefore each seal which is removed completely should be replaced by a so-called "tap-on" seal.*
- ◆ *If a seal has been partially removed, squeeze the sides together before installing.*



3.11 Removing and installing rear lid seal

3.11.1 Removing

- Pull rear lid seal -1- off body flange -2-.

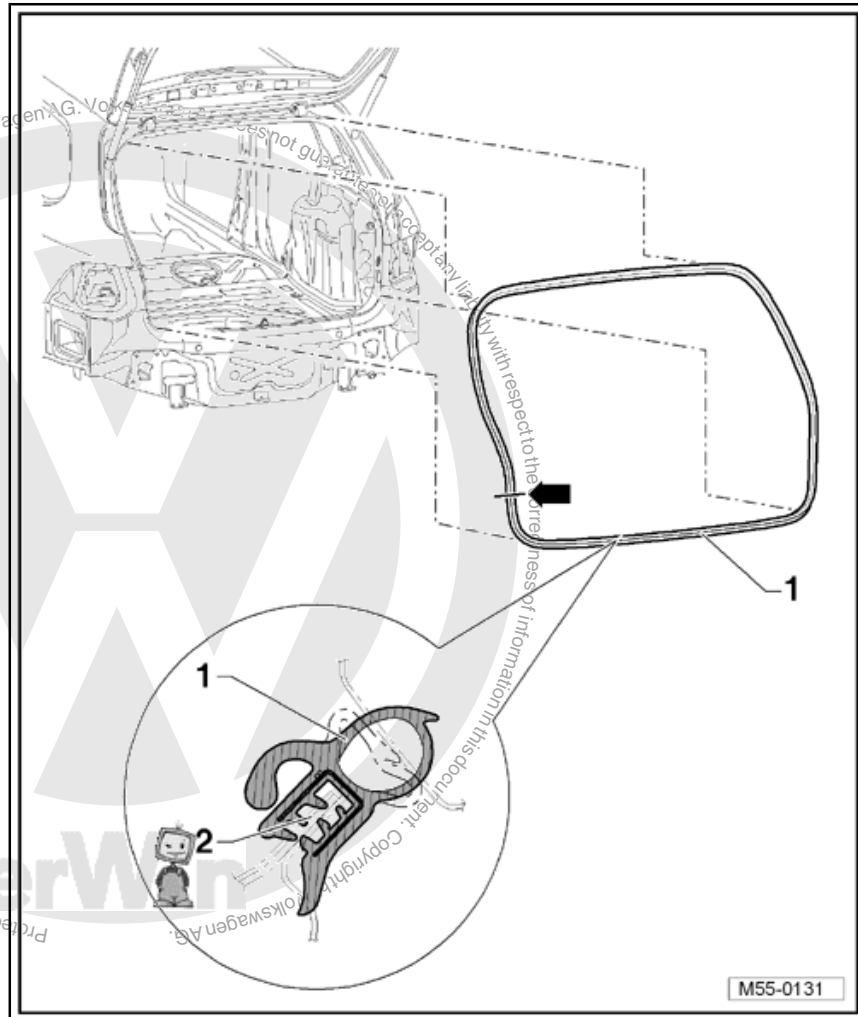


3.11.2 Installing

- Align rear lid seal -1- so that vulcanised point -arrow- faces centre of left tail light.



Push seal -1- evenly onto body flange -2-.





3.12 Registration plate carrier

1 - Pop rivet nut

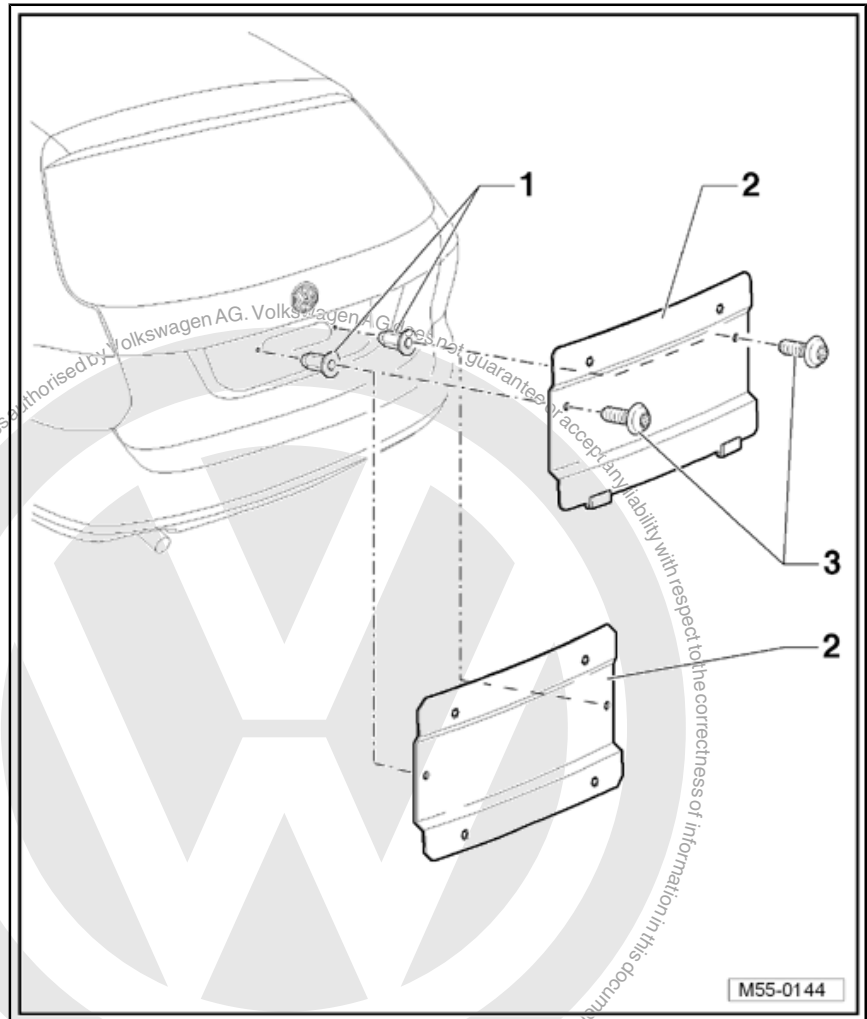
- Qty. 2

2 - Registration plate carrier

- Assignment ⇒ Parts catalogue "ETKA"

3 - Bolt

- Qty. 2
- 4 Nm

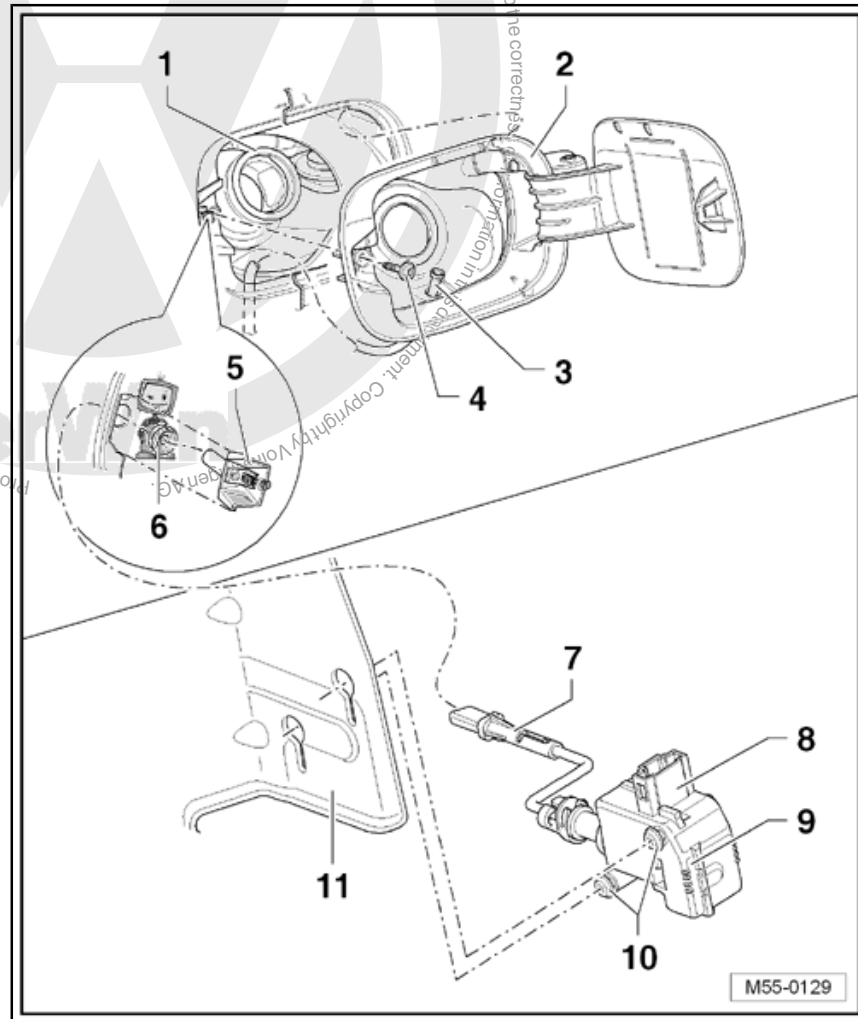




4 Fuel tank flap unit (saloon)

4.1 Assembly overview - tank flap unit

- 1 - Fuel filler neck
- 2 - Tank flap unit
 - Removing and installing
⇒ [page 54](#)
- 3 - Water drain hose
- 4 - Bolt
 - 1.5 Nm
- 5 - Assembly part
- 6 - Seal
- 7 - Release rod
- 8 - Connector
 - For tank filler flap locking motor -V155-
- 9 - Tank filler flap locking motor -V155-
 - Removing and installing
⇒ [page 56](#)
- 10 - Securing bolt
 - For tank filler flap locking motor -V155-
 - Qty. 2
 - 1.5 Nm
- 11 - Securing bracket
 - On rear right wheel housing



4.2 Removing and installing tank flap unit

4.2.1 Removing



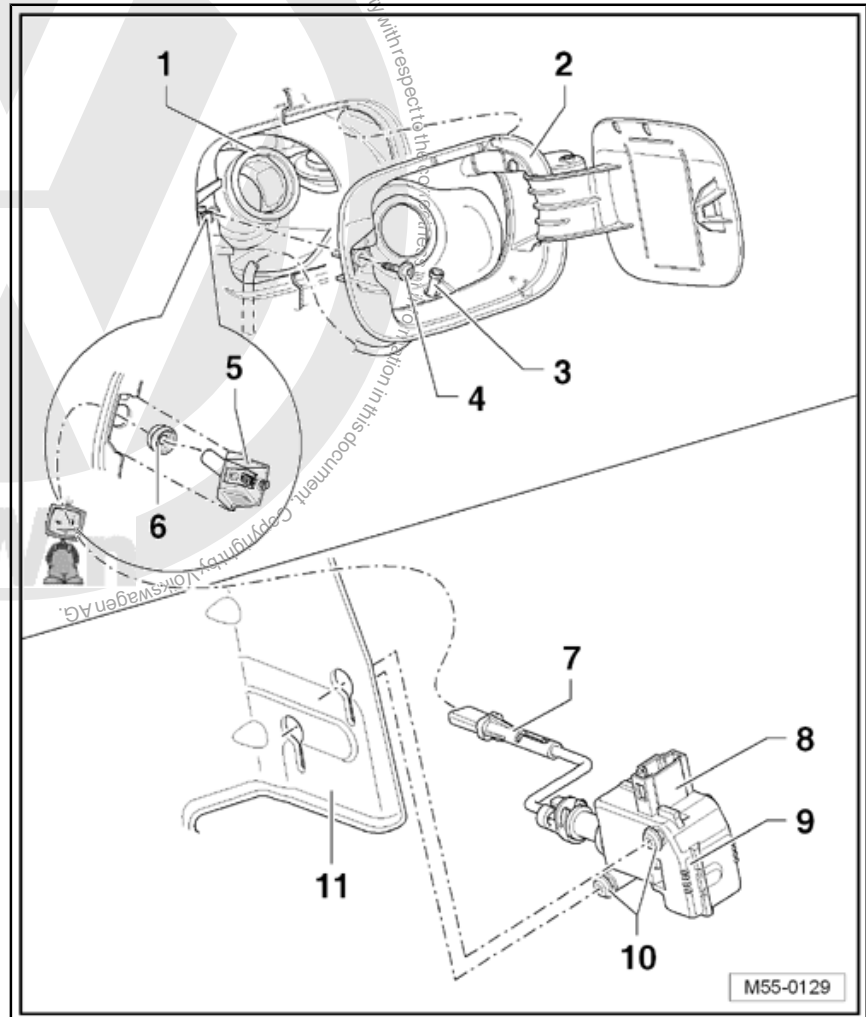
Note

If fuel tank filler flap does not open, it can be opened by hand using the release rod -7-. Remove rear right luggage compartment trim ⇒ General body repairs, interior; Rep. Gr. 70; Load area and luggage compartment trim for this.

- Open fuel tank flap.
- Remove tank cap.
- Remove bolt -4-.



- Pull rubber part of tank flap unit -2- off fuel tank filler neck -1-.
- Pull tank flap unit -2- with drain hose -3- to rear and swing fuel tank flap unit out of side panel.
- Unclip assembly part -5- out of side panel and pull assembly part off release rod -7-.



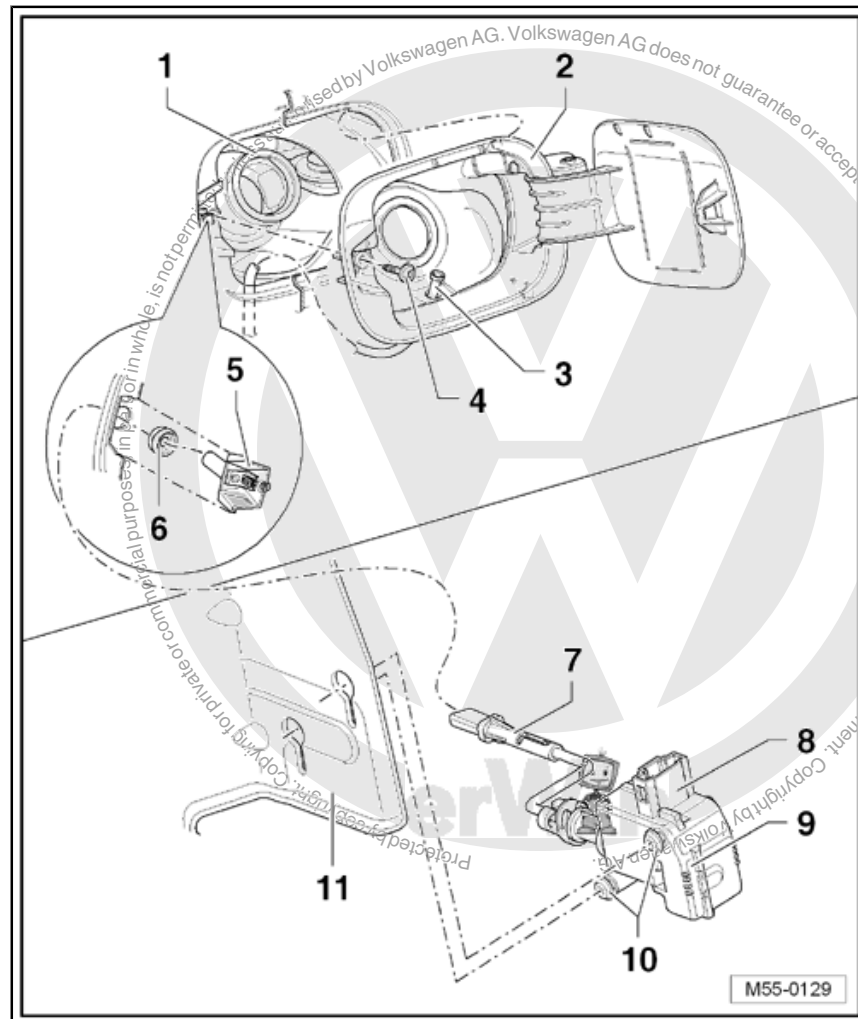
4.2.2 Installing

- The mounting part -5- has been pushed in.
 - Feed drain hose -3- through aperture in tank flap unit -2- and pull drain hose through as far as possible.
 - Guide drain hose into side panel.
 - With hinge side leading, guide tank flap unit -2- into side panel.
 - Then swivel tank flap unit completely onto side panel.
- Make sure that tank flap unit -2- locking devices engage correctly in side panel at top and bottom.
- Pull rubber part of tank flap unit over filler neck and tighten bolt -4-.



Specified torque for bolt -4-: 1.5 Nm

- Perform functional check of release components.



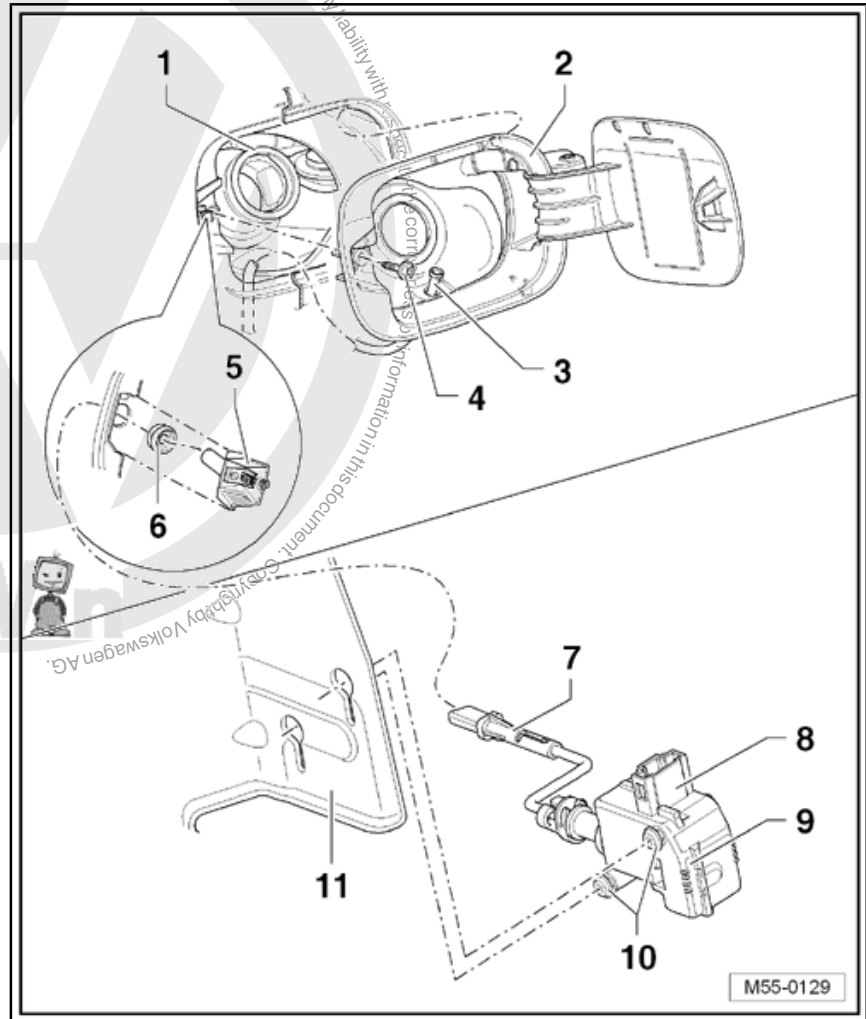
4.3 Removing and installing tank filler flap locking motor -V155-

4.3.1 Removing

- Remove luggage compartment side trim on right ⇒ General body repairs, interior; Rep. Gr. 70 ; Load area and luggage compartment trim .
- Disconnect connector -8- on tank filler flap locking motor - V155- -9-.
- Loosen bolts -10-.



- Pull tank filler flap locking motor -V155- -9- together with release rod -7- out of seal -6- and fitting -5-.



4.3.2 Installing

Install in reverse order of removal.

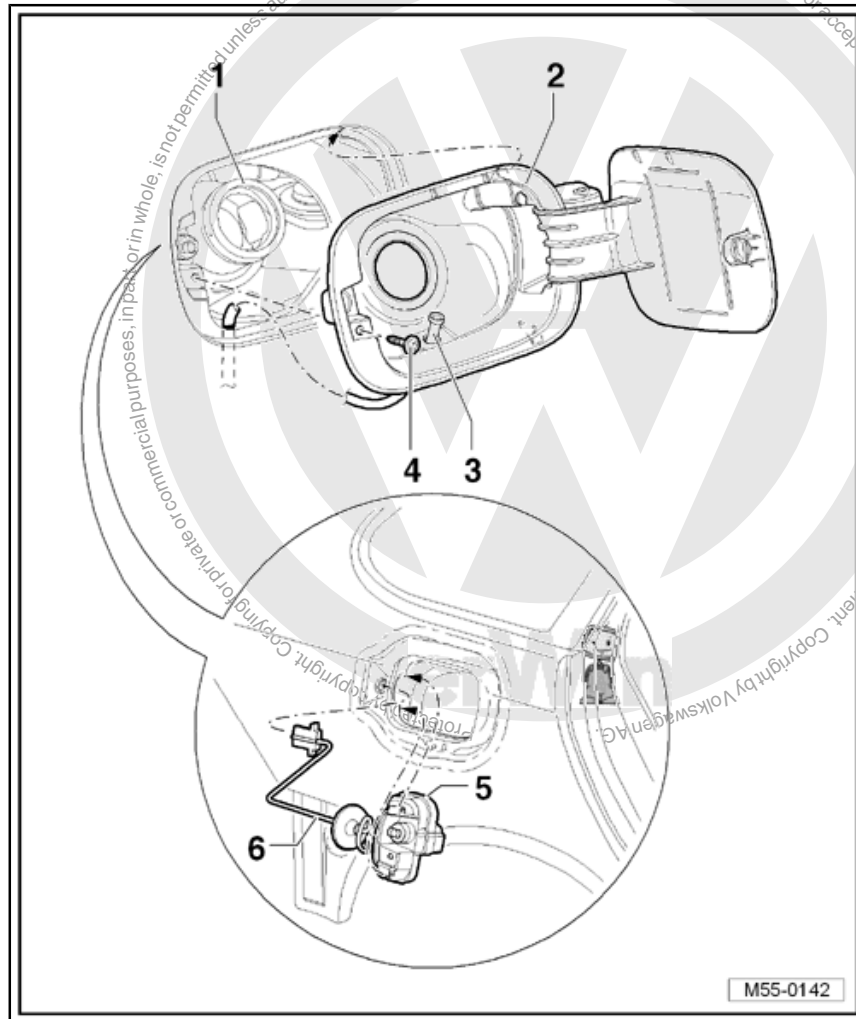
- Perform functional check of release components.



5 Fuel tank flap unit (Variant)

5.1 Assembly overview - tank flap unit

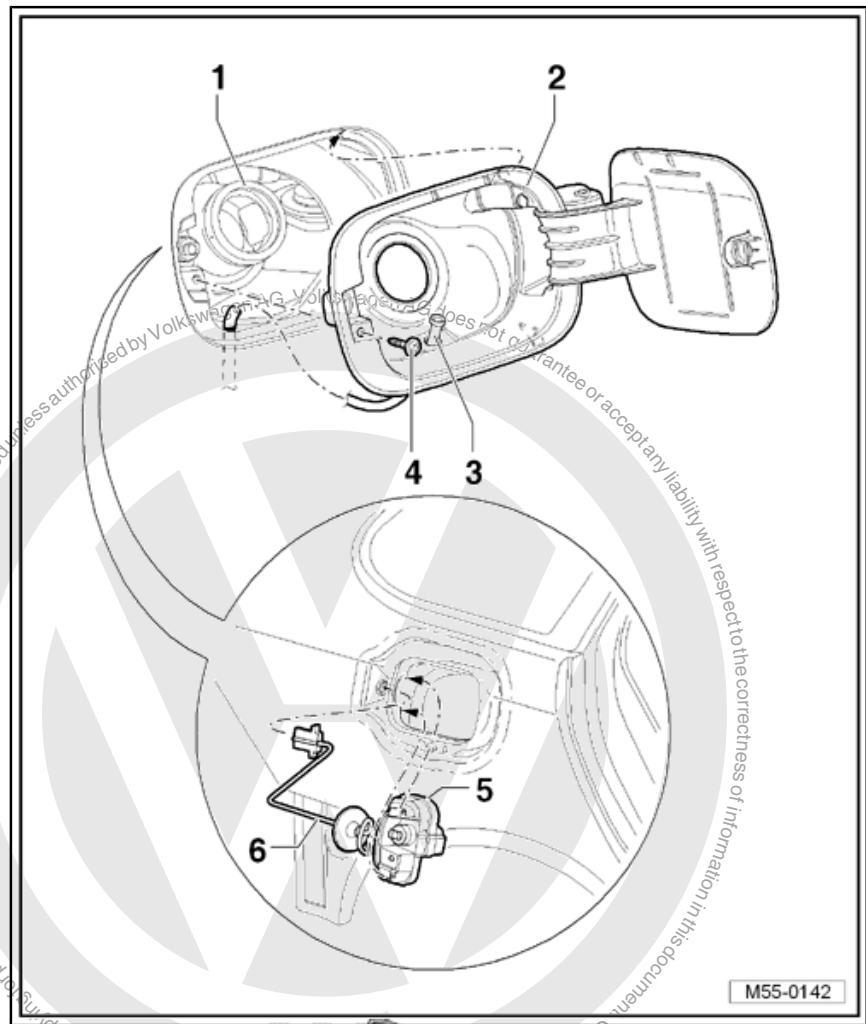
- 1 - Fuel filler neck
- 2 - Tank flap unit
 - ❑ Removing and installing
⇒ [page 58](#)
- 3 - Water drain hose
- 4 - Bolt
 - ❑ 1.5 Nm
- 5 - Tank filler flap locking motor -V155-
 - ❑ Removing and installing
⇒ [page 60](#)
- 6 - Wiring harness
 - ❑ For tank filler flap locking motor -V155-



5.2 Removing and installing tank flap unit

5.2.1 Removing

- Open fuel tank flap.
- Remove tank cap.
- Remove bolt -4-.
- Pull rubber part of tank flap unit -2- off fuel tank filler neck -1-.
- Pull tank flap unit -2- with drain hose -3- to rear and swing fuel tank flap unit out of side panel.



5.2.2 Installing

- Feed drain hose -3- through aperture in tank flap unit -2- and pull drain hose through as far as possible.
- Guide drain hose into side panel.
- With hinge side leading, guide tank flap unit -2- into side panel.
- Then swivel tank flap unit completely onto side panel.

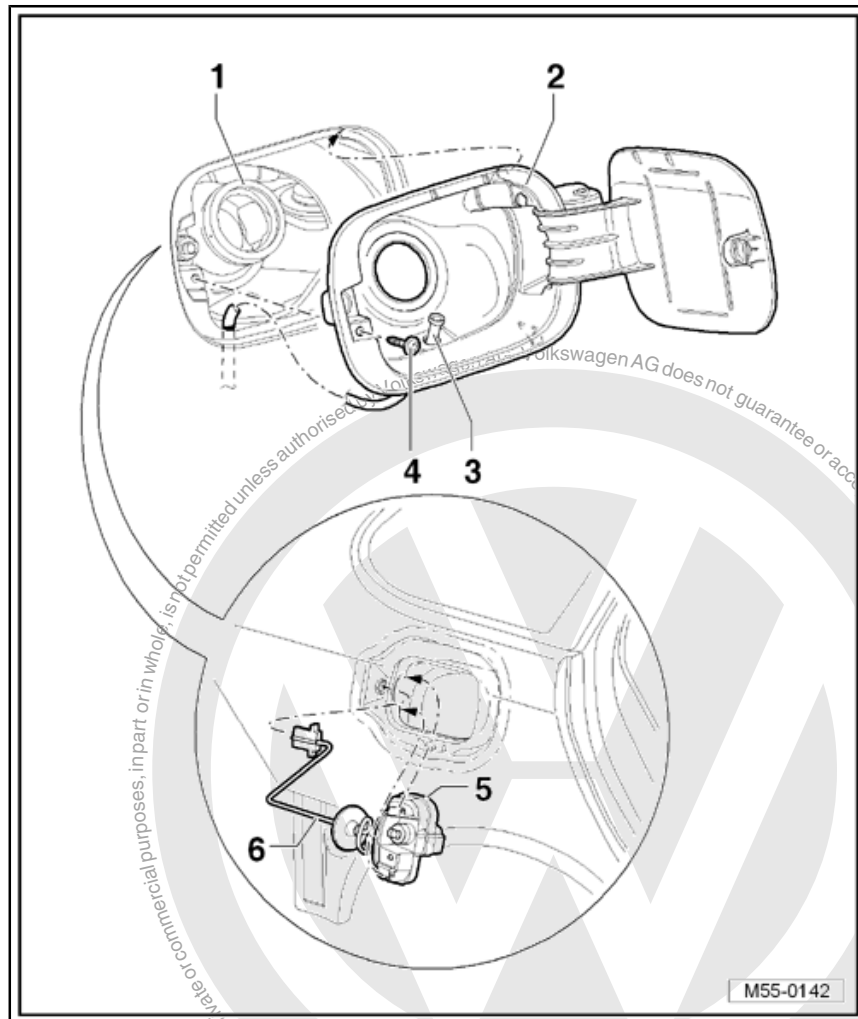
Make sure that tank flap unit -2- locking devices engage correctly in side panel at top and bottom.

- Pull rubber part of tank flap unit over filler neck and tighten bolt -4-.

Specified torque for bolt -4-: 1.5 Nm



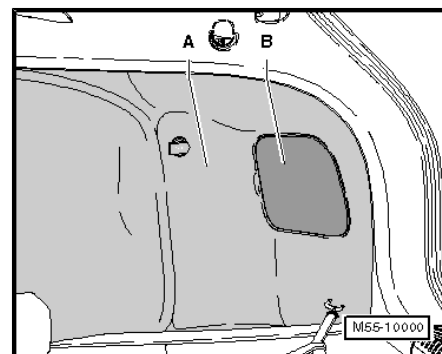
- Perform functional check of release components.



5.3 Removing and installing tank filler flap locking motor -V155-

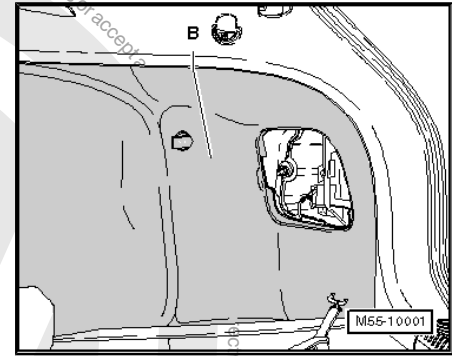
5.3.1 Removing

- Remove tank flap unit ⇒ [page 58](#) .
- Unclip service cover -B- from side panel -A-.

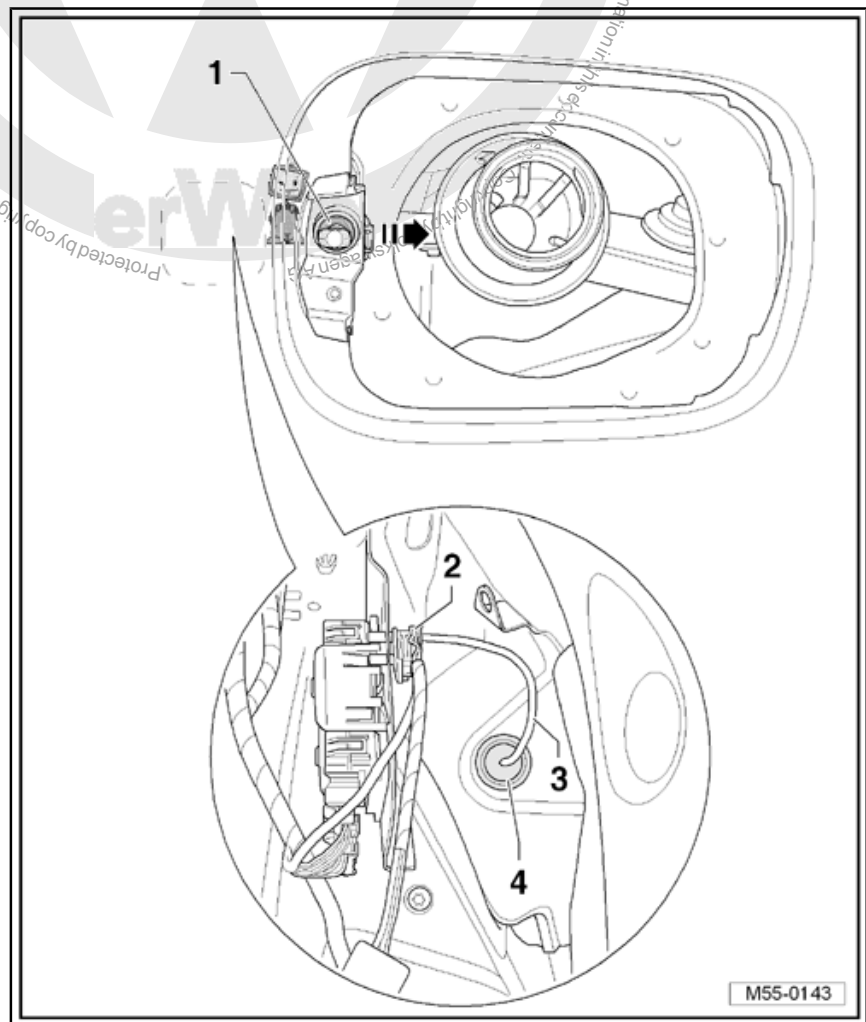




- Pull service cover -B- forwards slightly.



- Disconnect connector -2- on tank filler flap locking motor -V155- -1- through opening in side panel.

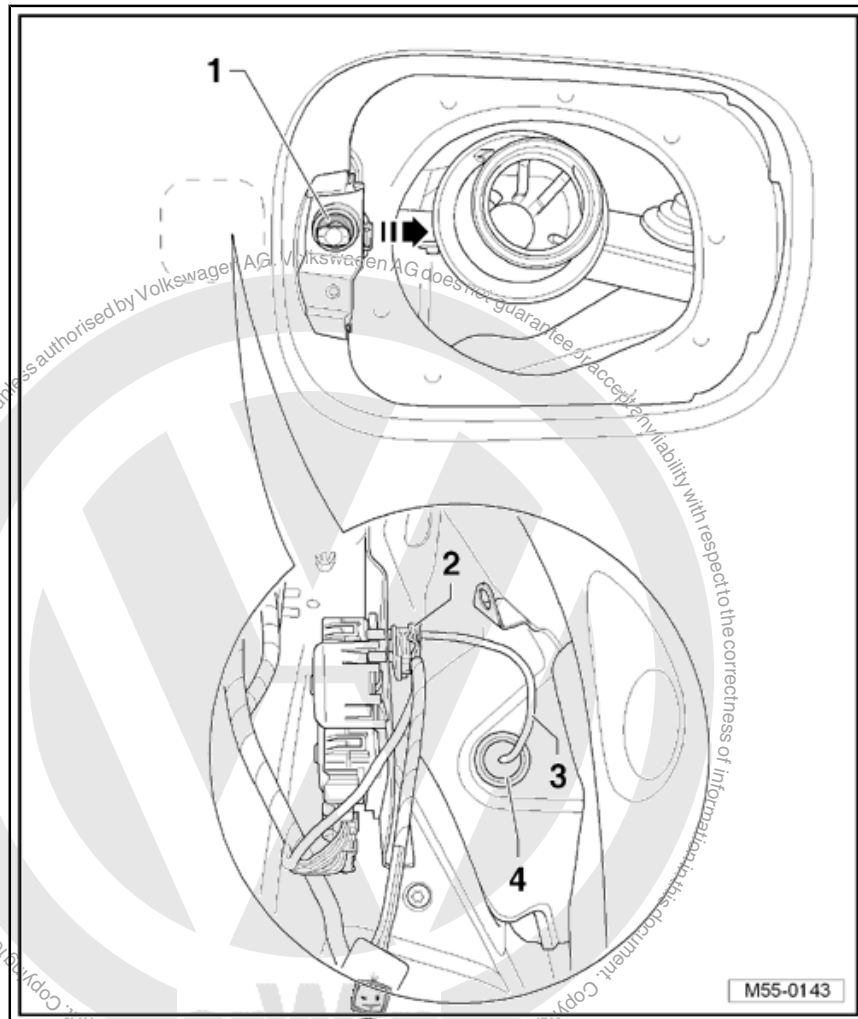


- Push rubber grommet -4- out of side panel and pull out wiring harness -3-.
- Pull tank filler flap locking motor -V155- -1- in direction of -arrow- off side panel.



5.3.2 Installing

- Feed wiring harness -3- through opening in side panel.
- Secure rubber grommet -4- on side panel.
- Reconnect connector -2-.
- Slide tank filler flap locking motor -V155- -1- in opposite direction of -arrow- onto side panel.
- Install tank flap unit ⇒ [page 59](#) .
- Install luggage compartment side trim on right ⇒ General body repairs, interior; Rep. Gr. 70 ; Load area and luggage compartment trim .





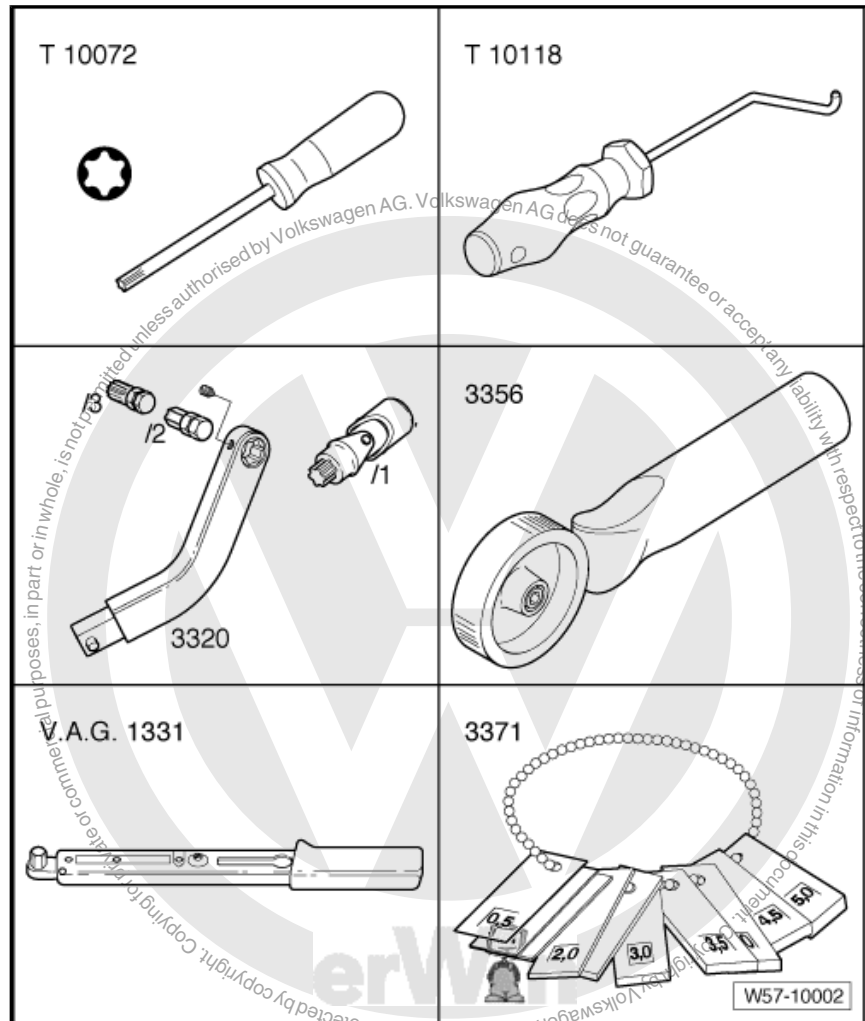
57 – Front doors, door components, central locking

1 Front door

1.1 Tools

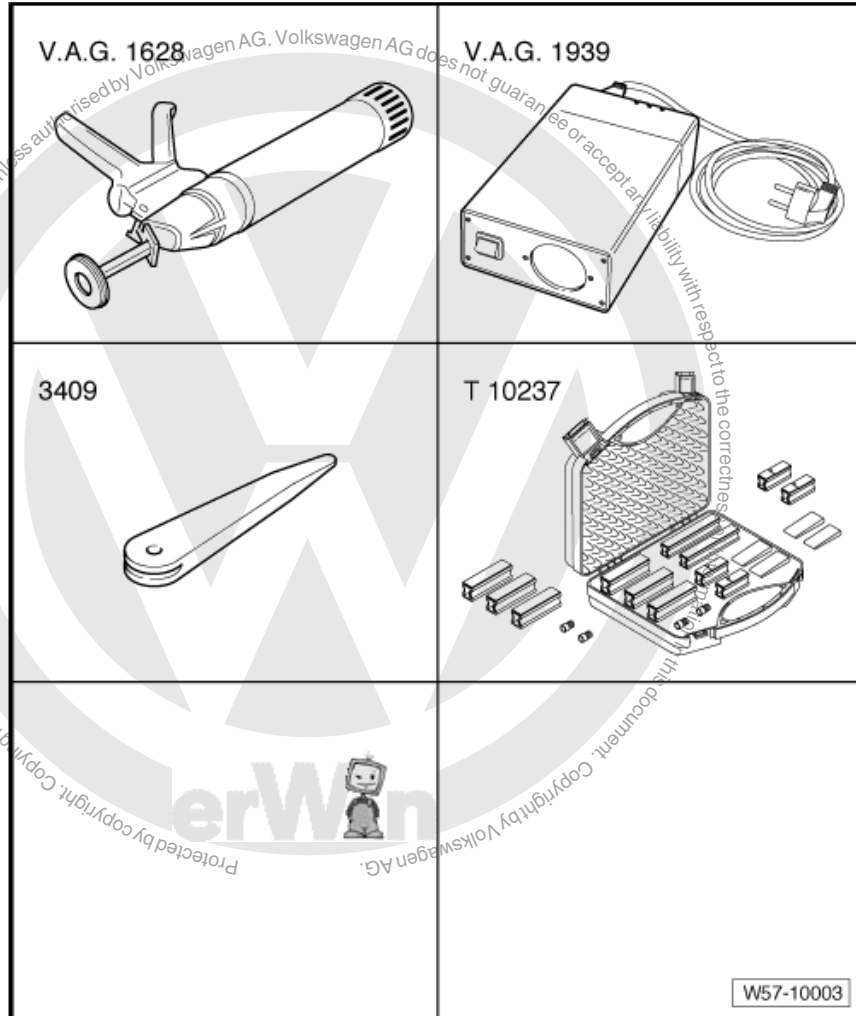
Special tools and workshop equipment required

- ◆ Socket -T10072-
- ◆ Assembly tool -T10118-
- ◆ Door alignment tool -3320- with -3320/1- , -3320/2- and -3320/3-
- ◆ Roller for door insulation foil -3356-
- ◆ Torque wrench -V.A.G 1331-
- ◆ Setting gauge -3371-





- ◆ Cartridge gun -V.A.G 1628-
- ◆ Cartridge heater -V.A.G 1939 A-
- ◆ Removal wedge -3409-
- ◆ Assembly tool set -T10237-



1.2 Materials

- ◆ 1K or 2K glass adhesive -DH 009 100 01- ^{1) 2)} or -DH 004 600 A2- ¹⁾
- ◆ Glass primer/paint primer -D 009 200 02- ³⁾
- ◆ Cleaning solution -D 009 401 04- ³⁾
- ◆ Primer applicator -D 009 500 25- ³⁾

1) Observe curing period ⇒ [page 82](#)

2) Heat according to manufacturer's instructions, using cartridge heater -V.A.G 1939 A- .

3) Materials are stored in box -D 004 700- .

1.3 Assembly overview - door assembly

A new door concept has been introduced with Jetta 2005 ▶, Bora 2005 ▶.

The door consists of an inner part -6- and an outer panel -1-.

The parts are joined by the front -7- and rear -4- retaining rail.



The retaining rails are bolted to the inner part of the door and bonded to the outer panel of the door.

The inner part -6- of the door functions basically as the previously known assembly carrier. Loudspeaker, window regulator, window regulator motor, wiring, window channel, exterior mirror and door lock are mounted on the door inner part.

The outer panel -1- of the door is additionally bolted to the lower edge of the inner part. The window slot outer seal, insulation and exterior door handle are mounted on the outer panel of the door.

 **Caution**

Different securing screws are used for the door outer panel. If these are fitted in the wrong positions, the outer panel for the door will be damaged.

 **Note**

The edge protection foil -2- must always be bonded between the door outer panel and the door inner part.

1 - Door outer panel

- Removing and installing
 => [page 112](#)

2 - Edge protection foil

- Self-adhesive
- Is bonded between door outer panel and door inner part.

3 - Bolt

- Feature: bolt with pointed end and thinner washer.
- Qty. 6 on lower edge
- Qty. 1 in rear section of door shoulder
- 10 Nm

4 - Rear retaining rail

- Adhesive -DH 009 100 03-

5 - Bolt

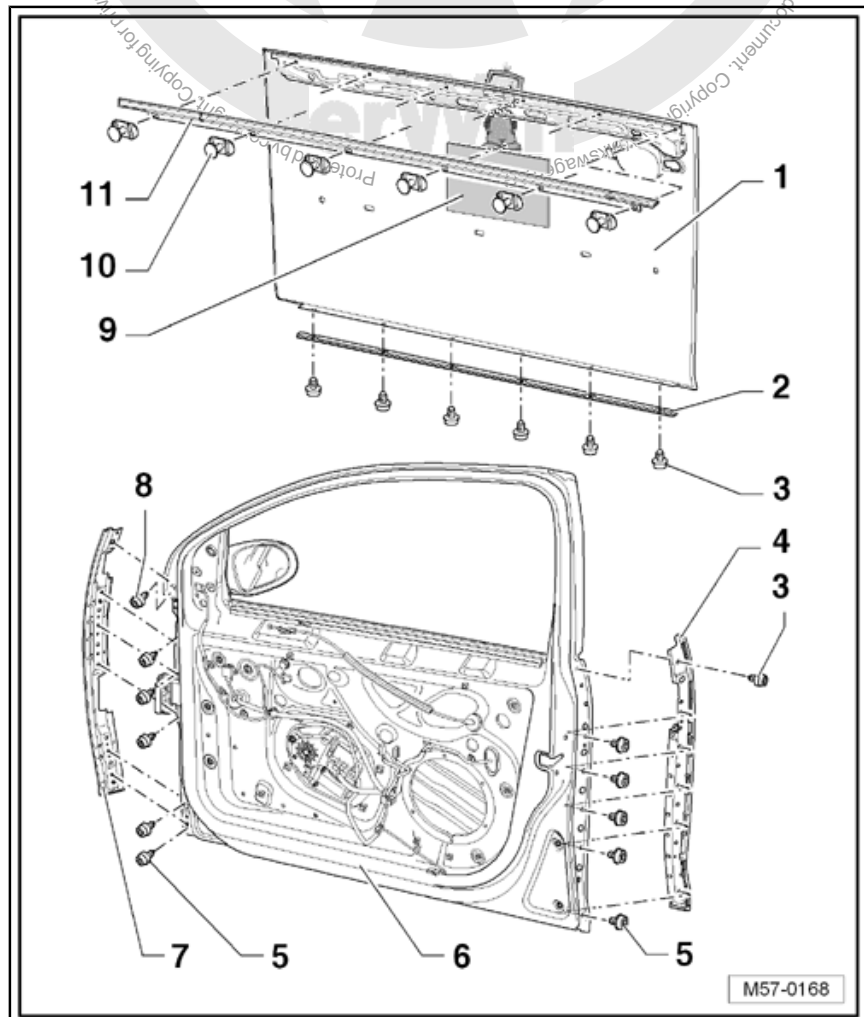
- Feature: bolt with no pointed end and thicker washer.
- Qty. 10 for both retaining rails
- 14 Nm

6 - Door inner part

- Assembly overview
 => [page 84](#)

7 - Front retaining rail

- Adhesive -DH 009 100 03-



M57-0168



8 - Bolt

- Feature: bolt with pointed end and thicker washer
- Qty. 1 in area of front section of door shoulder
- 10 Nm

9 - Insulation

- Self-adhesive
- To bond, first heat the insulation and then press on firmly

10 - Clip

- Qty. 6

11 - Window slot seal

- Must be fitted before fitting door outer panel.

1.4 Assembly overview - door hinges



Caution

Nut of eccentric bolt -9- should not be loosened under any circumstances. It cannot be tightened again using normal workshop tools.



Note

- ◆ *The right side is shown. The left side is similar.*
- ◆ *The hinge bolts must always be renewed if loosened.*
- ◆ *Hinges are now one piece.*

1 - Door

- Removing and installing
 ⇒ [page 68](#)
- Adjusting ⇒ [page 70](#)

2 - Guide bolt

- 10 Nm

3 - Door hinge with arrester

4 - Multi-point socket head bolt

- 20 Nm + 1/4 turn further
 (90°).
- Always renew after
 loosening

5 - Multi-point socket head bolt

- Installed from inside ve-
 hicle.
- Removing A-pillar lower
 trim ⇒ General body re-
 pairs, interior; Rep. Gr.
 70 ; Pillar and side panel
 trim
- 20 Nm + 1/4 turn further
 (90°).
- Always renew after
 loosening

6 - Multi-point socket head bolt

- 20 Nm + 1/4 turn further
 (90°).
- Always renew after
 loosening

7 - Multi-point socket head bolt

- 20 Nm + 1/4 turn further
 (90°).
- Always renew after loosening

8 - Guide bolt

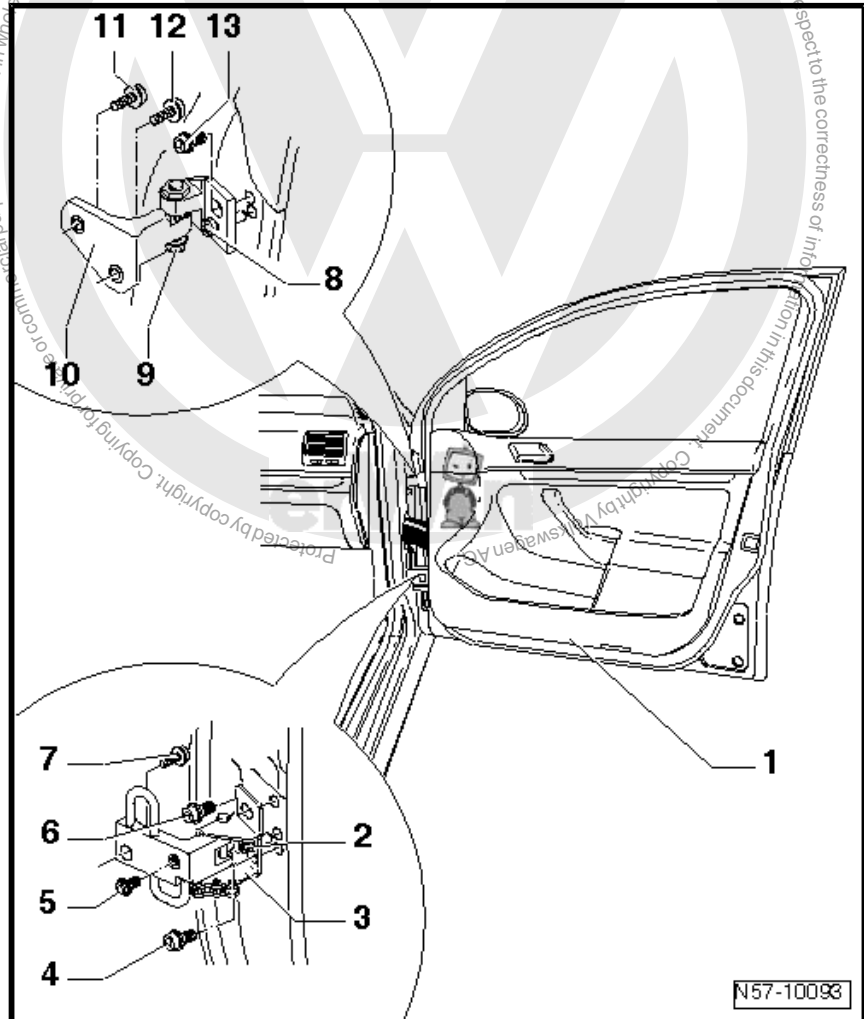
- 10 Nm

9 - Nut

- For eccentric pin
- Do not loosen
- Serves as a means of adjustment during production only

10 - Door hinge

- Door hinge is now one piece.





11 - Multi-point socket head bolt

- ❑ 20 Nm + 1/4 turn further (90°).
- ❑ Always renew after loosening

12 - Multi-point socket head bolt

- ❑ 20 Nm + 1/4 turn further (90°).
- ❑ Always renew after loosening

13 - Multi-point socket head bolt

- ❑ 20 Nm + 1/4 turn further (90°).
- ❑ Always renew after loosening

1.5 Removing and installing door



Note

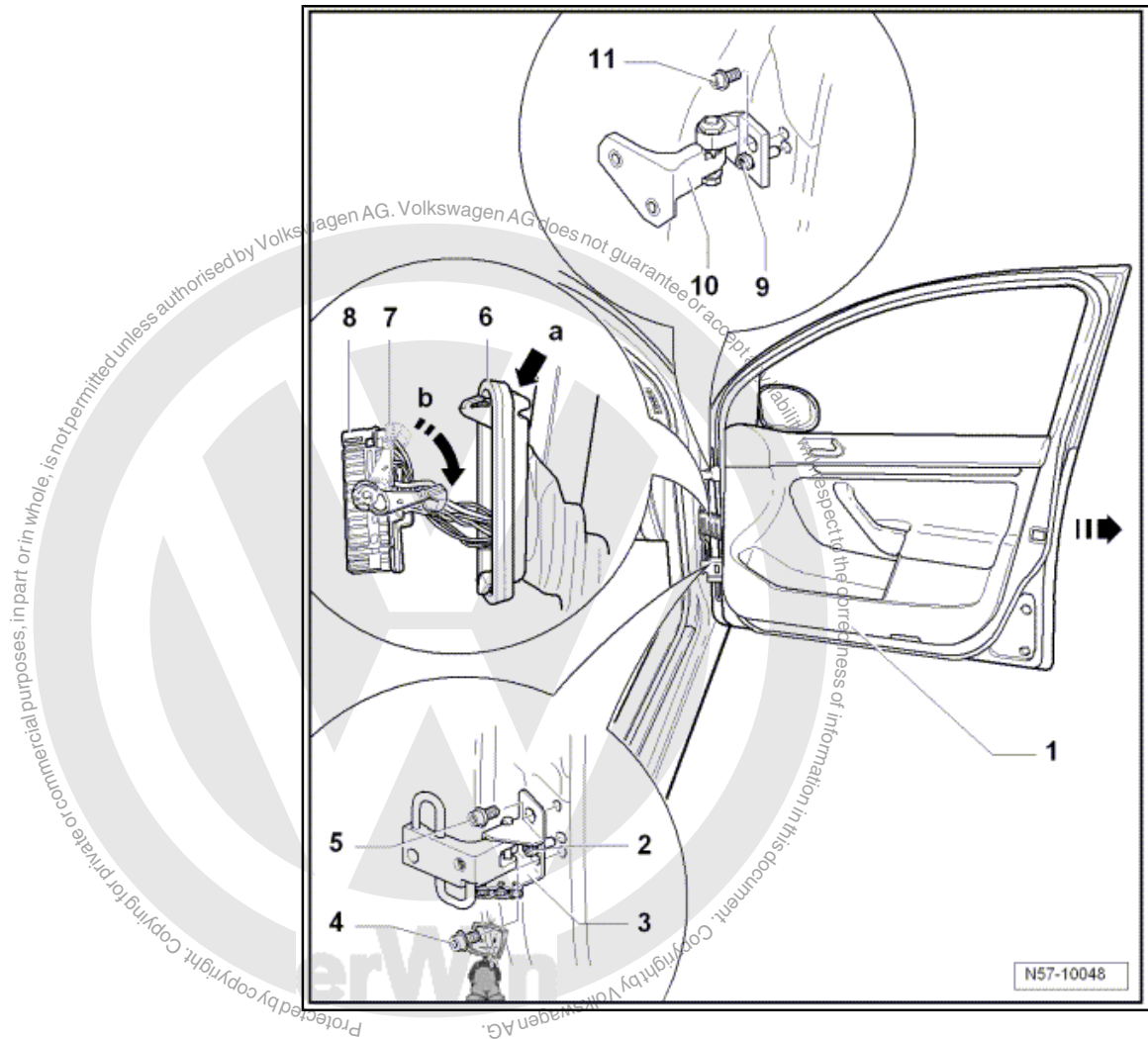
*The removal and installation sequence is only for the right door.
The removal and installation of the left door is similar.*

1.5.1 Removing

- Release boot -6- by pressing fastener -arrow a- and pull boot off A-pillar.
- Swing locking lever -7- downwards -arrow b- and separate electrical connector -8- from coupling station.
- Remove bolts -4-, -5- and -11- from hinge using special door alignment tool -3320- and bit -3320/3- .



- Pull door in direction of -arrow- off guide bolts -2- and -9-.



1.5.2 Installing

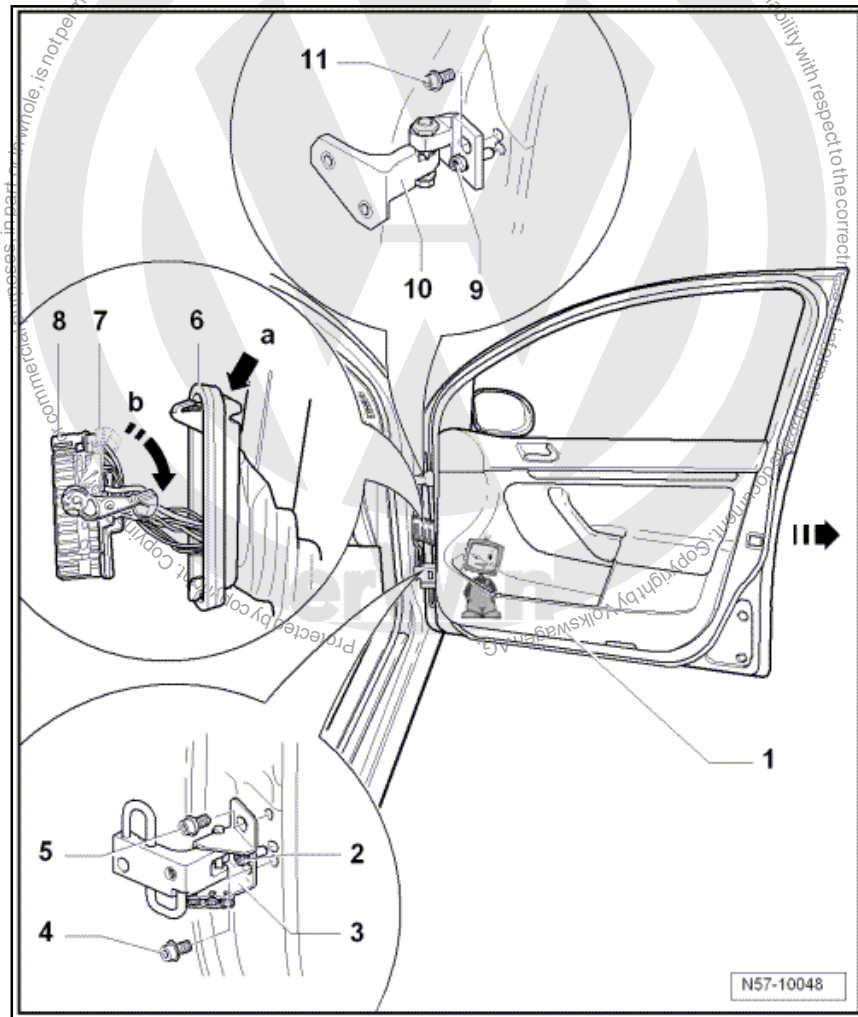
Install in reverse order of removal.

Specified torque for bolts -4-, -5- and -11-: 20 Nm + 1/4 turn further (90°).

Always renew bolts -4-, -5- and -11-.



Observe front door gap/shut lines ⇒ Body Repairs; Rep. Gr. 00 ;
Body dimensions .



1.6 Adjusting door



Caution

Nut of eccentric bolt -9- should not be loosened under any circumstances. Nut cannot be retightened using normal workshop tools.



Note

- ◆ *The door is adjusted correctly if the gaps/shut lines are even all around, the door is not too deep or does not stand proud and all contours align when the door is closed.*
- ◆ *Vehicle must be standing on its wheels when adjustments are performed.*
- ◆ *If door outer panel has been removed, door inner part window frame must be adjusted to roof frame and B-pillar, or rear door.*



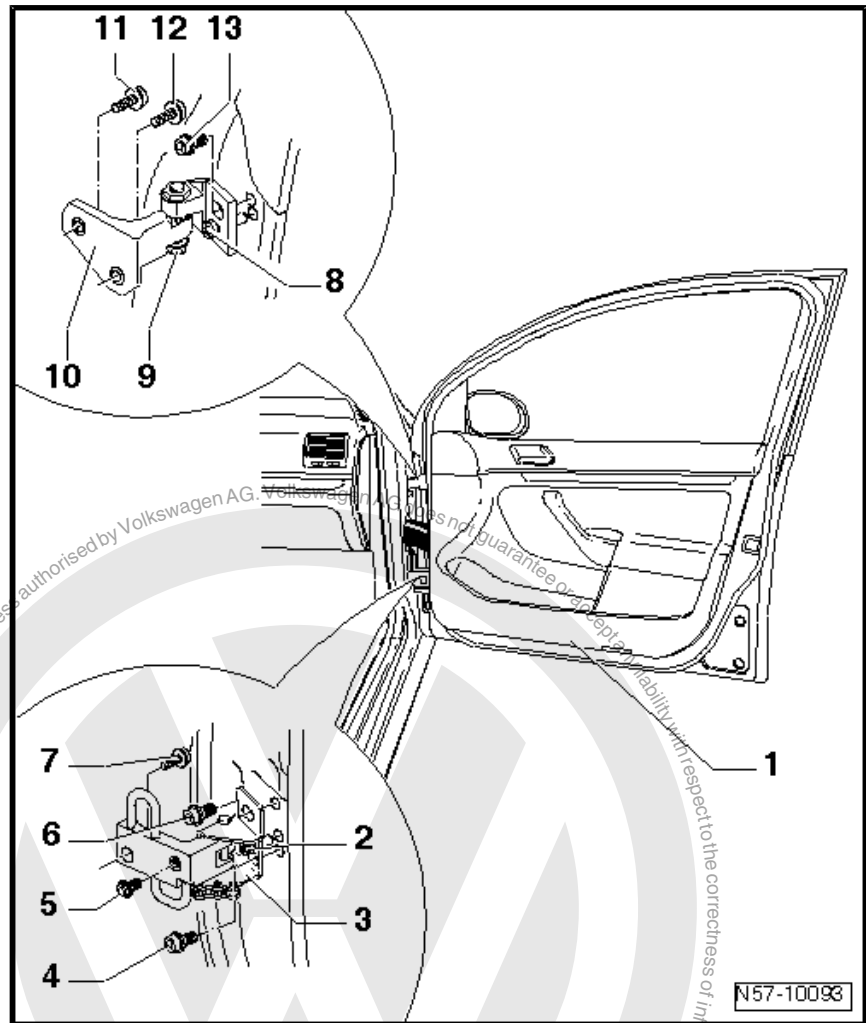
Observe front door gap/shut lines ⇒ Body Repairs; Rep. Gr. 00 ;
Body dimensions .

To be able to adjust gaps correctly, bolts -5-, -7-, -11- and -12- on
A-pillar must be loosened. For bolt -5-, A-pillar lower trim must be
removed ⇒ General body repairs, interior; Rep. Gr. 70 ; Pillar
and side panel trim .

Other measures such as raising the door have no effect. Subse-
quent pressure from above will cause the door to sack again.

Bolts -4-, -6- and -13- and also guide bolts -2- and -8- must be
loosened to correctly adjust the flush fitting of the door.

Use door alignment tool -3320- with bit -3320/3- for this.



1.6.1 Adjusting striker pin



Note

- ◆ The front door must lock fully when closing without any additional force being required and must not have any play.
- ◆ The front door must not be pushed up or down as a result of the striker pin adjustment.



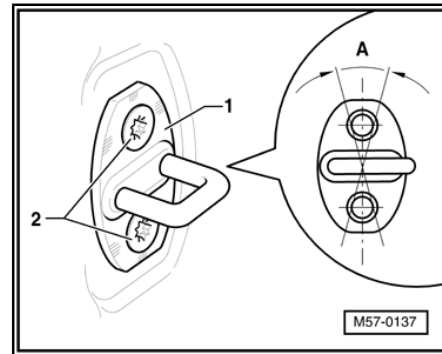
The following can be adjusted at the striker pin:

- ◆ When the front door does not align with the rear door.
- Loosen striker pin -1- by unbolting bolts -2- on B-pillar.
- Adjust the front door with the striker pin -1- so that the front door is flush with the rear door when shut (wind noise).

Maximum twist tolerance -A- of striker pin: $\pm 3^\circ$

- Retighten bolts -2-.

Specified torque: 20 Nm



WARNING

Only use this adjustment to adjust door inwards or outwards, never use for vertical adjustment. Door must not move upwards or downwards when opening and closing. This indicates that the vertical adjustment is incorrect.

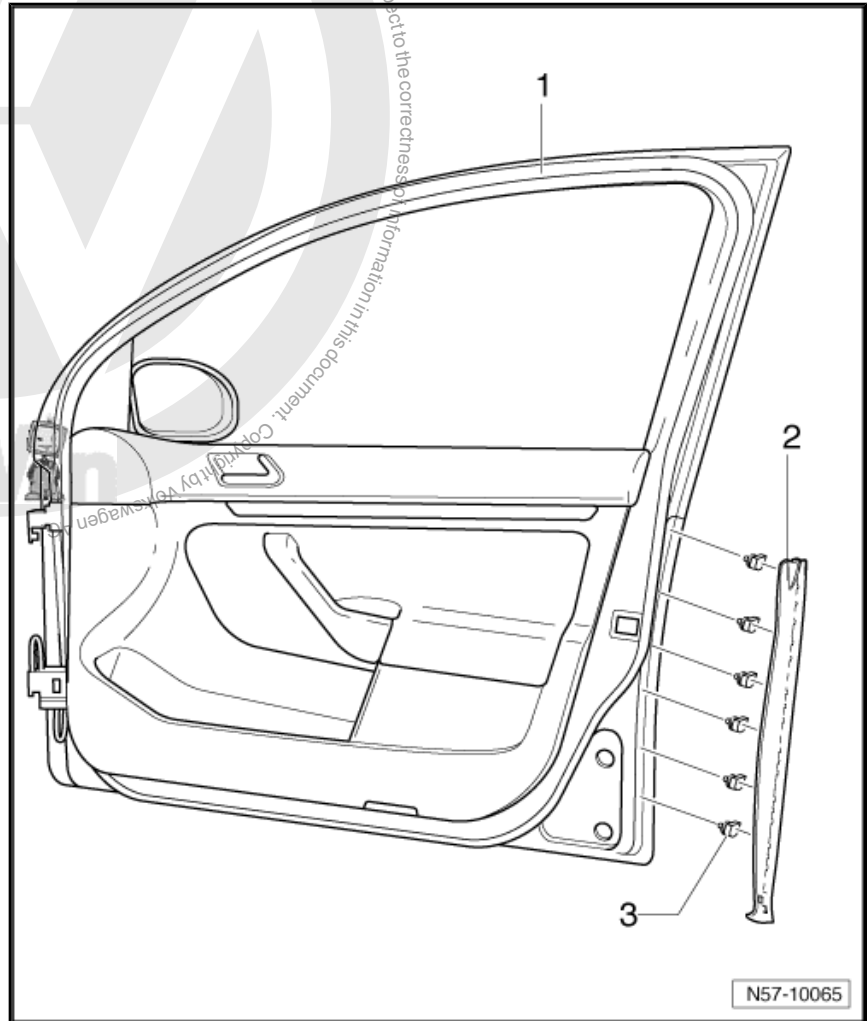




1.7 Removing and installing outer panel on door

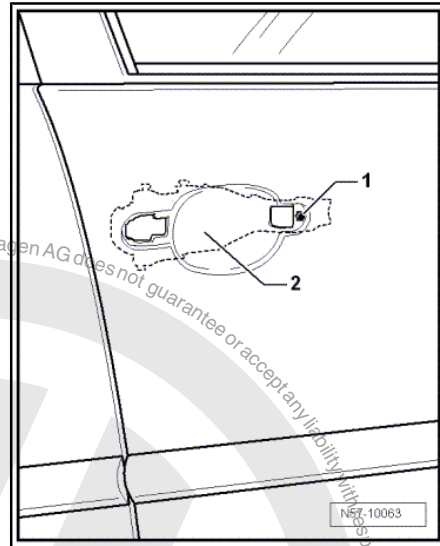
1.7.1 Removing

- Prise out clips -3-, starting at bottom of door -1-, and remove cover -2-.





- Remove lock cylinder ⇒ [page 86](#) .
- Remove door handle ⇒ [page 86](#) .
- Remove bolt -1- from bearing bracket -2- which is located behind door outer panel.



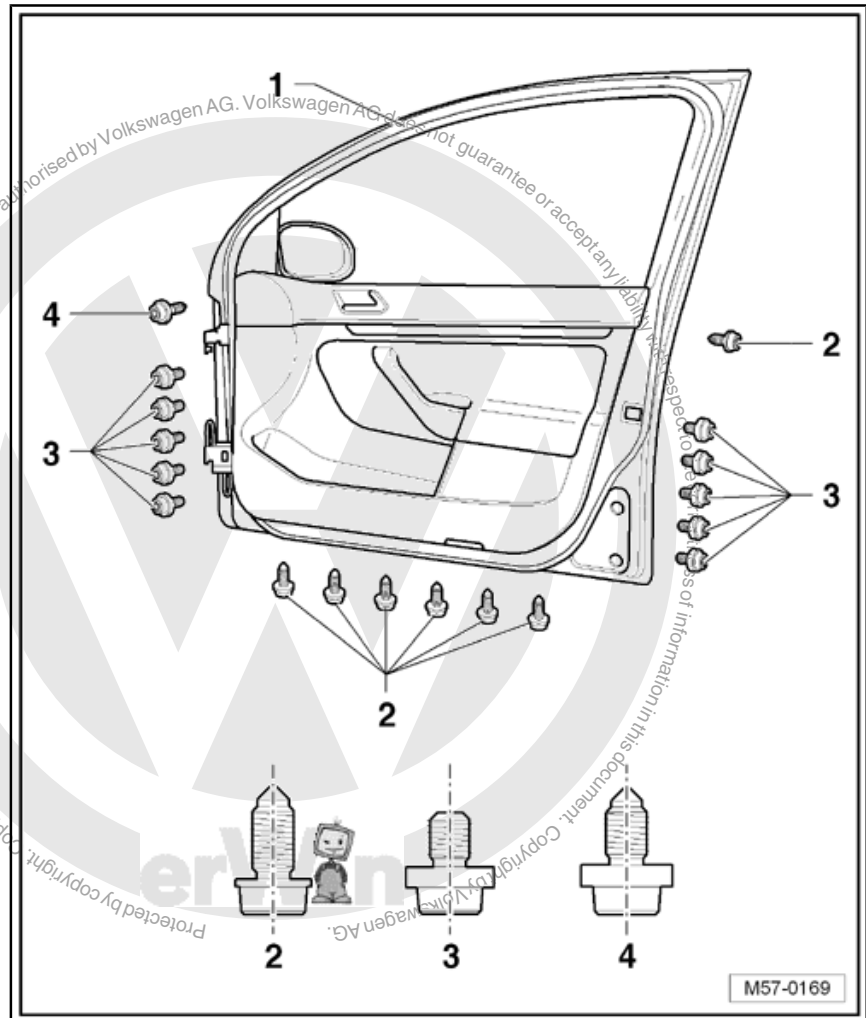
- Remove all bolts -2-, -3- and -4-.



Note

It is possible to find bolt type -4- instead of bolt type -2- in rear upper location on door of some vehicles. If this is the case, do not replace bolt type -4- with bolt type -2-.

- Carefully remove door outer panel.



1.7.2 Installing



Caution

Bolts of different types are used to secure outer panel of door. If these are fitted in the wrong positions, the outer panel for the door will be damaged.

- Carefully position outer panel on door.
- Insert all bolts -2-, -3- and -4-.

Observe correct usage for the different types of bolts.

- ◆ Feature for bolt -2-: bolt with pointed end and thinner washer
- ◆ Feature for bolt -3-: bolt with no pointed end but with thicker washer.
- ◆ Feature for bolt -4-: bolt with pointed end and thicker washer.
- Check whether retaining rail guide pins are located in appropriate guide holes in inner part of door. Only then tighten all bolts -2-, -3- and -4-.

Observe correct specified torque for the different types of bolts.

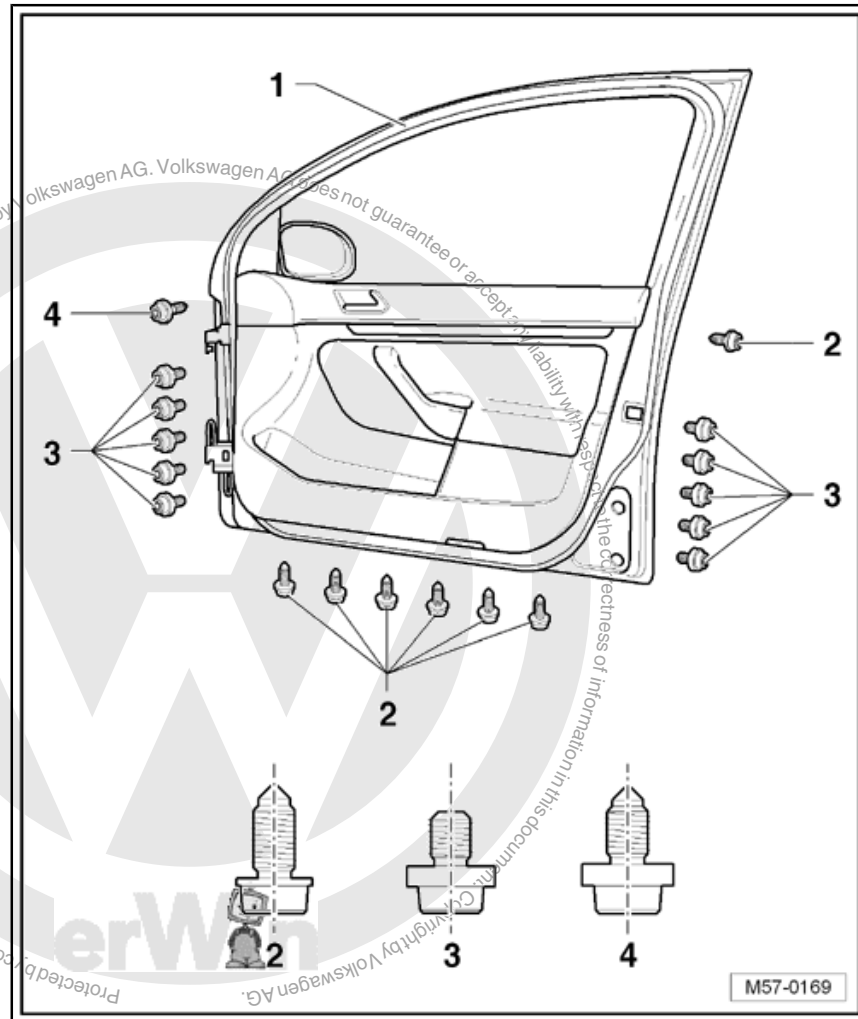


Specified torque for bolt -2-: 10 Nm

Specified torque for bolt -3-: 14 Nm

Specified torque for bolt -4-: 10 Nm

Further installation is performed in reverse order of removal



1.8 Installing new outer panel on door



Caution

Bolts of different types are used to secure outer panel of door. If these are fitted in the wrong positions, the outer panel for the door will be damaged.



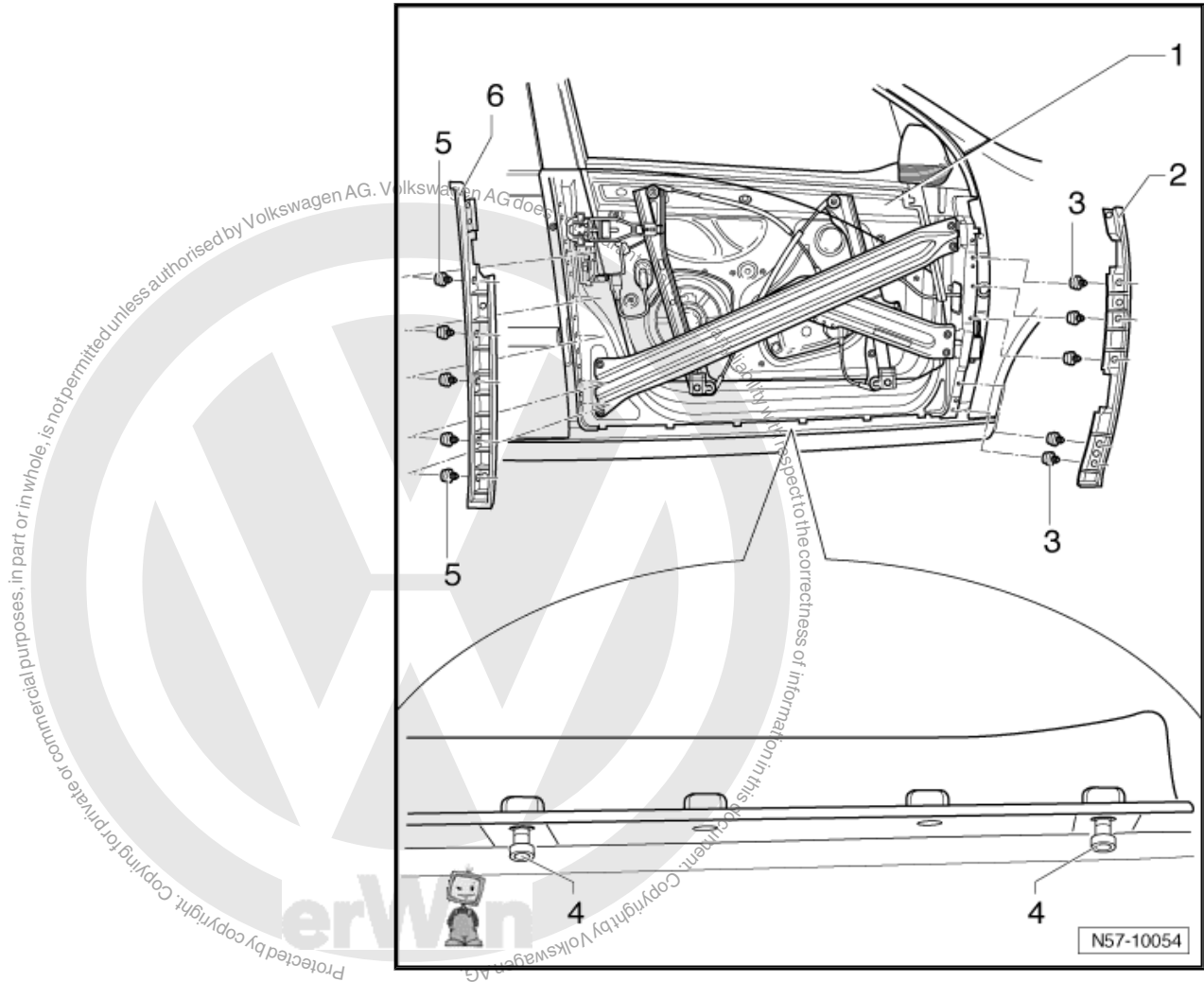
Note

Observe installation notes in chapter for bonding new outer panel on door ⇒ [page 82](#)

- The old (damaged) outer panel with retaining rails is removed ⇒ [page 73](#).



- Install front -2- and rear -6- retaining rails on inner part of door inner part -1-. Use "bolt with no point but with thicker washer" for this.
- Specified torque for bolts -3- and -5-: 14 Nm
- Fit two guide bolts -4- in lower edge of door inner part -1-.



The painted outer panel for the door is first offered up without bonding agent.

Assembly blocks -3- from assembly tool set -T10237- are required when fitting outer panel on door. A strip of double-sided adhesive tape -6- is applied on the side with a cut-out step. The pin has the minimum dimension for the gap width. The surface with no adhesive tape is brought into position on the adjacent panel.

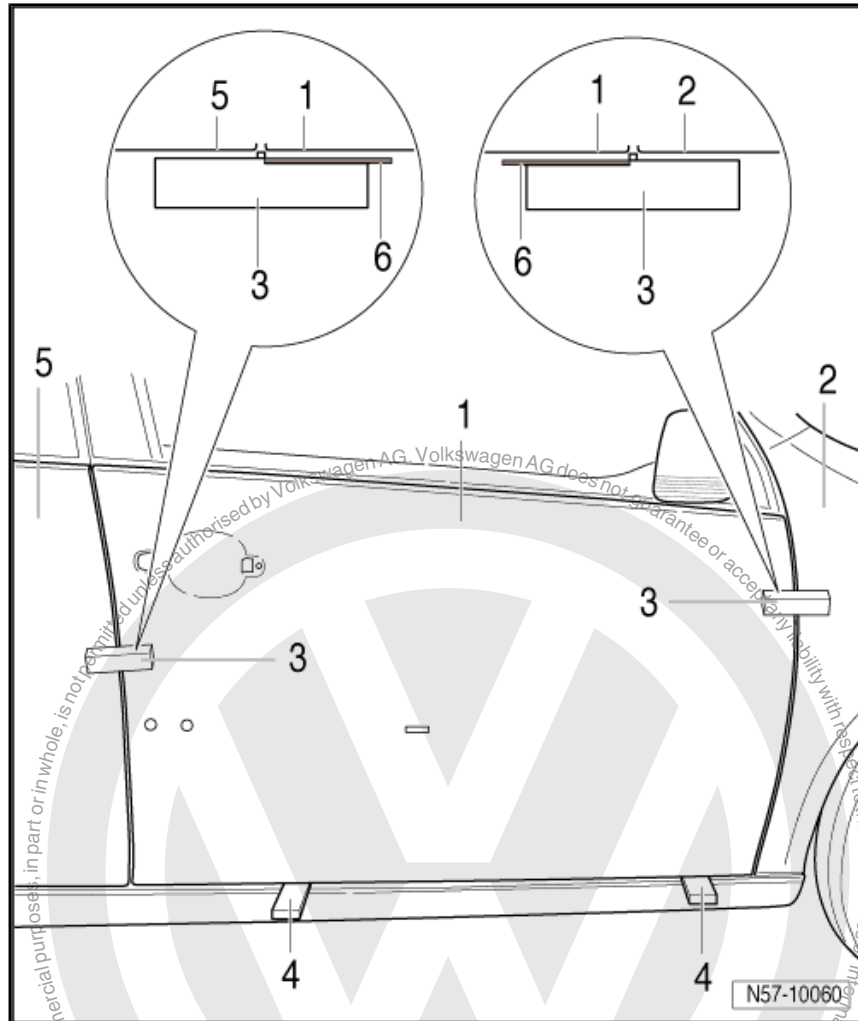
- Stick the assembly block -3- on outer panel -1- of the door.
- Guide outer panel -1- over guide bolts on lower edge of door inner part.
- Adjust gap to sill and height of outer panel on door using wedges -4- from assembly tool set -T10237- .
- Lay door outer panel -1- with assembly blocks on adjacent panels -2- and -5-.



- Check gap/shut lines using setting gauge -3371- → Body Repairs; Rep. Gr. 00 ; Body dimensions .

If gap dimension cannot be adjusted further, door inner part must be adjusted → [page 70](#)

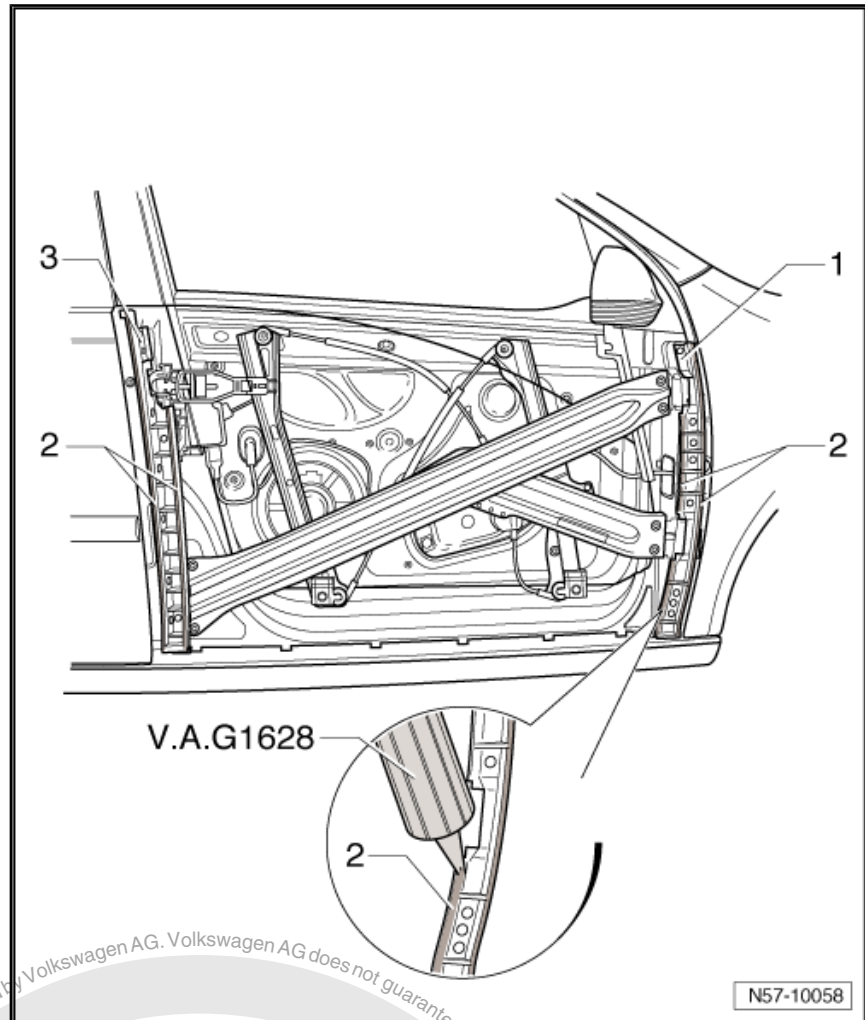
- Remove door outer panel again.



- Apply a bead of adhesive material -2- using cartridge gun - V.A.G 1628- to front -1- and rear -3- retaining rails.

i Note

Adhesive -DA 004 600 A2- can be used for this procedure and is applied with double cartridge gun -VAS 5237-. There is no requirement to preheat.



Fixing blocks -2- from assembly tool set -T10237- are required when fitting outer panel on door. Two strips of double-sided adhesive tape -5- are applied on the contact surface.

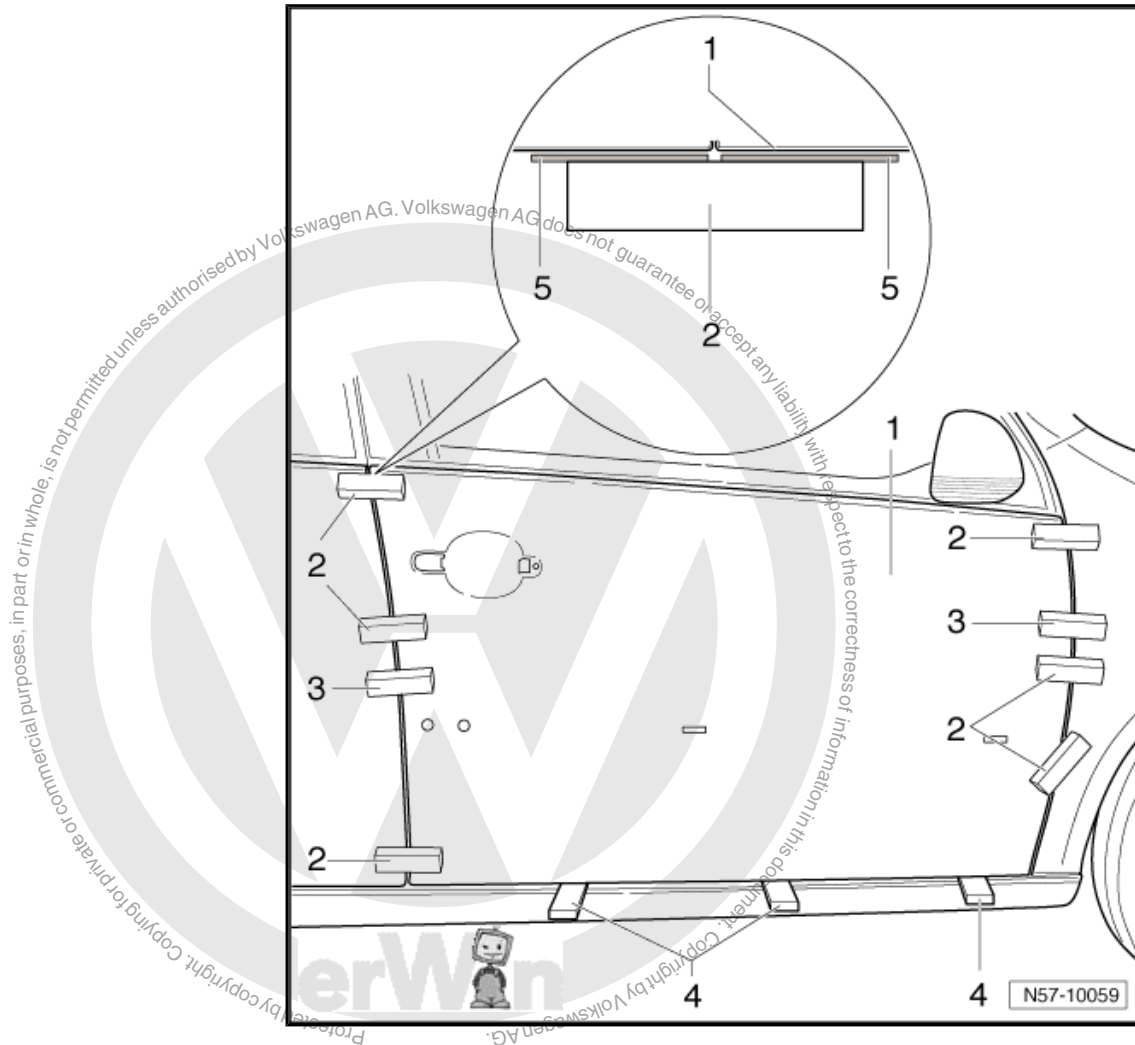
- Guide outer panel -1- over guide bolts on lower edge of door inner part.
- Bring outer panel with assembly blocks -3- into contact with surrounding components.
- Adjust gap to sill and height of outer panel on door using wedges -4- from assembly tool set.
- Check gap/shut line using setting gauge -3371- ⇒ Body Repairs; Rep. Gr. 00 ; Body dimensions .
- Bond short fixing blocks -2- evenly on the replacement door and the adjacent components.



Note

A waiting period of 90 or 180 minutes must be observed before performing further work on the bonded door ⇒ [page 82](#) .

- Further installation is performed in reverse order of removal ⇒ [page 75](#) .



1.9 Removing and installing retaining rail on door outer panel

1.9.1 Removing retaining rail



Caution

The following work steps are to be carried out with great care. As outer panel is to be reused, dents and scratches must be avoided.

When cutting through the adhesive bead, always hold the retaining rail and outer panel together as shown in the illustration. If this is not done, the outer panel will come away from the retaining rail, thus rendering it useless.

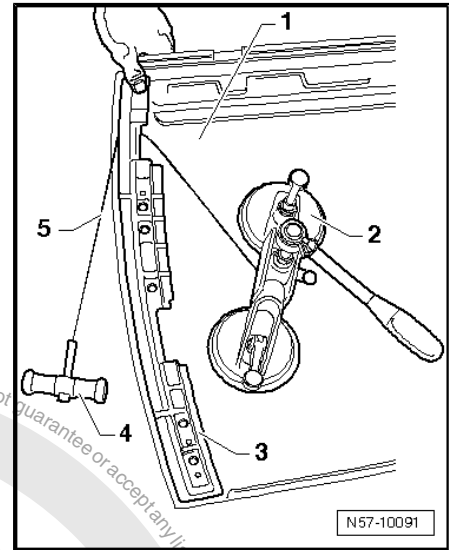


Note

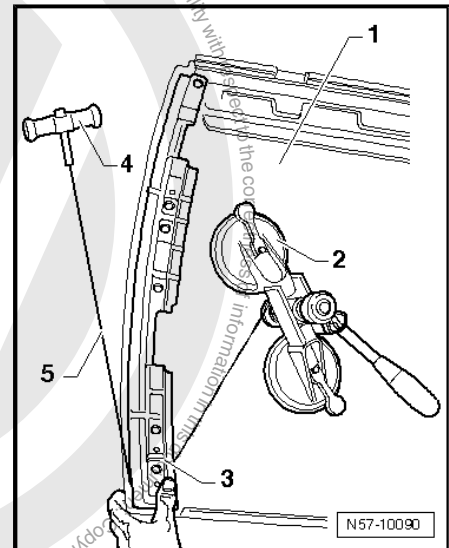
The following procedures should be carried out with the aid of an assistant.



- Door outer panel with retaining rails is removed ⇒ [page 73](#) .
- Place door outer panel -1- on firm surface and protect door outer panel against scratches.
- Secure reel -2- on outer panel of door -1-.
- Secure cord -5- on reel -2- and counterhold -4-.
- Hold retaining rail and outer panel of door together securely when cutting through adhesive bead.
- Cut through adhesive bead of retaining rail -3- and outer panel -1- with cord up to just over half way.



- Once adhesive bead has been cut through to just over half way in step one, turn reel -2- around and insert cord -5- in side still bonded.
- Hold retaining rail -3- and outer panel -1- of door together securely when cutting through adhesive bead further.
- Cut through second half of adhesive bead.



1.9.2 Installing retaining rail

- Using extreme care, cut away remainder of adhesive bead to the utmost minimum on outer panel of door, ensuring that no damage is caused to the paintwork.
- Remainder of procedure is described in chapter entitled "Installing new outer panel for door" ⇒ [page 76](#) .



Note

Observe also "instructions for bonding in new outer panel" on door when installing a new retaining rail.

- In place of removed retaining rail, install a new retaining rail on the door inner part.
- Apply adhesive to new retaining rail
- Tighten screws to secure door panel on lower edge and on retaining rail still in place.



- Secure outer panel for door on new retaining rail with fixing blocks from assembly tool set -T10237- and double-sided adhesive tape.

1.10 Installation notes for bonding a new outer panel on door

Note

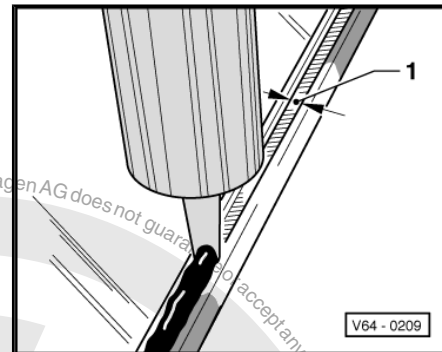
- ◆ *If front and rear door outer panels must be renewed, they must be done at the same time. When bonding-in both outer panels, the long fixing block from assembly tool set -T10237- is stuck on for the transition from front outer panel to rear outer panel.*
- ◆ *If door outer panel CDP coating is damaged on inside in area to be bonded or it has been painted, this area must be primed with glass/paint primer -D 009 200 02- .*
- ◆ *The 1K glass adhesive -DH 009 100 01- must be heated in cartridge heater -V.A.G 1939 A- for 20 minutes.*
- ◆ *Adhesive -DA 004 600 A2- can be used for this procedure and is applied with double cartridge gun -VAS 5237- . There is no requirement to preheat.*
- Clean contact surfaces on retaining rails thoroughly using cleaning solution -D 009 401 04- .
- Apply adhesive material to appropriate surfaces at right angles to retaining rail using cartridge gun -V.A.G 1628- .



Caution

Door outer panel must be installed within 10 minutes, or adhesive properties of adhesive will be impaired.

- ◆ With assistance of both assembly blocks from assembly tool set -T10237- , place door outer panel on retaining rails and align with wedges and setting gauge -3371- and press contact surfaces of assembly blocks onto adjacent components.
- ◆ Secure door with fixing blocks from assembly tool set -T10237- during curing period.
- ◆ After installation door outer panel must align with other components and gaps must be even.
- ◆ If adhesive bead is too thick and adhesive exudes between retaining rail and door outer panel, excess adhesive must be removed.



1.11 Minimum curing period



WARNING

Special standards must be adhered to when replacing bonded outer panels for door. One of these standards is, for example, that a freshly bonded door outer panel must comply with the safety requirements following the minimum prescribed curing period, even in an accident.

For door outer panel: curing period for 1K adhesive -DH 009 100 01- is 180 minutes and for 2K adhesive -DA 004 600 A2- 90 minutes.



What is meant by minimum curing period is, time from bonding outer panel on door to time vehicle is taken into use or further work is carried out. During this time, the vehicle must stand on a level surface at room temperature (at least 15 °C).



WARNING

Vehicle is safe to use only after the curing period is completed.

1.12 Cleaning off excess adhesive sealing material

- Use of adhesive remover -D 002 000 10- as a cleaning solution is recommended. Observe the appropriate safety precautions when performing this work.



Caution

When cleaning vehicle the door outer panel just bonded-in must not be moved.

- First clean painted surface as much as possible using a dry cloth. Remove residual excess with adhesive remover -D 002 000 10- .
- Cleaning plastic trim: allow adhesive sealant to cure (approx. one hour) and then peel off.



1.13 Assembly overview - door inner part



Note

The right side is shown. The left side is similar.

1 - Door inner part

2 - Window slot seal

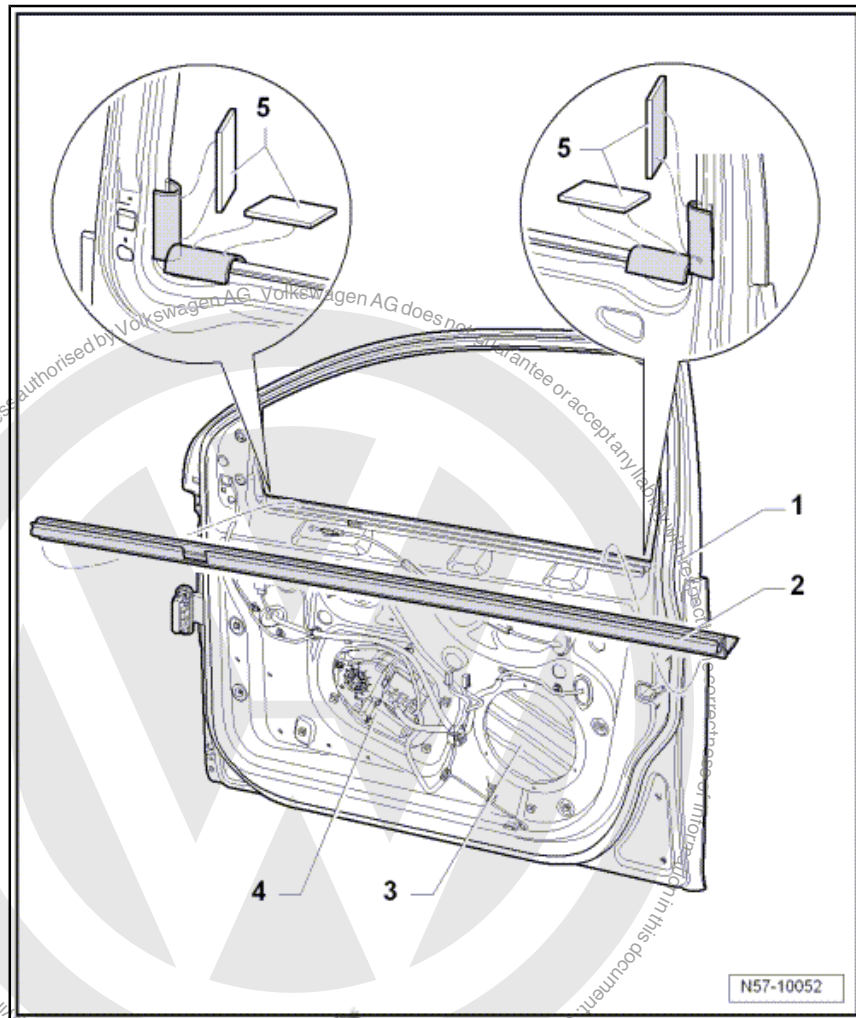
3 - Loudspeaker

4 - Window regulator motor

- ❑ Removing ⇒ [page 284](#)

5 - Insulation

- ❑ Qty. 4
- ❑ 20 mm x 40 mm commercially available textile adhesive tape





1.14 Assembly overview - door handle and door lock



Note

Only the left side is shown. The right side is similar.

1 - Cable

- To lock release from interior door handle.

2 - Cable

- To release lock from door exterior handle.

3 - Bolt

- Qty. 2
- To secure lock to door inner part.
- 18 Nm

4 - Door lock

- Removing and installing ⇒ [page 90](#)

5 - Cover

- Not supplied with door lock.
- Secured on door lock with locking lugs

6 - Bearing bracket

- Removing and installing ⇒ [page 89](#)

7 - Torx bolt

- To secure lock cylinder housing or housing ⇒ [Item 9 \(page 85\)](#)

8 - Base

9 - Lock cylinder housing

- Only on driver side.
- Passenger side is installed in a housing.
- Removing and installing ⇒ [page 86](#)

10 - Cover

- For lock cylinder housing
- Secured to lock cylinder housing with three locking lugs

11 - Key

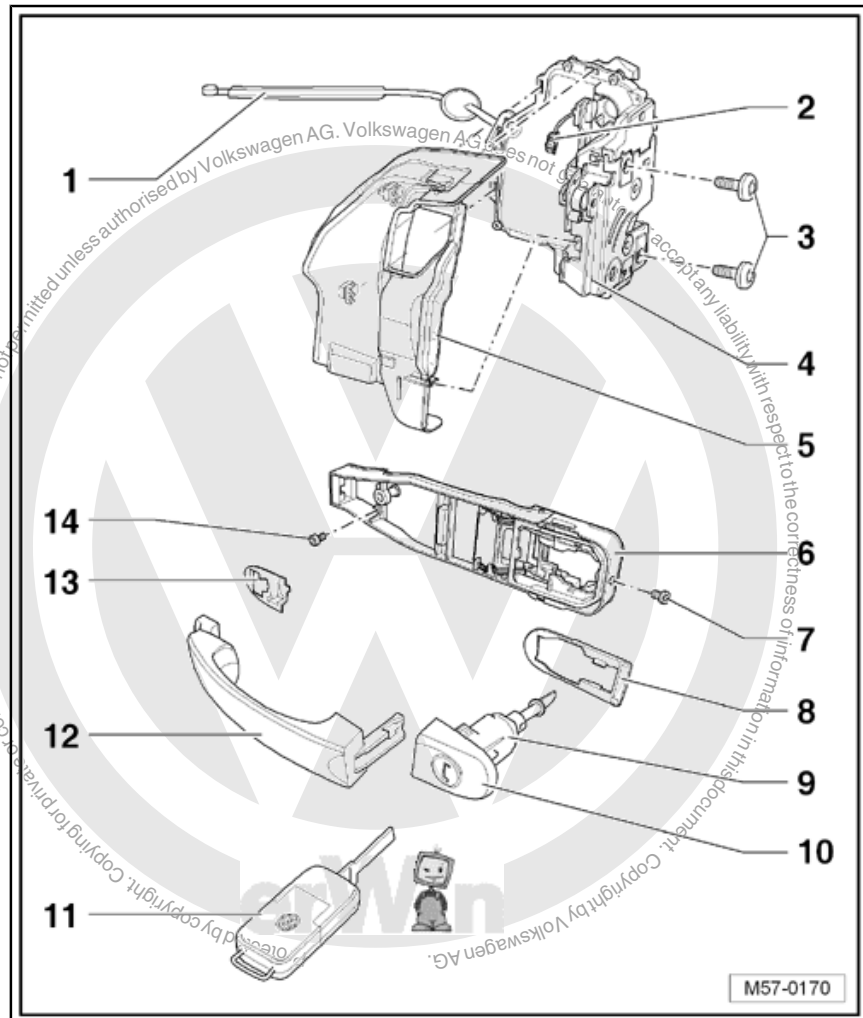
- Changing battery ⇒ [page 100](#) .
- Adapting new or additional key to remote control and immobilizer ⇒ [page 100](#) .

12 - Door handle with base

- Removing and installing ⇒ [page 86](#)

13 - Base

- Part of door handle.





14 - Torx bolt

- 4.5 Nm

1.15 Removing and installing housing

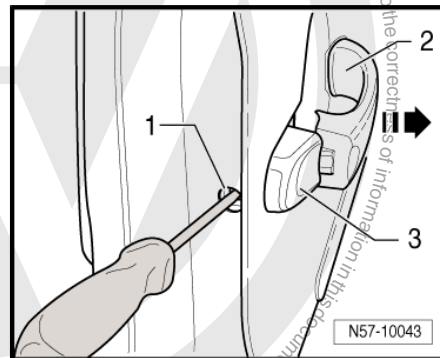


Note

The removal and installation sequence is only for the right housing. The removal and installation of the right lock cylinder is similar.

1.15.1 Removing

- Prise cover (⇒ page 73 Fig. N57-10065, item 2) off front door.
- Lever out caps in front of bolts -1-.
- Pull door handle -2- in direction of -arrow- and unbolt bolt -1- onto stop using socket wrench -T10072- .
- Pull out housing -3-.



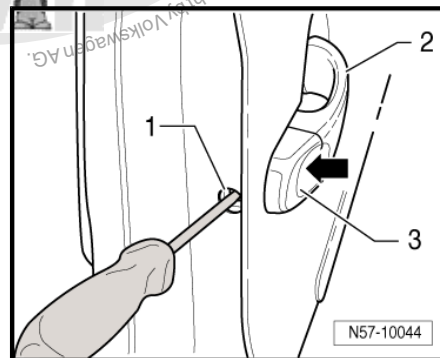
1.15.2 Installing

- Fit housing -3- in door handle -2- bearing bracket at right angles -arrow-.

Door handle -2- must rest only lightly against door panel.

- Now tighten bolt -1- in bearing bracket using socket wrench -T10072- .

The door handle -2- locates in the housing -3- with a well audible click.



Note

During installation, housing must be pressed against door panel. The door handle just rests lightly against the door panel.

Further installation is performed in reverse order of removal.

Then always check function while door is still open, as an incorrectly fitted and adjusted Bowden cable cannot open the door.

1.16 Removing and installing door handle



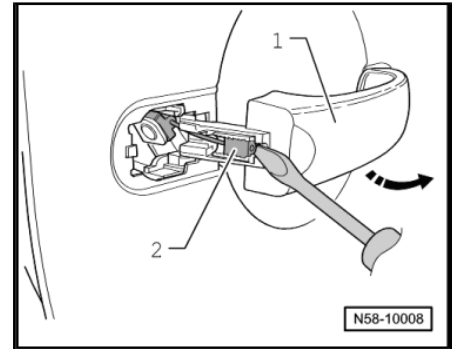
Note

The removal and installation sequence is only for the right door handle. The removal and installation of the left door handle is similar.



1.16.1 Removing

- Remove housing ⇒ [page 86](#) .
- Lever clip -2- out of door handle -1-.
- Swivel door handle -1- out of door -arrow-.



1.16.2 Installing

- Guide assembly tool -T10118- into door through opening in door outer panel.
- Use a hand torch to illuminate inside of door for improved visibility.
- Hook assembly tool -T10118- in spring -arrow A-.
- Hook spring onto door lock by pulling assembly tool -T10118- -arrow B-.

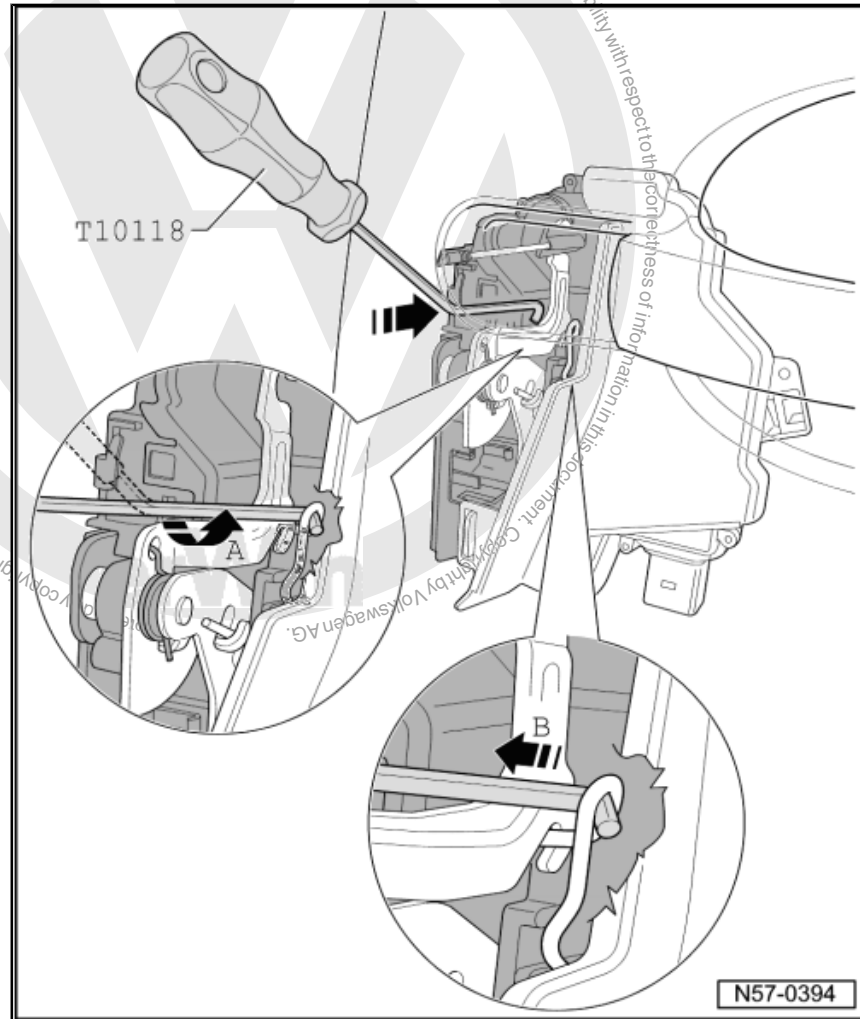
The release lever is now secured.





i Note

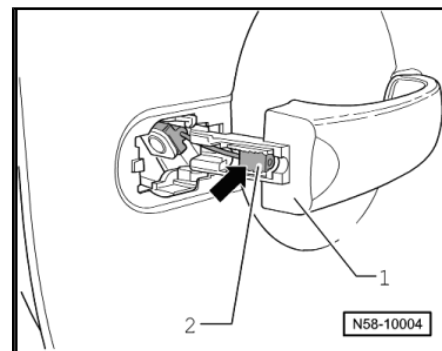
Hooking the spring into the operating lever secures the lock. This prevents incorrect attachment of the Bowden cable to the door handle later.



- Swivel door handle -1- into door.
- Pull clip -2- in the panel opening and engage clip in door handle -1- -arrow-.

i Note

- ◆ Press door handle -1- against door panel when assembling.
- ◆ Clip -2- must engage audibly in door handle -1-.
- Install housing ⇒ [page 86](#) .



Then always check function while door is still open, as an incorrectly fitted and adjusted Bowden cable cannot open the door.



1.17 Removing and installing bearing bracket

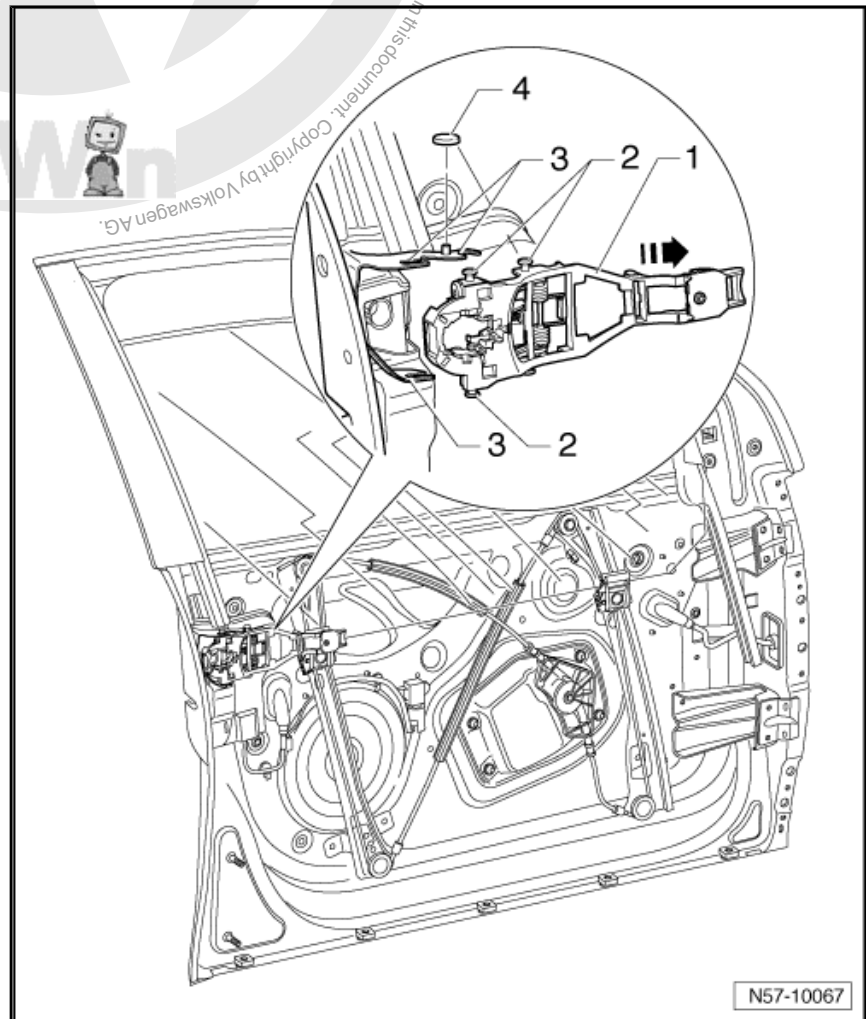


Note

Removal and installation are described only for the right bearing bracket. The removal and installation of the left bearing bracket is similar.

1.17.1 Removing

- Remove housing ⇒ [page 86](#) .
- Remove door handle ⇒ [page 86](#) .
- Remove door outer panel ⇒ [page 112](#) .
- Pull retaining rubber -4- upwards off guide pins.
- Pull bearing bracket -1- in direction of -arrow- with guide pins -2- out of mountings -3-.

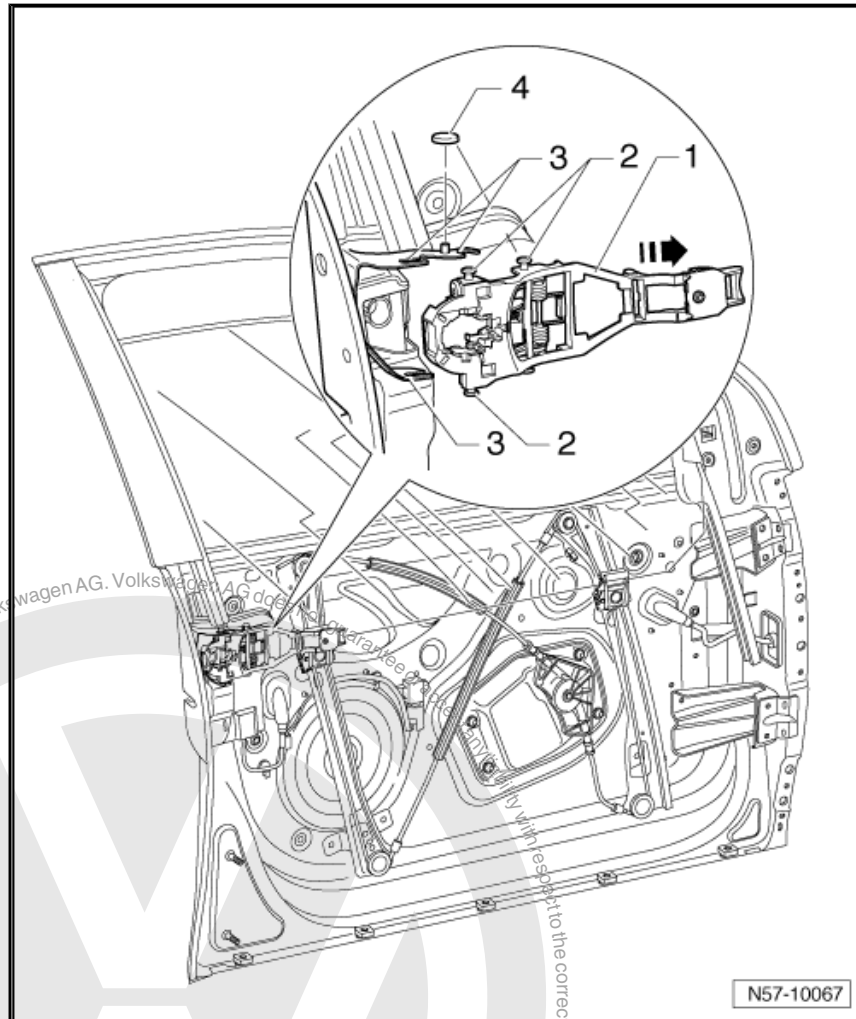




1.17.2 Installing

- Push bearing bracket -1- with guide pins -2- in mountings -3-.
- Secure retaining rubber -4- to guide pins and securing bolts on bearing plate mounting.

Further installation is performed in reverse order of removal.



1.18 Removing and installing door lock



Note

The removal and installation sequence is only for the right door lock. The removal and installation of the left door lock is similar.

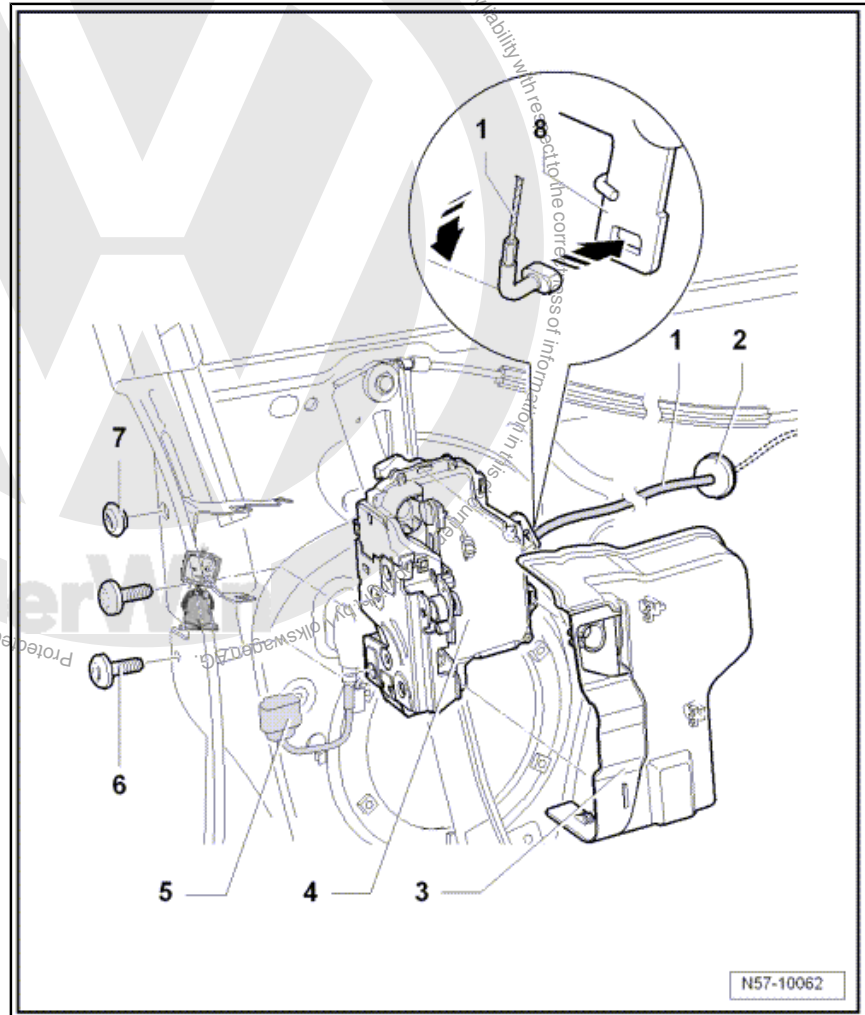
1.18.1 Removing

- Remove housing ⇒ [page 86](#)
- Remove door handle ⇒ [page 86](#)
- Remove door outer panel ⇒ [page 73](#)



- Remove bearing bracket ⇒ [page 89](#) .
- Disconnect connector -5-.
- Remove bolts -6-.
- Release cable -1- from relay lever -8- and remove door lock -4-.

Cover -3- is not supplied with door lock.



1.18.2 Installing

Install in reverse order of removal.

Specified torque for bolts: 18 Nm.

Then always check function while door is still open, as an incorrectly fitted and adjusted Bowden cable cannot open the door.



1.19 Assembly overview - side impact protection

1 - Side impact protection

- ❑ To remove and install, remove outer panel for door => [page 112](#)

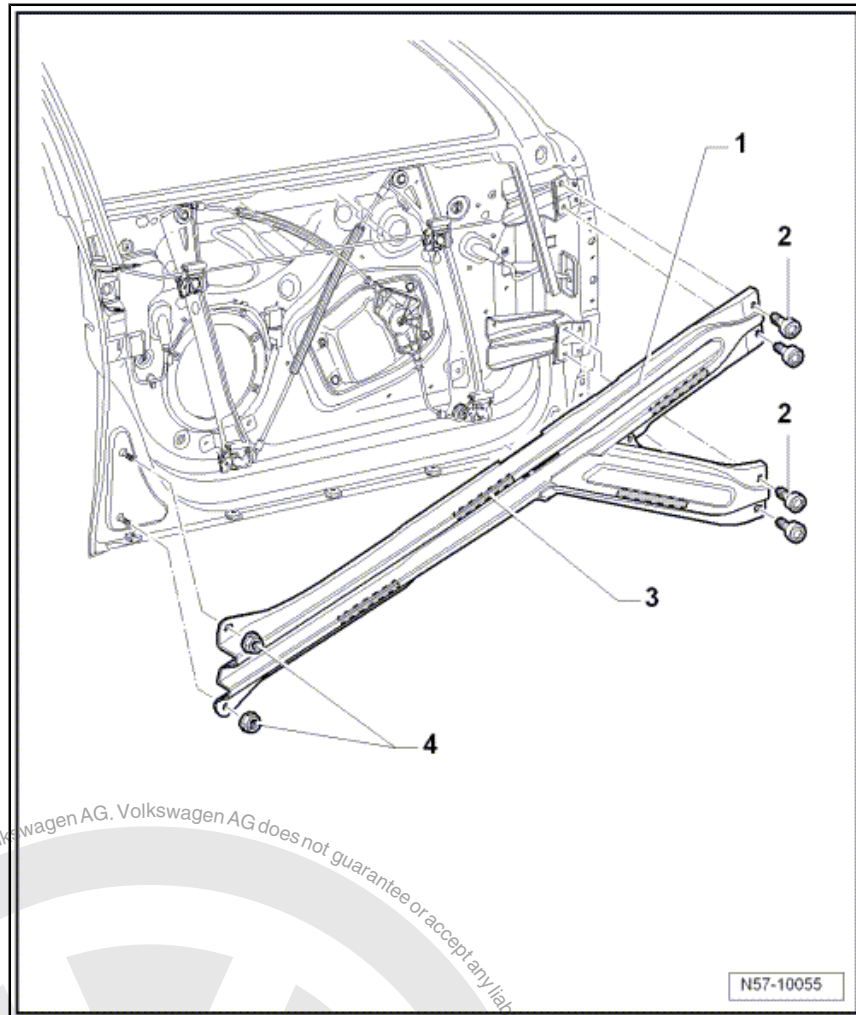
2 - Bolt

- ❑ Qty. 4
- ❑ 20 Nm

3 - Insulation

4 - Nut

- ❑ Qty. 2
- ❑ 20 Nm



1.20 Door inner seal

During production, a sealant is applied to the door inner seals, which are then placed on the door flange and rolled on.



Note

- ◆ *When seals are removed, the sealant will spread to the inside of the seal and the flanks will be bent out slightly. If the seal is then refitted, a tight seal is not guaranteed.*
- ◆ *Therefore each seal which is removed completely should be replaced by a so-called "tap-on" seal.*
- ◆ *If a seal has been partially removed, squeeze sides of seal together before refitting.*



1.21 Removing and installing door inner seal

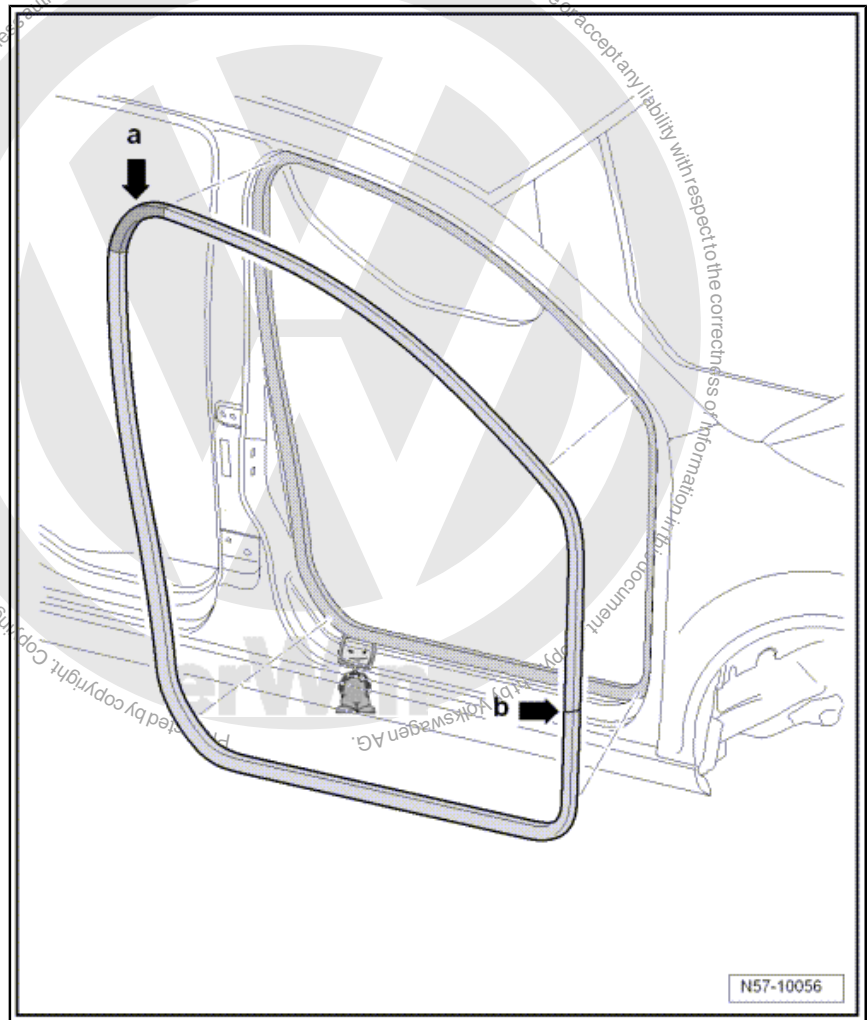


Note

The removal and installation sequence is only for the right door inner seal. The removal and installation of the left door inner seal is similar.

1.21.1 Removing

- Pull door inner seal off body flange.

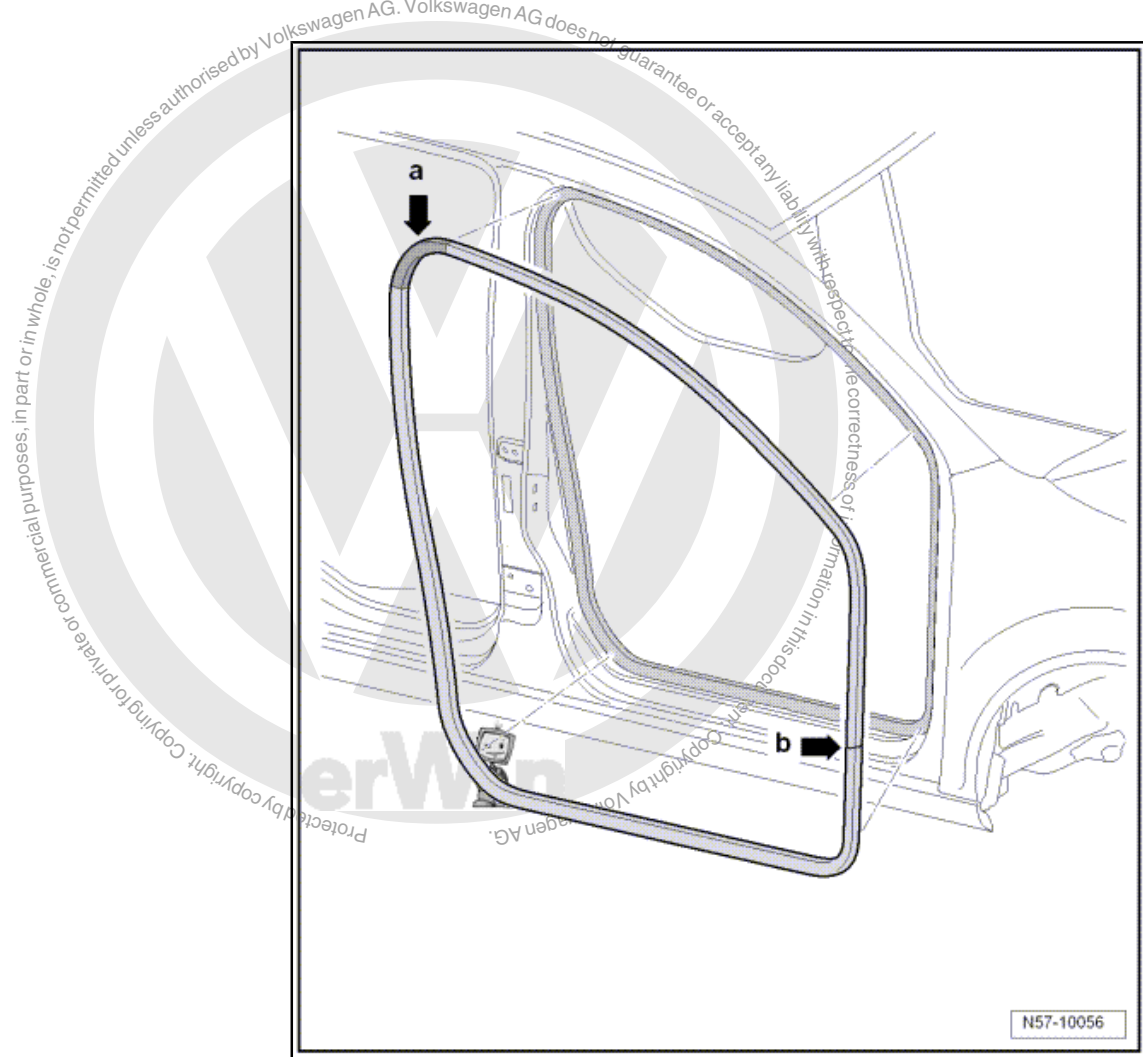


1.21.2 Installing

- Align door inner seal so that the vulcanised point -arrow b- is located at the height of the lower hinge.



- Start installing door inner seal at top radius -arrow a- of door aperture.



1.22 Removing and installing door outer seal



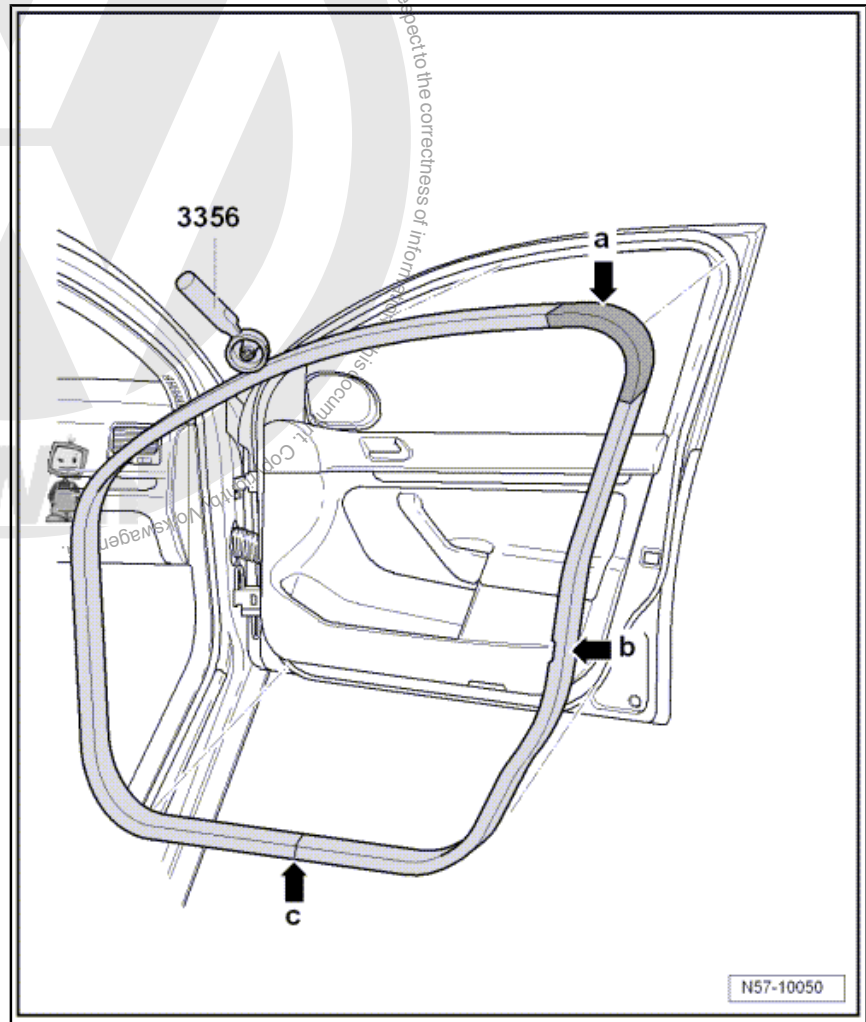
Note

- ◆ *Removal and installation are described only for the right door outer seal. Removal and installation of the left door outer seal are similar.*
- ◆ *Remove protective backing immediately before installation. Working temperature approx. 20 °C.*



1.22.1 Removing

- Pull door outer seal off door.

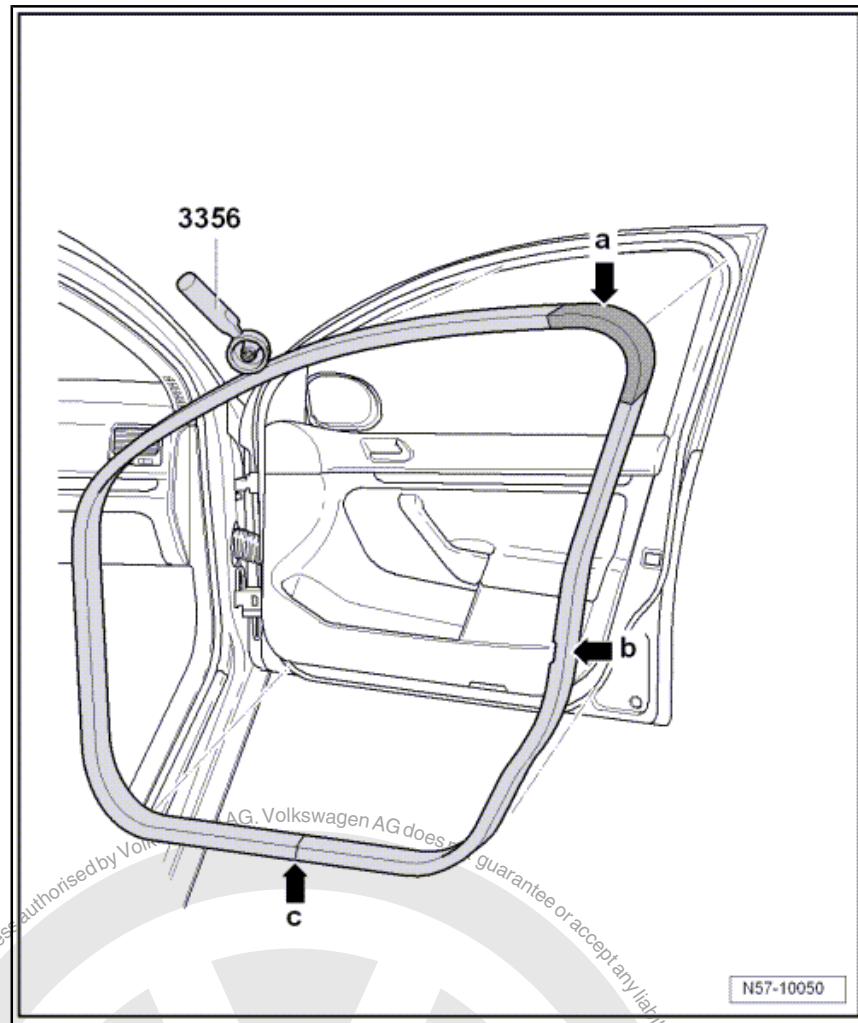


1.22.2 Installing

- Remove adhesive residues with erasure disc of adhesive strip remover -VAS 6349- .
- Immediately before bonding door outer seal, clean bonding surface thoroughly with adhesive remover -D 002 000 10- .
- Bonding surfaces must be free of dust and grease and there should be no adhesive residues.
- Align door outer seal with section -arrow b- towards door lock securing bolts.
- Door outer seal vulcanised point -arrow c- should then be in middle of sill.



- Pull off protective foil and install seal on door. Do not pull door outer seal excessively to avoid stretching seal.



- Press complete bonding surface of seal -3- onto door -1- all around using roller -3356- .
- To do this, push seal aside -arrow a- so that the roller -3356- runs directly over the contact surface of the seal.

The roller can apply the necessary force -arrow b- to the bonding surface -2- only when procedure described above is followed.

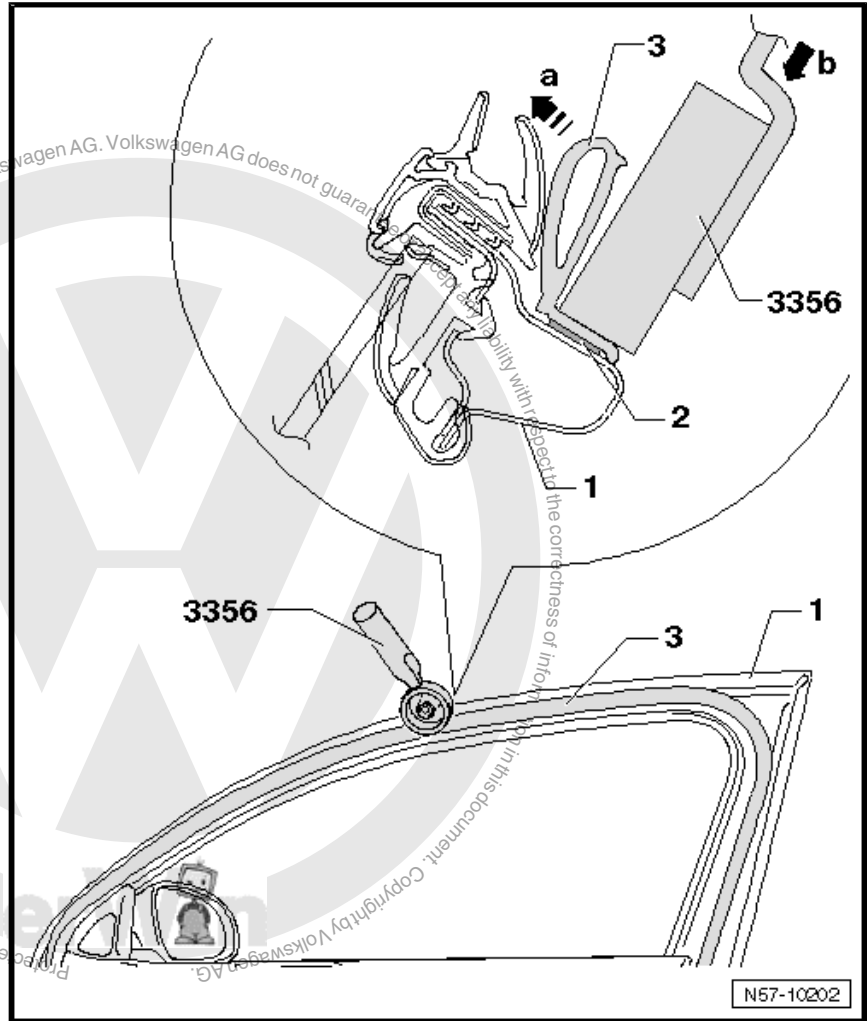
- If the seal has stretched, cut seal to required length and press on butt joint well.
- If seal -3- comes loose in small areas again, press seal on well again using roller -3356- .

i Note

The door must not be closed for a period of 2 hours to ensure the door outer seal does not move or loosen again.



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2 Central locking

2.1 Fitting location overview - central locking components

1 - Anti-theft alarm horn

- ❑ Location: under rear section of wheel housing liner in front right wheel housing (removing rear section of wheel housing liner ⇒ [page 321](#))

2 - Coupling station

- ❑ Location: right A-pillar
- ❑ To disconnect connector, release bellows at A-pillar ⇒ [page 68](#)

3 - Convenience system central control unit -J393-

- ❑ Location: under dash panel and behind glove compartment on front passenger side (removing glove compartment ⇒ General body repairs, interior; Rep. Gr. 68 ; Compartments, covers and trims)

4 - Door control unit -J387-

- ❑ Integrated in window regulator motor (removing window regulator motor ⇒ [page 285](#))

5 - Door lock

- ❑ Door lock is secured on inner part of door (removing door lock ⇒ [page 90](#))
- ❑ Electric central locking is integrated into door lock

6 - Coupling station

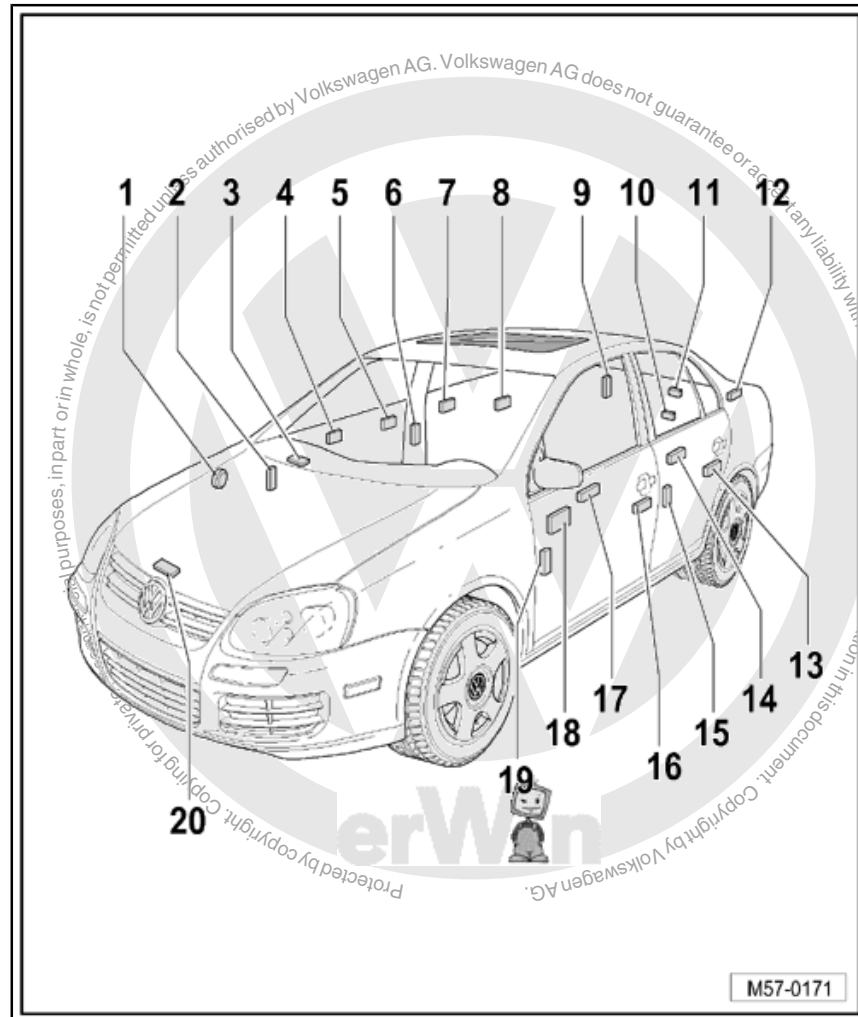
- ❑ Location: right B-pillar.
- ❑ To disconnect connector, release boot on B-pillar ⇒ [page 107](#) .

7 - Rear right door control unit -J389-

- ❑ Integrated in window regulator motor
- ❑ Removing (saloon) ⇒ [page 302](#)
- ❑ Removing (Variant) ⇒ [page 317](#)

8 - Door lock

- ❑ Electric central locking is integrated into door lock
- ❑ Removing (saloon) ⇒ [page 129](#)
- ❑ Removing (Variant) ⇒ [page 155](#)





9 - Tank filler flap locking motor -V155-

- Location: behind right trim of luggage compartment
- Removing (saloon) ⇒ [page 54](#)
- Removing (Variant) ⇒ [page 58](#)

10 - Lock for rear lid

- Location: bolted to rear lid
- Removing (saloon) ⇒ [page 36](#)
- Removing (Variant) ⇒ [page 48](#)

11 - Rear lid handle release button -E234-

- Not installed on all vehicles
- Integrated in rear handle of rear lid (removing handle on saloon) ⇒ [page 36](#))
- Removing (Variant) ⇒ [page 47](#)

12 - Coupling station, rear lid

- Location, saloon: behind luggage compartment side trim on left (removing luggage compartment side trim on left ⇒ General body repairs, interior; Rep. Gr. 70 ; Load area and luggage compartment trim .
- Location, Variant: on rear of moulded headliner (lowering moulded headliner ⇒ General body repairs, interior; Rep. Gr. 70 ; Roof trims)

13 - Door lock

- Electric central locking is integrated into door lock
- Removing (saloon) ⇒ [page 129](#)
- Removing (Variant) ⇒ [page 155](#)

14 - Rear left door control unit -J388-

- Integrated in window regulator motor
- Removing (saloon) ⇒ [page 302](#)
- Removing (Variant) ⇒ [page 317](#)

15 - Coupling station

- Fitting location: left B-pillar
- To disconnect connector, release boot on B-pillar ⇒ [page 107](#) .

16 - Door lock

- Door lock is secured on inner part of door (removing door lock ⇒ [page 90](#))
- Electric central locking is integrated into door lock

17 - Central switch for window regulators

- Location: installed in door panel
- Removing and installing central switch for window regulators ⇒ Electrical system; Rep. Gr. 96 ; Lights, bulbs, switches - interior

18 - Door control unit -J386-

- Integrated in window regulator motor (removing window regulator motor ⇒ [page 285](#))

19 - Coupling station

- Fitting location: left A-pillar
- To disconnect connector, release bellows at A-pillar ⇒ [page 68](#)

20 Bonnet contact switch -F266-

- Anti-theft alarm system contact switch
- Cannot be replaced as an individual item
- Location: on bonnet lock (removing bonnet lock ⇒ [page 23](#))



2.2 Adapting keys with remote control

Keys with remote control are adapted using the vehicle diagnosis, testing and information system -VAS 5051- .

- Select "guided fault finding" in vehicle diagnostic, testing and information system -VAS 5051- .
- Using the **[GoTo]** key, select "Function/component selection" and the following menu items in succession:
 - ◆ Body (Repair group 01; 27; 50-97)
 - ◆ Internal/external installations (Repair group 01; from 55 77)
 - ◆ 01 - Self-diagnosis
 - ◆ 46 - Convenience system central module
 - ◆ Functions
 - ◆ Adaption

2.3 Assembly overview - battery for folding key with remote control

1 - Key with variable code transponder

2 - Upper part of transmitter unit

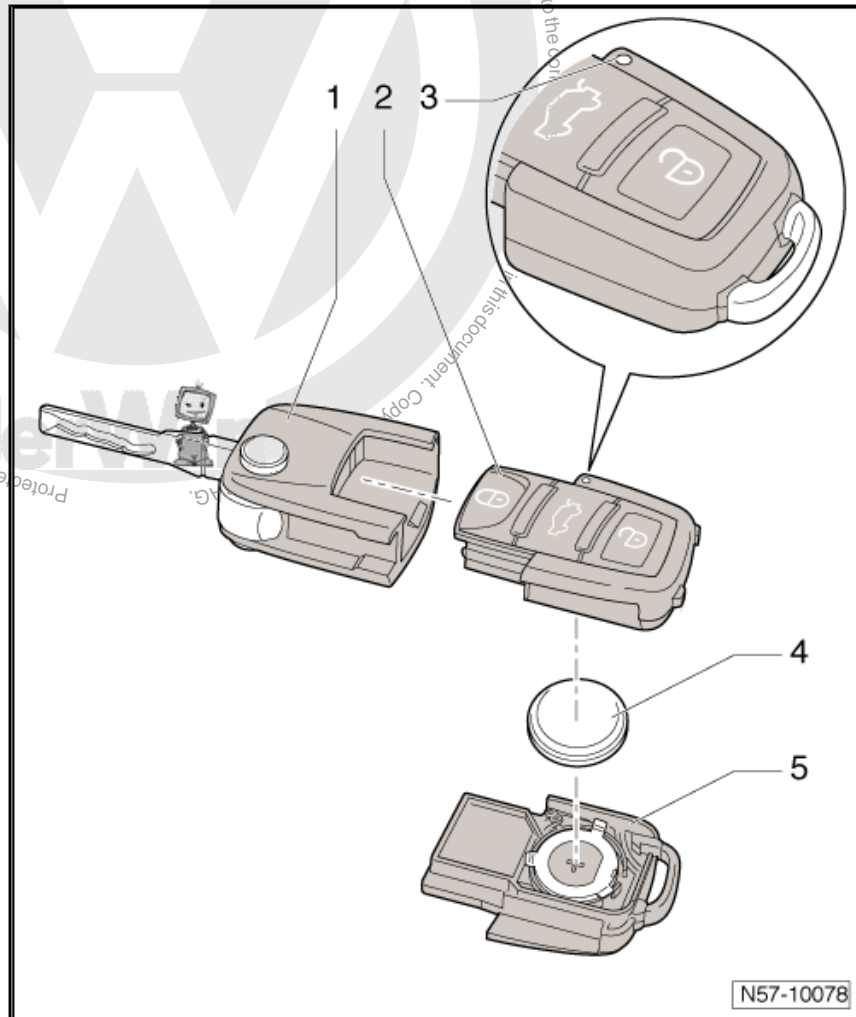
3 - LED

- LED must flash when remote control is operated
- If LED does not flash during remote control operation, the battery is dead and must be renewed.

4 - Battery

- Removing battery
⇒ [page 101](#)
- Installing battery
⇒ [page 101](#)

5 - Lower part of transmitter unit

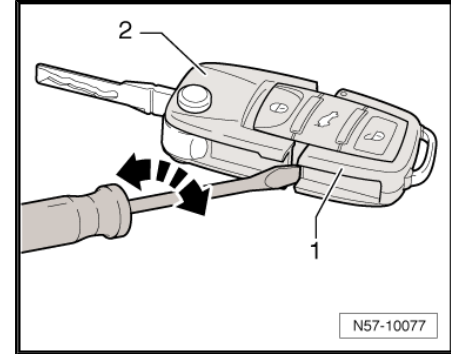




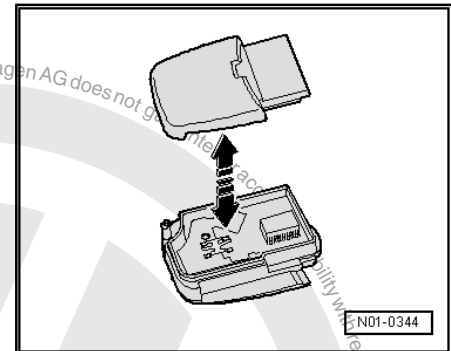
2.4 Removing and installing battery for folding key with remote control

2.4.1 Removing

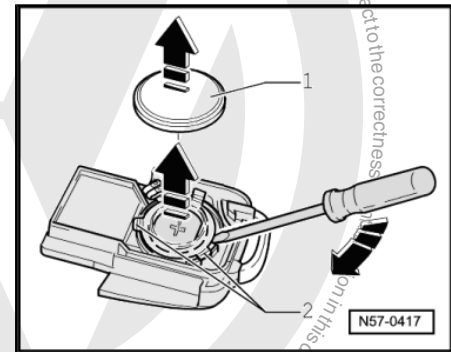
- Insert a screwdriver in slot between transmitter unit -1- and key -2-.
- Twist screwdriver in -direction of arrow- to separate transmitter unit from key.



- Press upper part of transmitter unit and lower part of transmitter unit apart in direction of -arrow-.



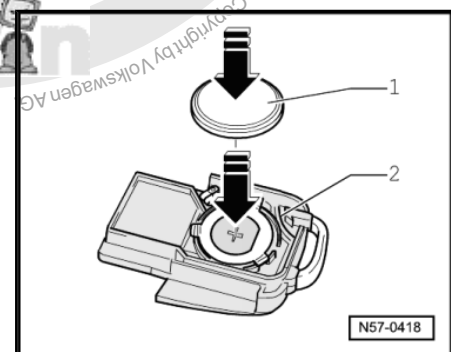
- Unclip battery -1- from retainers -2- with a screwdriver in direction of -arrow-.



2.4.2 Installing

Note polarity and correct position when installing battery.

- Place battery -1- in transmitter unit -2- with positive terminal downwards (positive terminal is marked on housing).
- Engage battery in lower part of transmitter unit by pressing down lightly.
- Fit upper part of transmitter unit and lower part of transmitter unit together (do not damage seal).
- Then clip transmitter unit to key.





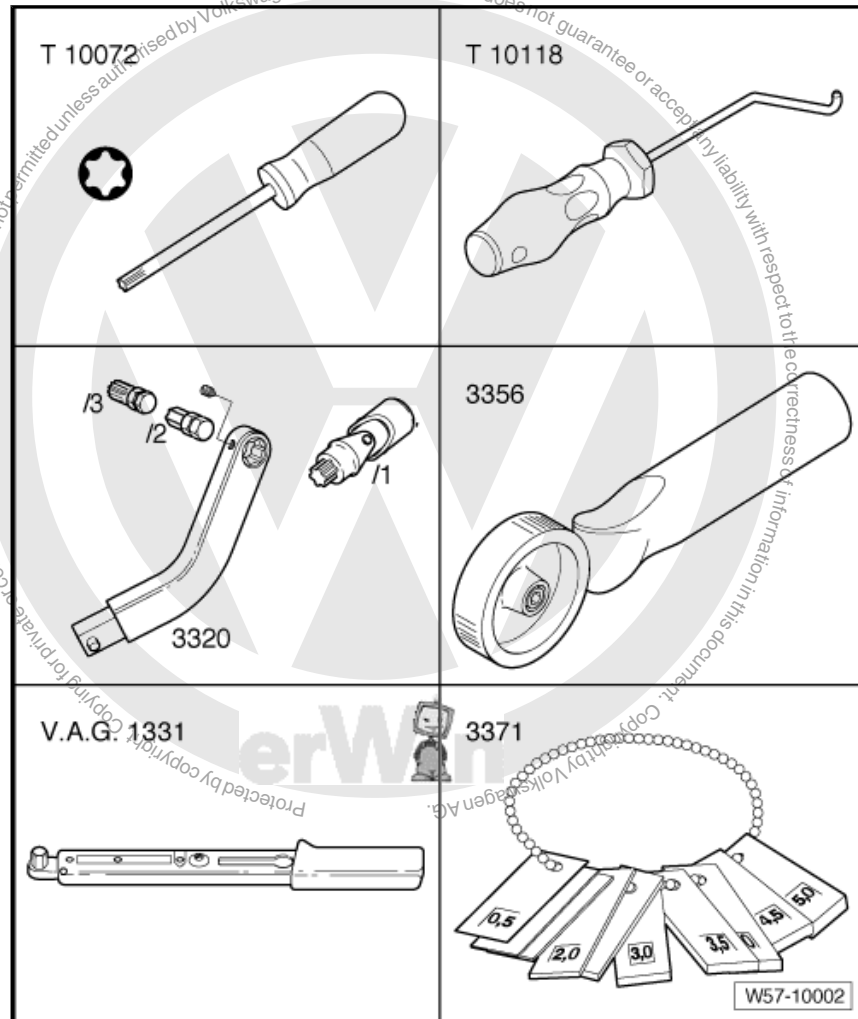
58 – Rear doors, door components

1 Rear door (saloon)

1.1 Tools

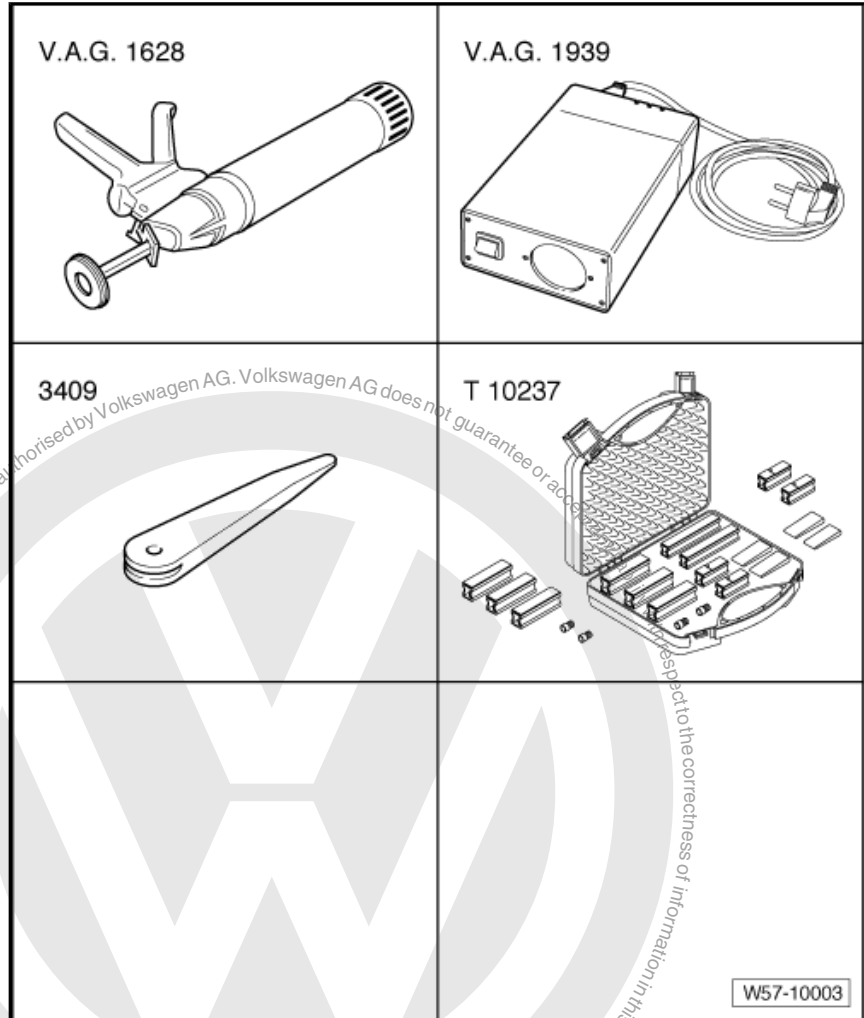
Special tools and workshop equipment required

- ◆ Socket -T10072-
- ◆ Assembly tool -T10118-
- ◆ Door alignment tool -3320- with -3320/1- , -3320/2- and -3320/3-
- ◆ Roller for door insulation foil -3356-
- ◆ Torque wrench -V.A.G 1331-
- ◆ Setting gauge -3371-





- ◆ Cartridge gun -V.A.G 1628-
- ◆ Cartridge heater -V.A.G 1939 A-
- ◆ Removal wedge -3409-
- ◆ Assembly tool set -T10237-



1.2 Materials

- ◆ 1K or 2K glass adhesive -DH 009 100 01-^{4) 5)} or -DA 004 600 A2-⁴⁾
- ◆ Glass primer/paint primer -D 009 200 02-⁶⁾
- ◆ Cleaning solution -D 009 401 04-⁶⁾
- ◆ Primer applicator -D 009 500 25-⁶⁾

4) Observe curing period ⇒ [page 121](#)

5) Heat according to manufacturer's instructions, using cartridge heater -V.A.G 1939 A- .

6) Materials are stored in box -D 004 700- .

1.3 Assembly overview - door assembly

A new door concept has been introduced with Jetta 2005 ▶ , Bora 2005 ▶ .

The door consists of an inner part -6- and an outer panel -1-.

The parts are joined by the front -7- and rear -4- retaining rail.



The retaining rails are bolted to the inner part of the door and bonded to the outer panel of the door.

The inner part -6- of the door functions basically as the previously known assembly carrier. Loudspeaker, window regulator, window regulator motor, wiring, window channel, exterior mirror and door lock are mounted on the inner part of the door.

The outer panel -1- of the door is additionally bolted to the lower edge of the inner part. The window slot outer seal, insulation and exterior door handle are mounted on the outer panel of the door.



Caution

Bolts of different types are used to secure outer panel of door. If these are fitted in the wrong positions, the outer panel for the door will be damaged.

1 - Door outer panel

- ❑ Removing and installing door outer panel
⇒ [page 112](#)

2 - Edge protection

- ❑ Between door outer panel and door inner part.

3 - Bolt

- ❑ Feature: bolt with pointed end and thinner washer.
- ❑ Qty. 4 on lower edge
- ❑ Qty. 1 in rear section of door shoulder
- ❑ 10 Nm

4 - Rear retaining rail

- ❑ Adhesive: -DH 009 100 03-

5 - Bolt

- ❑ Feature: bolt with no pointed end and thicker washer.
- ❑ Qty. 11 on both retaining rails
- ❑ 14 Nm

6 - Door inner part

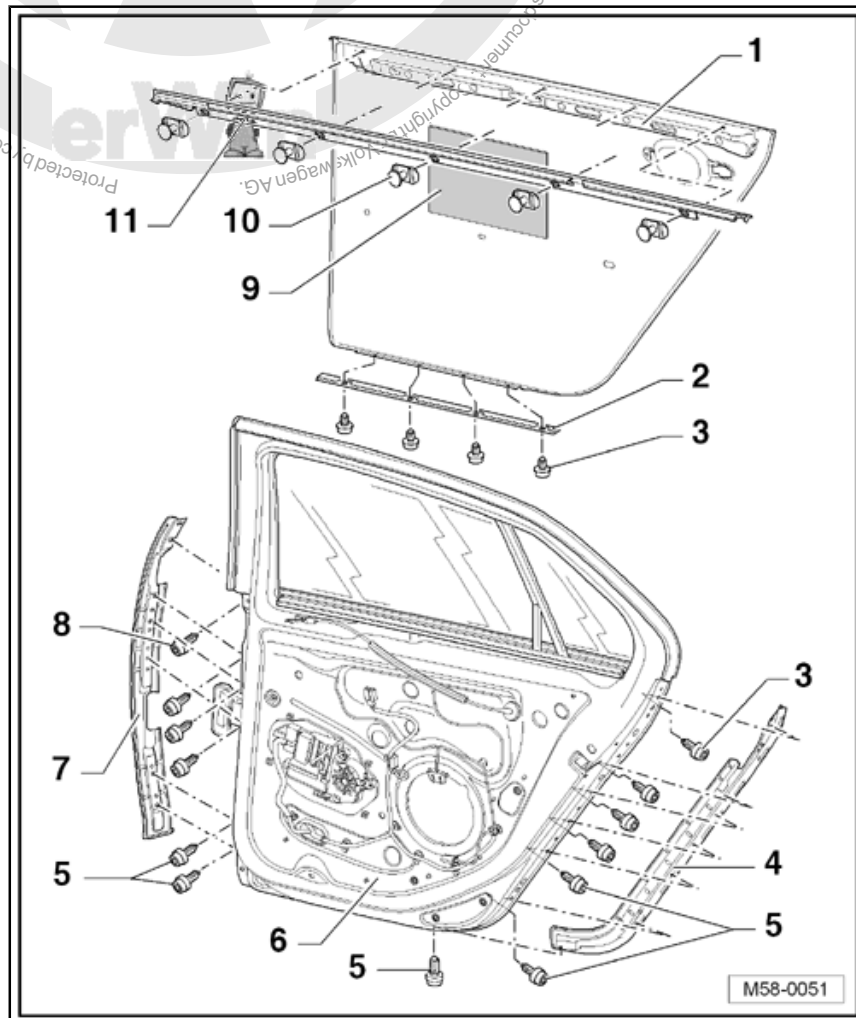
- ❑ Assembly overview
⇒ [page 123](#)

7 - Front retaining rail

- ❑ Adhesive: -DH 009 100 03-

8 - Bolt

- ❑ Feature: bolt with pointed end and thicker washer
- ❑ Qty. 1 in area of front section of door shoulder
- ❑ 10 Nm





9 - Insulation

- Self-adhesive
- To bond, first heat the insulation and then press on firmly

10 - Clip

- Qty. 5

11 - Window slot seal

- Must be fitted before fitting door outer panel.

1.4 Assembly overview - door hinges



Caution

Nut of eccentric bolt -9- should not be loosened under any circumstances. It cannot be tightened again using normal workshop tools.





Note

- ◆ *The right side is shown. The left side is similar.*
- ◆ *The hinge bolts must always be renewed if loosened.*
- ◆ *Hinges are now one piece.*

1 - Door

- Removing and installing
 ⇒ [page 107](#)
- Adjusting ⇒ [page 109](#)

2 - Guide bolt

- 10 Nm

3 - Door hinge with arrester

4 - Multi-point socket head bolt

- 20 Nm + 1/4 turn further
 (90°).
- Always renew after
 loosening

5 - Multi-point socket head bolt

- 20 Nm + 1/4 turn further
 (90°).
- Always renew after
 loosening

6 - Multi-point socket head bolt

- 20 Nm + 1/4 turn further
 (90°).
- Always renew after
 loosening

7 - Multi-point socket head bolt

- 20 Nm + 1/4 turn further
 (90°).
- Always renew after
 loosening

8 - Guide bolt

- 10 Nm

9 - Nut

- For eccentric pin
- Do not loosen
- Serves as a means of adjustment during production only

10 - Door hinge

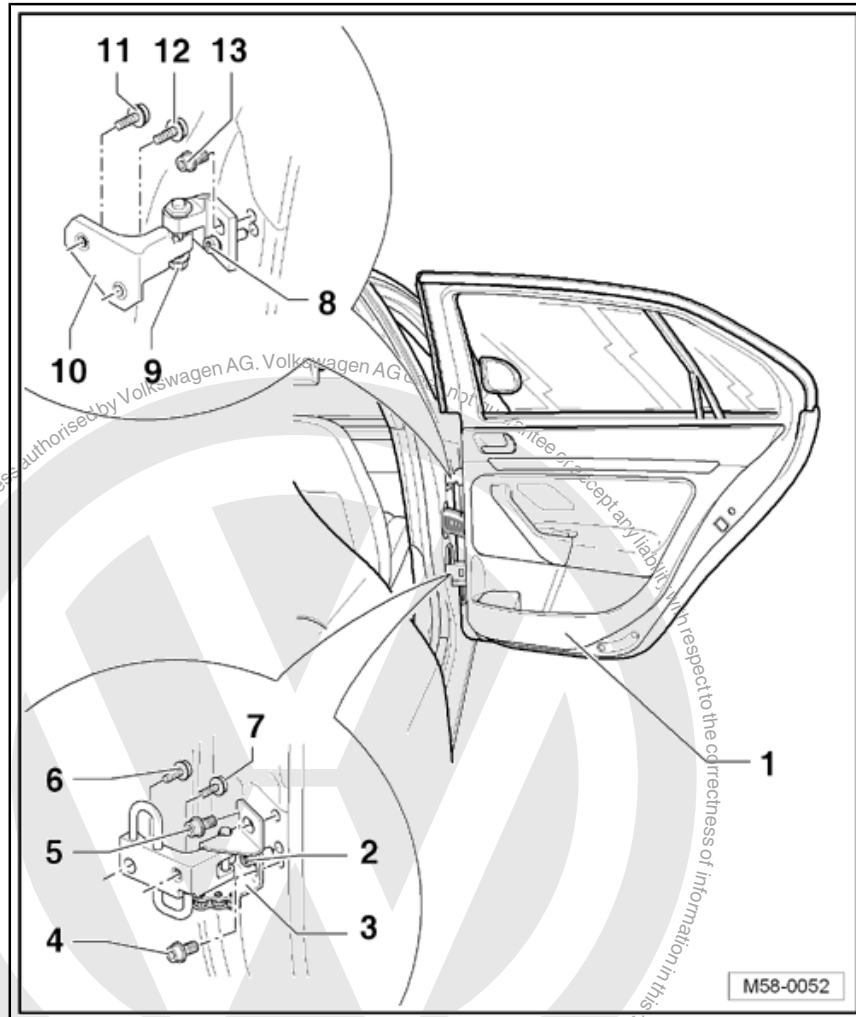
- Hinge no longer comprises of more than one part.

11 - Multi-point socket head bolt

- 20 Nm + 1/4 turn further (90°).
- Always renew after loosening

12 - Multi-point socket head bolt

- 20 Nm + 1/4 turn further (90°).
- Always renew after loosening





13 - Multi-point socket head bolt

- 20 Nm + 1/4 turn further (90°).
- Always renew after loosening

1.5 Removing and installing door



Note

*The removal and installation sequence is only for the right door.
The removal and installation of the left door is similar.*

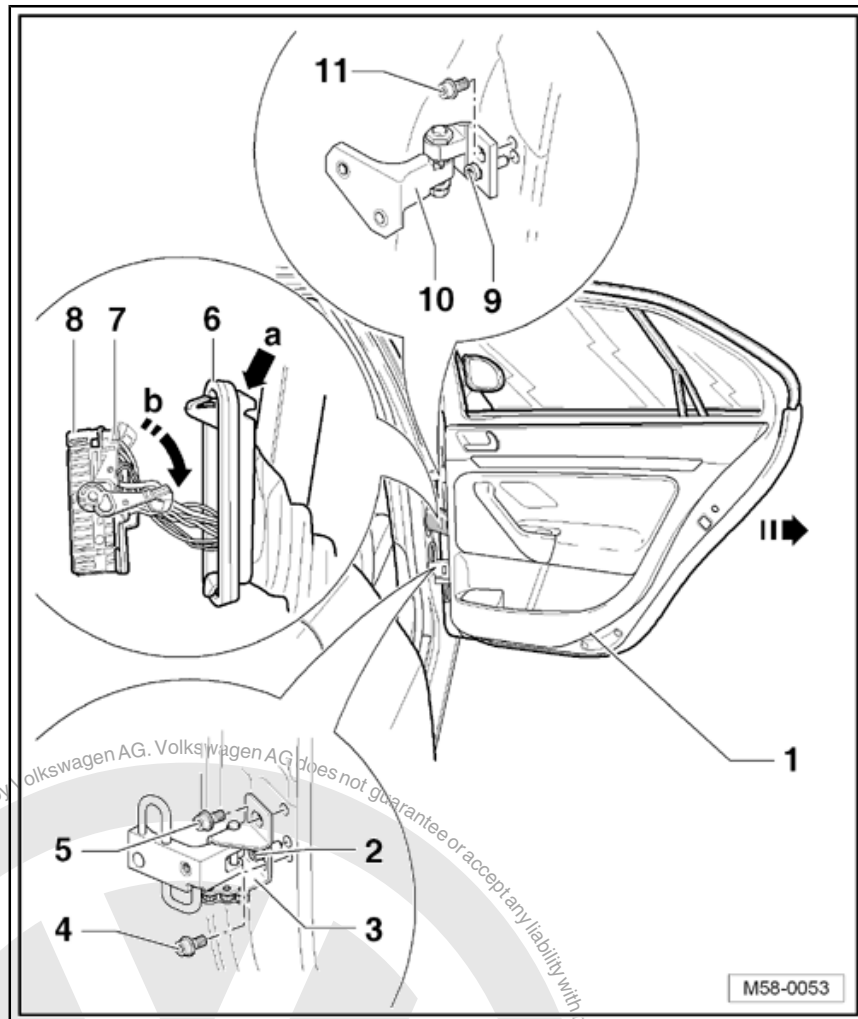
1.5.1 Removing

- Release boots -6- by pressing fastener -arrow a- and pull boots off B-pillar.
- Swing release lever -7- downwards -arrow b- and disconnect electrical connector -8- from coupling station.
- Remove bolts -4-, -5- and -11- from hinge using special door alignment tool -3320- and bit -3320/3- .





- Pull door -1- in direction of -arrow- off guide bolts -2- and -9-.



1.5.2 Installing

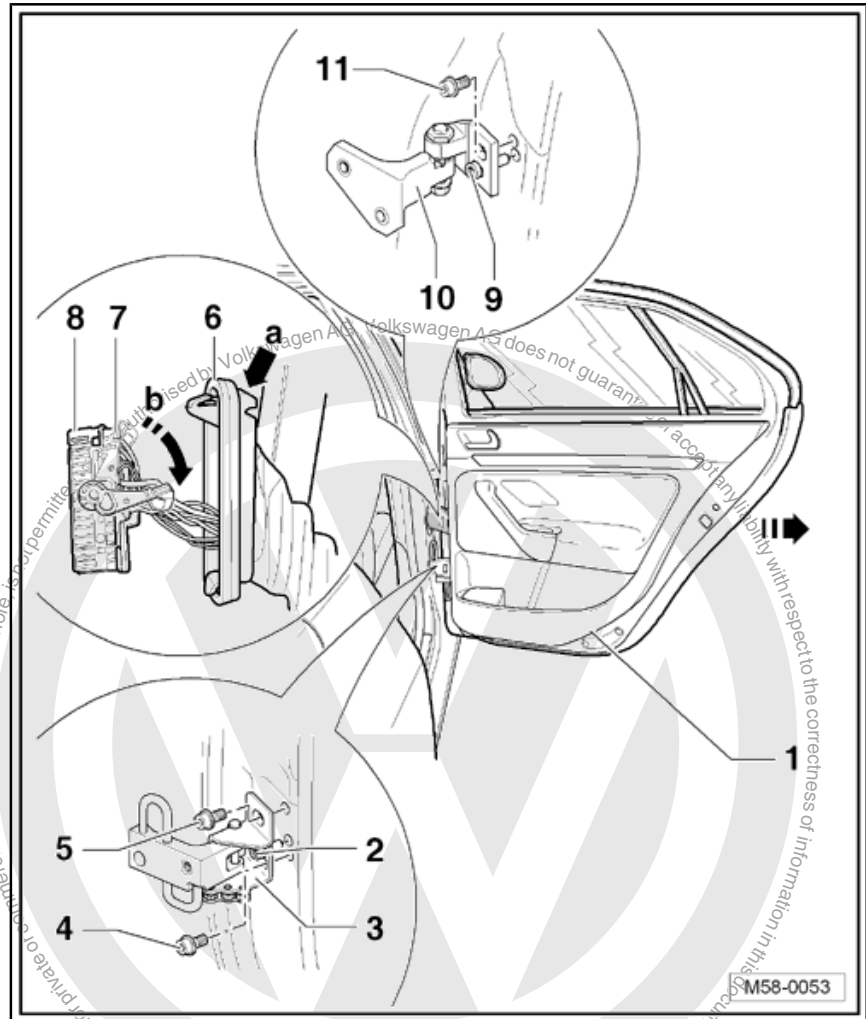
Install in reverse order of removal.

Specified torque for bolts -4-, -5- and -11-: 20 Nm + 1/4 turn further (90°).

Always renew bolts -4-, -5- and -11-.



Observe rear door gap/shut lines → Body Repairs; Rep. Gr. 00 ;
 Body dimensions .



1.6 Adjusting door



Caution

Nut of eccentric bolt -9- should not be loosened under any circumstances. It cannot be tightened again using normal workshop tools.



Note

- ◆ *The door is adjusted correctly if the gaps/shut lines are even all around, the door is not too deep or does not stand proud and all contours align when the door is closed.*
- ◆ *Vehicle must be standing on its wheels when adjustments are performed.*
- ◆ *If the door outer panel has been removed, the door inner part window frame must be adjusted to the roof frame, C-pillar and front door.*



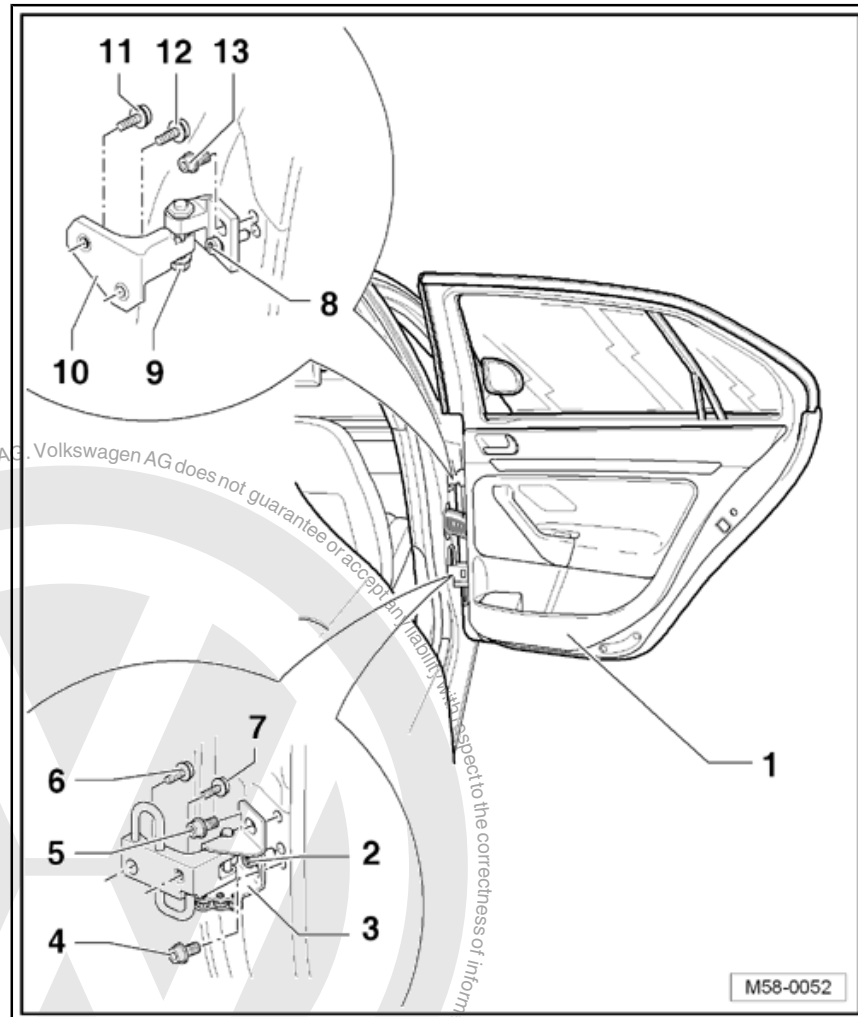
Observe rear door gap/shut lines ⇒ Body Repairs; Rep. Gr. 00 ;
Body dimensions .

To be able to adjust gaps correctly, bolts -6-, -7-, -11- and -12-
must be loosened.

Other measures such as raising the door have no effect. Subse-
quent pressure from above will cause the door to sack again.

Bolts -4-, -5- and -13- and also guide bolts -2- and -8- must be
loosened to correctly adjust the flush fitting of the door.

Use door alignment tool -3320- with bit -3320/3- for this.



1.6.1 Adjusting striker pin



Note

- ◆ The rear door must lock fully when closing without any additional force being required and must not have any play.
- ◆ The rear door must not be pushed up or down as a result of the striker pin adjustment.

The following can be adjusted at the striker pin:

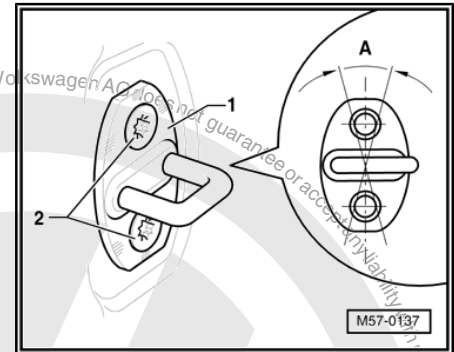


- ◆ When rear door does not align with side panel.
- Loosen striker pin -1- by loosening bolts -2- on side panel.
- Adjust rear door at striker pin -1- so that rear door is flush with rear side panel when shut (wind noise).

Maximum twist tolerance -A- of striker pin: $\pm 3^\circ$

- Retighten bolts -2-.

Specified torque: 20 Nm



WARNING

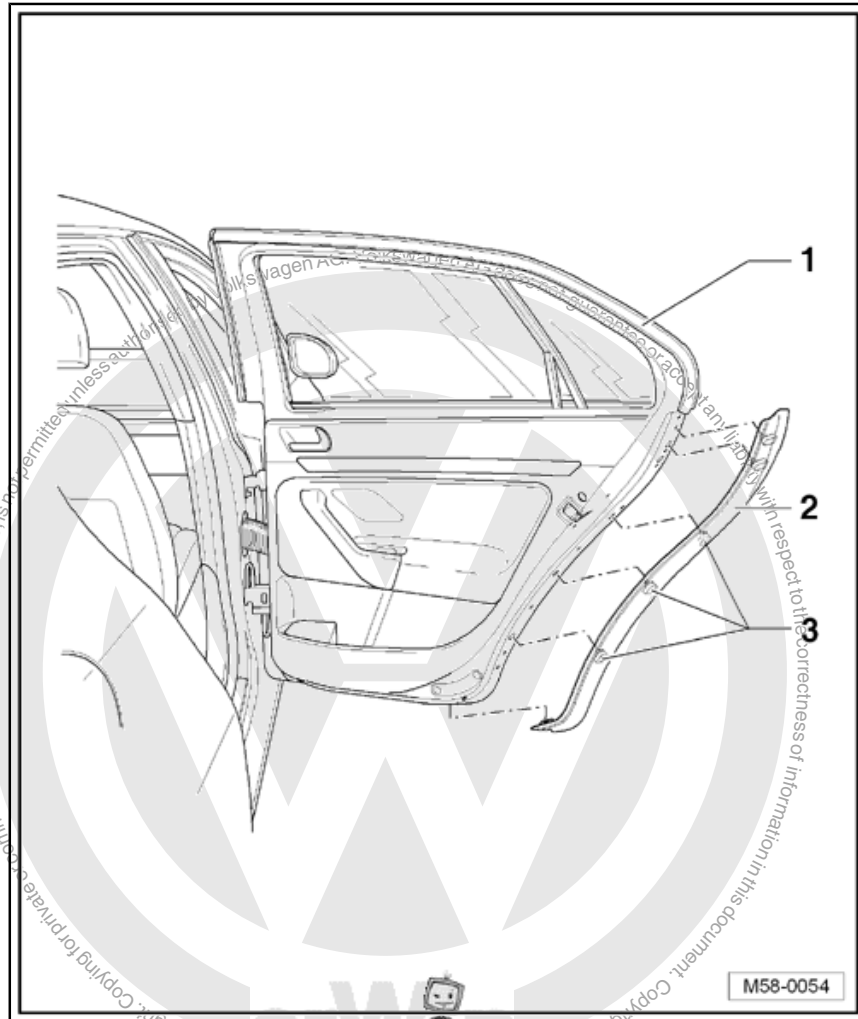
Only use this adjustment to adjust door inwards or outwards, never use for vertical adjustment. Door must not move upwards or downwards when opening and closing. This indicates that the vertical adjustment is incorrect.



1.7 Removing and installing outer panel on door

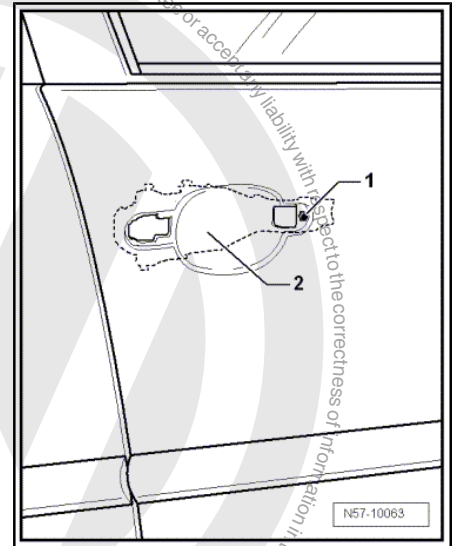
1.7.1 Removing

- Prise out clips -3-, starting at bottom of door -1-, and remove rear cover -2-.

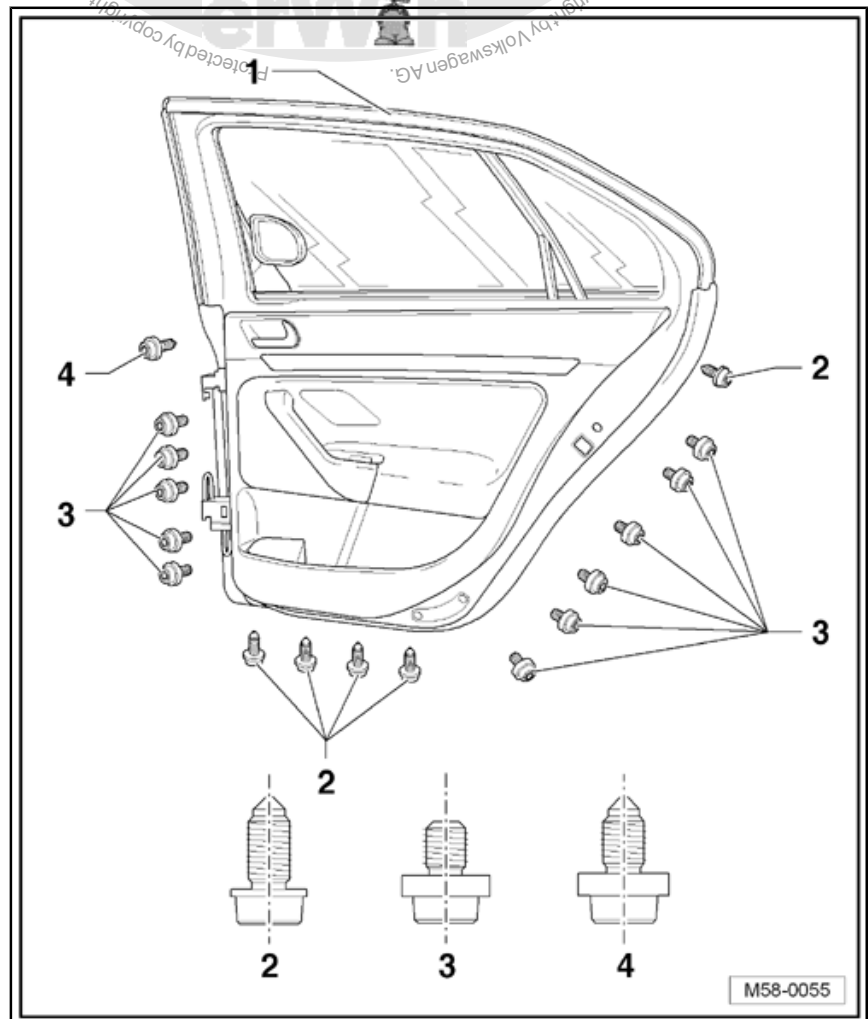




- Remove housing ⇒ [page 124](#) .
- Remove door handle ⇒ [page 125](#) .
- Remove bolt -1- from bearing bracket -2- which is located behind door outer panel.



- Remove all bolts -2-, -3- and -4-.
- Carefully remove door outer panel.





1.7.2 Installing



Caution

Bolts of different types are used to secure outer panel of door. If these are fitted in the wrong positions, the outer panel for the door will be damaged.

- Carefully position outer panel on door.
- Insert all bolts -2-, -3- and -4-.

Observe correct usage for the different types of bolts.

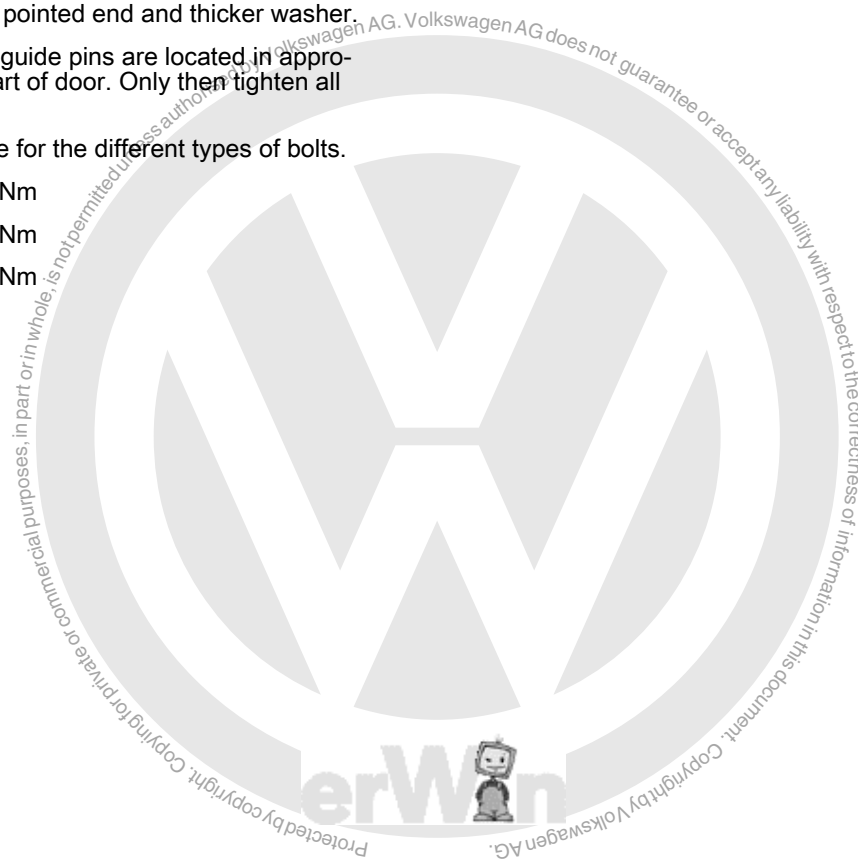
- ◆ Feature for bolt -2-: bolt with pointed end and thinner washer
- ◆ Feature for bolt -3-: bolt with no pointed end but with thicker washer.
- ◆ Feature for bolt -4-: bolt with pointed end and thicker washer.
- Check whether retaining rail guide pins are located in appropriate guide holes in inner part of door. Only then tighten all bolts -2-, -3- and -4-.

Observe correct specified torque for the different types of bolts.

Specified torque for bolt -2-: 10 Nm

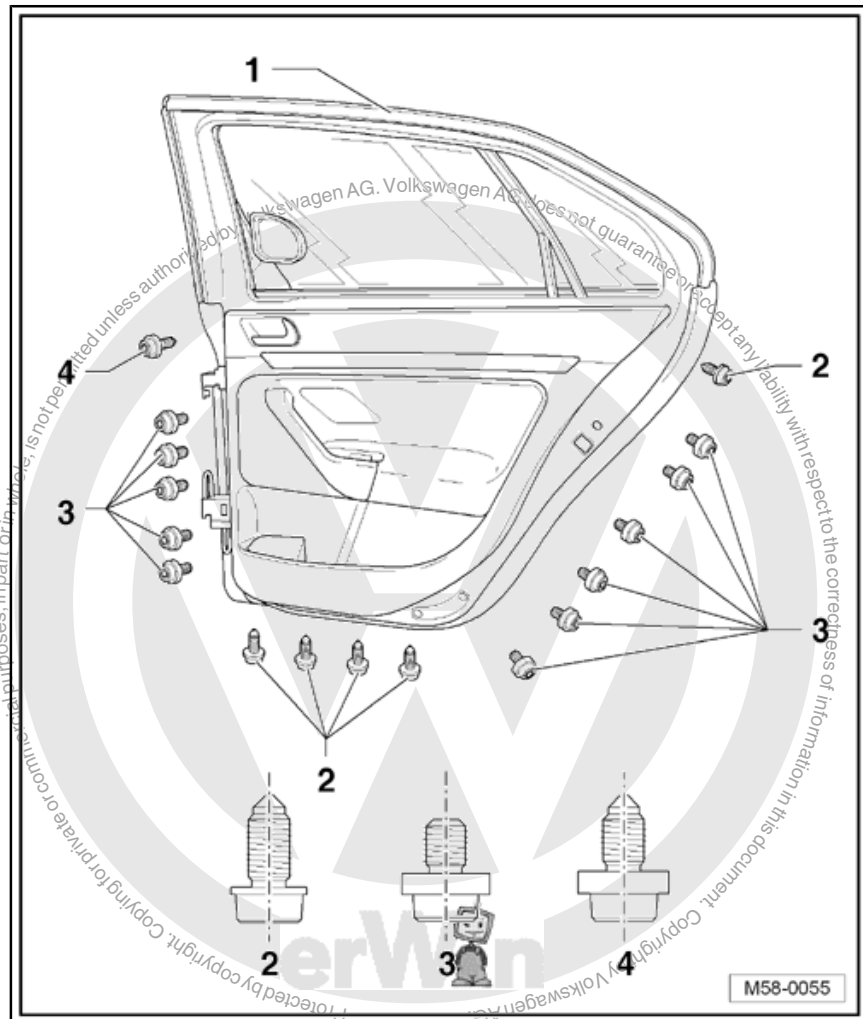
Specified torque for bolt -3-: 14 Nm

Specified torque for bolt -4-: 10 Nm





Further installation is performed in reverse order of removal



1.8 Installing new outer panel on door



Caution

Bolts of different types are used to secure outer panel of door. If these are fitted in the wrong positions, the outer panel for the door will be damaged.



Note

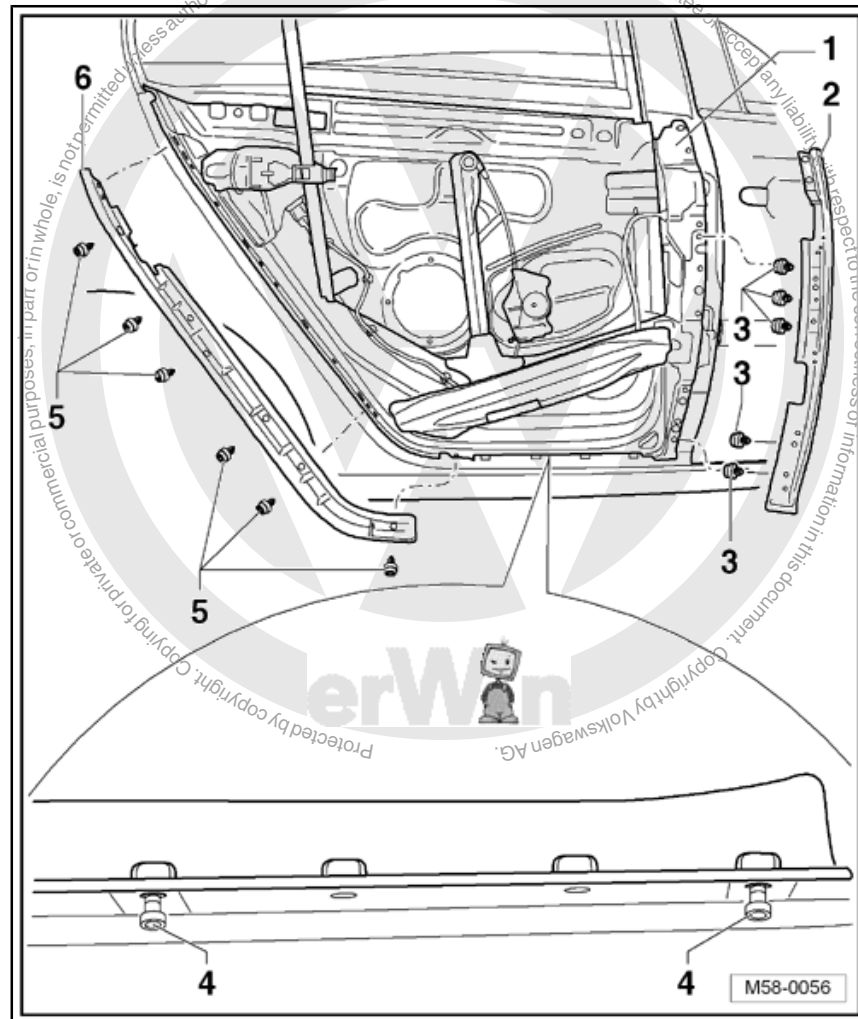
Observe section preparing door outer panel for bonding ⇒ [page 121](#)

- The old (damaged) outer panel with retaining rails is removed ⇒ [page 112](#) .
- Install front -2- and rear -6- retaining rails on inner part of door -1-. Use "bolt with no point but with thicker washer" for this.

Specified torque for bolts -3- and -5-: 14 Nm



- Fit two guide bolts -4- in lower edge of door inner part -1-



The painted outer panel for the door is first offered up without bonding agent.

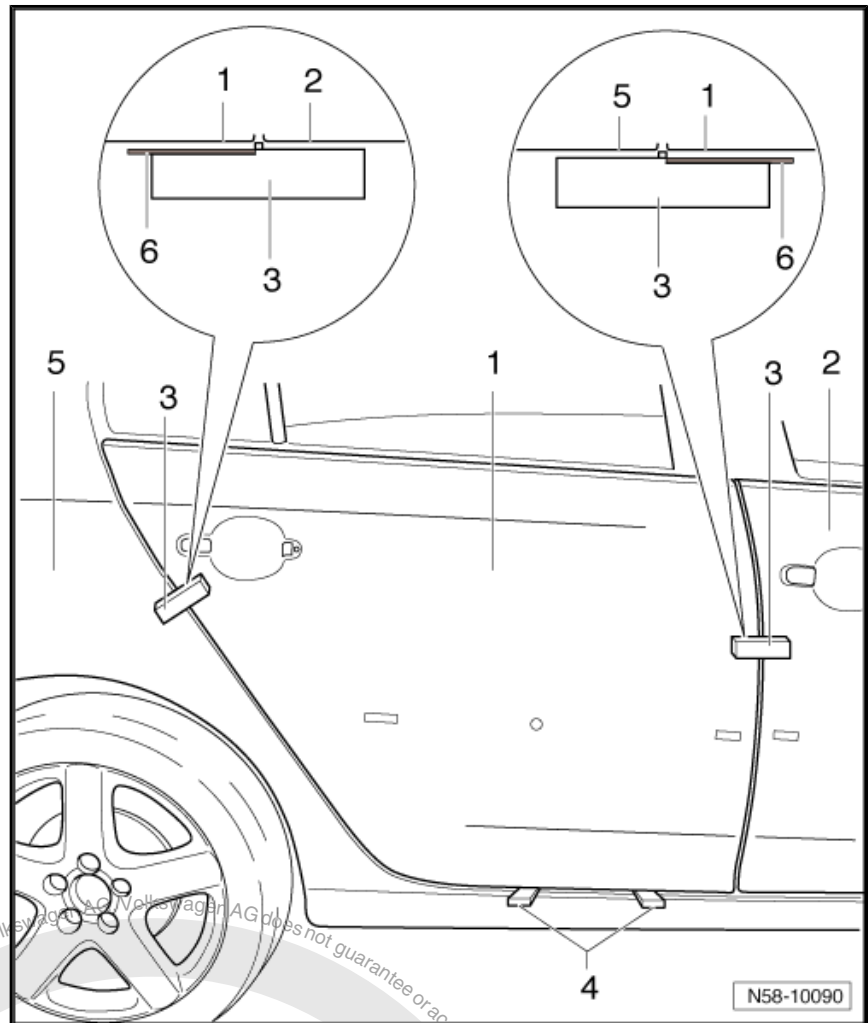
Assembly blocks -3- from assembly tool set -T10237- are required when fitting outer panel on door. A strip of double-sided adhesive tape -6- is applied on the side with a cut-out step. The pin has the minimum dimension for the gap width. The surface with no adhesive tape is brought into position on the adjacent panel.

- Stick the assembly block -3- on outer panel -1- of the door.
- Guide outer panel -1- over guide bolts on lower edge of door inner part.
- Adjust gap to sill and height of outer panel on door using wedges -4- from assembly tool set -T10237- .
- Lay door outer panel -1- with assembly blocks on adjacent panels -2- and -5-.
- Check gap/shut lines using setting gauge -3371- => Body Repairs; Rep. Gr. 00 ; Body dimensions .

If gap dimension cannot be adjusted further, door inner part must be adjusted => [page 123](#)



- Remove door outer panel again.

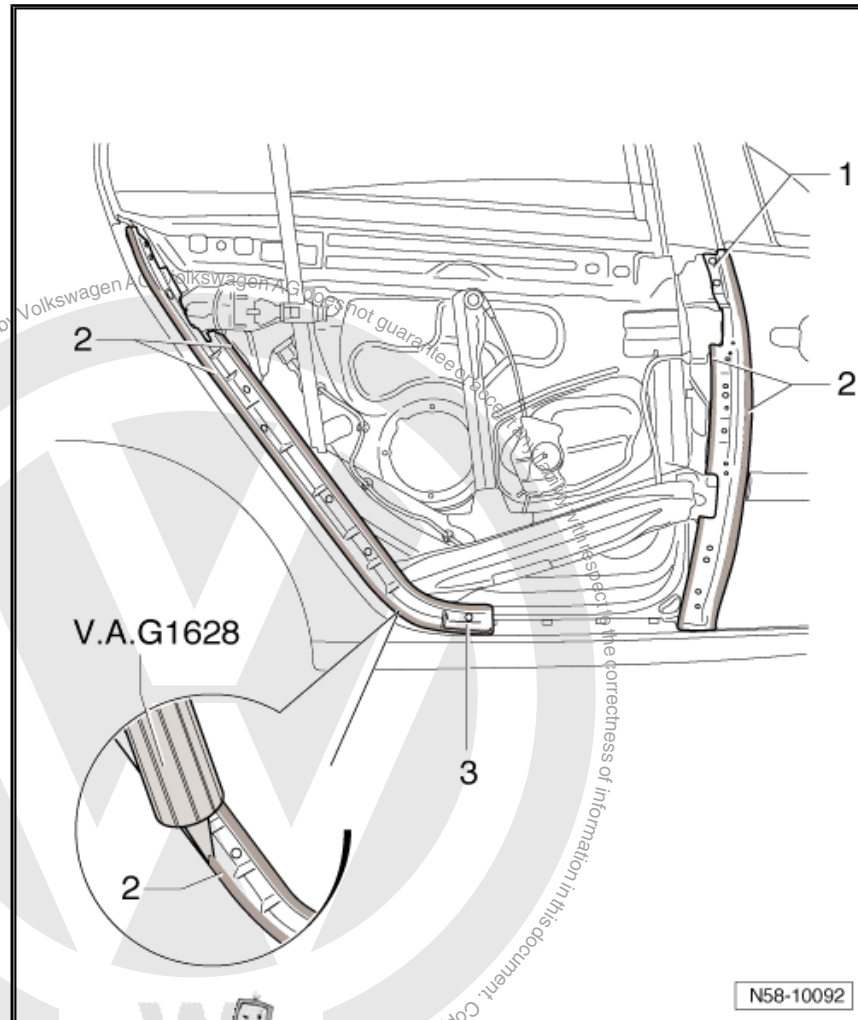


- Apply a bead of adhesive material -2- using cartridge gun - V.A.G 1628- to front -1- and rear -3- retaining rails.



Note

Adhesive -DA 004 600 A2- can be used for this procedure and is applied with double cartridge gun -VAS 5237-. There is no requirement to preheat.



Fixing blocks -2- from assembly tool set -T10237- are required when fitting outer panel on door. Two strips of double-sided adhesive tape -5- are applied on the contact surface.

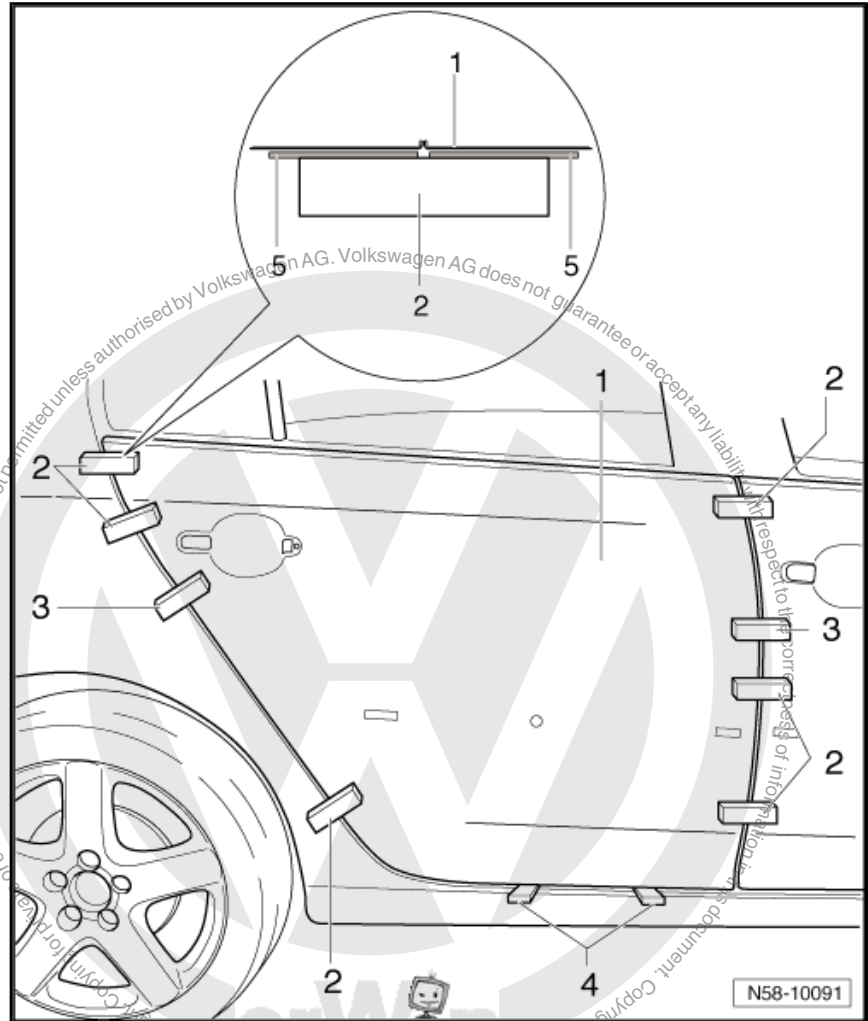
- Guide outer panel -1- over guide bolts on lower edge of door inner part.
- Bring outer panel with assembly blocks -3- into contact with surrounding components.
- Adjust gap to sill and height of outer panel on door using wedges -4- from assembly tool set.
- Check gap/shut line using setting gauge -3371- ⇒ Body Repairs; Rep. Gr. 00 ; Body dimensions .
- Bond short fixing blocks -2- evenly on the replacement door and the adjacent components.



Note

A waiting period of 90 or 180 minutes must be observed before performing further work on the bonded door ⇒ [page 121](#) .

- Further installation is performed in reverse order of removal ⇒ [page 114](#) .



1.9 Removing and installing retaining rail on door outer panel

1.9.1 Removing retaining rail



Caution

The following work steps are to be carried out with great care. As outer panel is to be reused, dents and scratches must be avoided.

When cutting through the adhesive bead, always hold the retaining rail and outer panel together as shown in the illustration. If this is not done, the outer panel will come away from the retaining rail, thus rendering it useless.

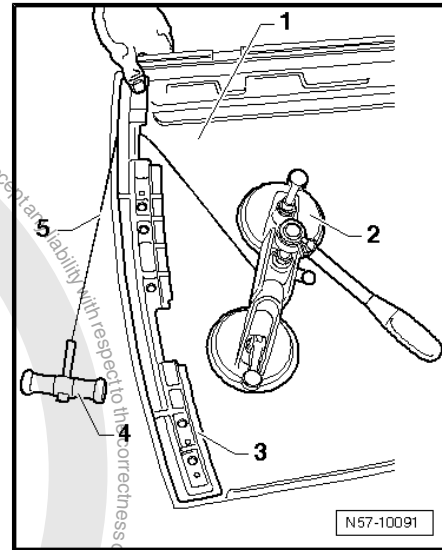


Note

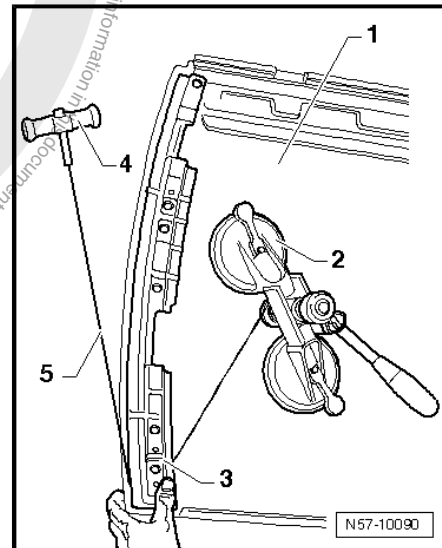
The following procedures should be carried out with the aid of an assistant.



- Door outer panel with retaining rails is removed => [page 112](#) .
- Place door outer panel -1- on firm surface and protect door outer panel against scratches.
- Secure reel -2- on outer panel of door -1-.
- Secure cord -5- on reel -2- and counterhold -4-.
- Hold retaining rail and outer panel of door together securely when cutting through adhesive bead.
- Cut through adhesive bead of retaining rail -3- and outer panel -1- with cord up to just over half way.



- Once adhesive bead has been cut through to just over half way in step one, turn reel -2- around and insert cord -5- in side still bonded.
- Hold retaining rail -3- and outer panel -1- of door together securely when cutting through adhesive bead further.
- Cut through second half of adhesive bead.



1.9.2 Installing retaining rail

- Using extreme care, cut away remainder of adhesive bead to the utmost minimum on outer panel of door, ensuring that no damage is caused to the paintwork.
- Remainder of procedure is described in chapter entitled "Installing new outer panel for door" => [page 115](#) .



Note

Observe also "instructions for bonding in new door outer panel" when installing a new retaining rail.

- In place of removed retaining rail, install a new retaining rail on the door inner part.
- Apply adhesive to new retaining rail
- Secure outer panel for door to lower edge and fitted retaining rail.



- Secure outer panel for door on new retaining rail with fixing blocks from assembly tool set -T10237- and double-sided adhesive tape.

1.10 Installation notes for bonding a new outer panel on door



Note

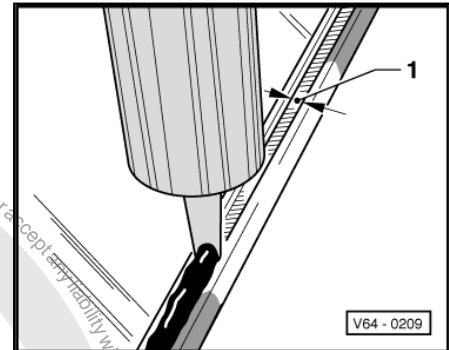
- ◆ *If front and rear door outer panels must be renewed, they must be done at the same time. When bonding-in both door outer panels, the long fixing block from assembly tool set -T10237- is stuck on for the transition from front door outer panel to rear door outer panel.*
 - ◆ *If door outer panel CDP coating is damaged on inside in area to be bonded or it has been painted, this area must be primed with glass/paint primer -D 009 200 02- .*
 - ◆ *The 1K glass adhesive -DH 009 100 01- must be heated in cartridge heater -V.A.G 1939 A- for 20 minutes.*
 - ◆ *Adhesive -DA 004 600 A2- can be used for this procedure and is applied with double cartridge gun -VAS 5237- . There is no requirement to preheat.*
- Clean contact surfaces on retaining rails thoroughly using cleaning solution -D 009 401 04- .
 - Apply adhesive material to appropriate surfaces at right angles to retaining rail using cartridge gun -V.A.G 1628- .



Caution

Door outer panel must be installed within 10 minutes, or adhesive properties of adhesive will be impaired.

- ◆ With assistance of both assembly blocks from assembly tool set -T10237- , place outer panel for door on retaining rails and align with wedges and setting gauge -3371- and press contact surfaces of assembly blocks onto adjacent components.
- ◆ Secure door with fixing blocks from assembly tool set -T10237- during curing period.
- ◆ After installation door outer panel must align with other components and gaps must be even.
- ◆ If adhesive bead is too thick and adhesive exudes between retaining rail and door outer panel, excess adhesive must be removed.



1.11 Minimum curing period



WARNING

Special standards must be adhered to when replacing bonded outer panels for door. One of these standards is, for example, that a freshly bonded door outer panel must comply with the safety requirements following the minimum prescribed curing period, even in an accident.



For door outer panel: curing period for 1K adhesive -DH 009 100 01- is 90 minutes and for 2K adhesive -DA 004 600 A2- 180 minutes.

What is meant by minimum curing period is, time from bonding outer panel on door to time vehicle is taken into use or further work is carried out. During this time, the vehicle must stand on a level surface at room temperature (at least 15 °C).



WARNING

Vehicle is safe to use only after the curing period is completed.

1.12 Cleaning off excess adhesive sealing material

- Use of adhesive remover -D 002 000 10- as a cleaning solution is recommended. Observe the appropriate safety precautions when performing this work.



Caution

When cleaning vehicle the door outer panel just bonded-in must not be moved.

- First clean painted surface as much as possible using a dry cloth. Remove residual excess with adhesive remover -D 002 000 10-.
- Cleaning plastic trim: allow adhesive sealant to cure (approx. one hour) and then peel off.



1.13 Assembly overview - door inner part



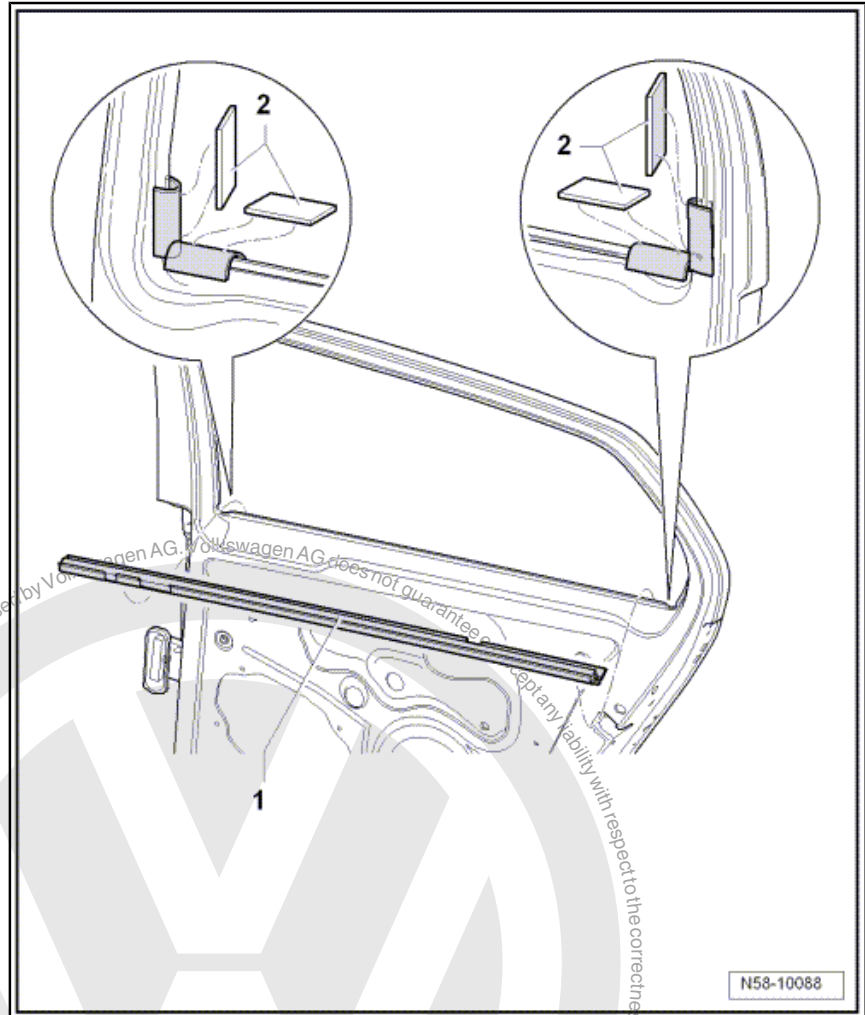
Note

The right side is shown. The left side is similar.

1 - Window slot seal

2 - Insulation

- Qty. 4
- 20 mm x 40 mm, commercially available textile adhesive tape.



N58-10088



1.14 Assembly overview - door handle and door lock



Note

The right side is shown. The left side is similar.

1 - Door lock

- ❑ Removing and installing
 ⇒ [page 129](#)

2 - Cable

- ❑ To lock release from interior door handle.

3 - Cover

- ❑ Not supplied with door lock.
- ❑ Secured on door lock with locking lugs

4 - Bearing bracket

- ❑ Removing ⇒ [page 127](#)

5 - Torx bolt

- ❑ 4.5 Nm

6 - Base

- ❑ Part of door handle.

7 - Door handle with base

- ❑ Removing and installing
 ⇒ [page 125](#)

8 - Cover

- ❑ For housing
- ❑ Secured on housing with locking lugs

9 - Housing

- ❑ Removing and installing
 ⇒ [page 124](#)

10 - Base

11 - Torx bolt

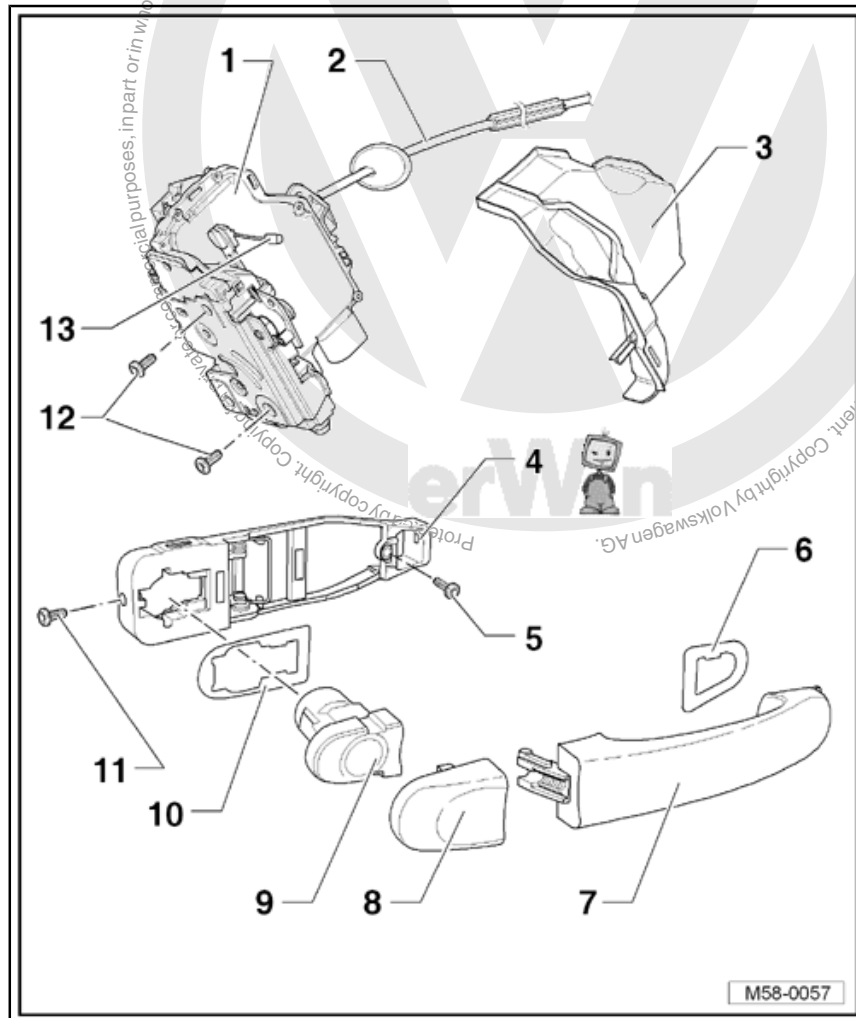
- ❑ For locking housing ⇒ [Item 9 \(page 150\)](#)

12 - Bolt

- ❑ 18 Nm

13 - Cable

- ❑ To release lock from door exterior handle.



1.15 Removing and installing housing



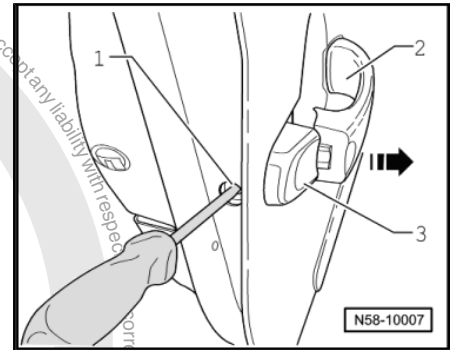
Note

Removal and installation sequence is only for right housing. Removal and installation of left housing is similar.



1.15.1 Removing

- Prise rear cover (⇒ [page 112](#) Fig. M58-0054, item 2) off rear door.
- Lever out caps in front of bolts -1-.
- Pull door handle -2- in direction of -arrow- and unbolt bolt -1- onto stop using socket wrench -T10072- .
- Pull housing -3- out of door handle bearing bracket at right angles to door.



1.15.2 Installing

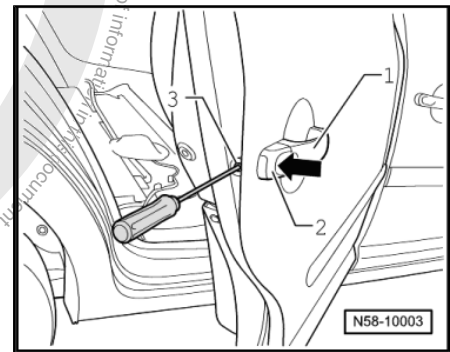
- Fit housing -2- in door handle -1- bearing bracket at right angles -arrow-.
- Door handle -1- must rest only lightly against door panel.
- Now tighten bolt -3- in bearing bracket using socket wrench -T10072-.

The door handle engages in housing again with an audible click.



Note

*During installation, housing must be pressed against door panel.
The door handle just rests lightly against the door panel.*



Further installation is performed in reverse order of removal.

Then always check function while door is still open, as an incorrectly fitted and adjusted Bowden cable cannot open the door.

1.16 Removing and installing door handle

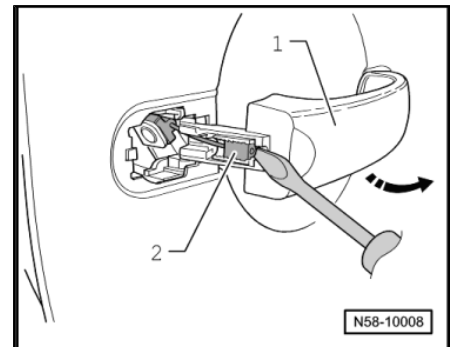


Note

The removal and installation sequence is only for the right door handle. The removal and installation of the left door handle is similar.

1.16.1 Removing

- Remove housing ⇒ [page 124](#) .
- Lever clip -2- out of door handle -1-.
- Swivel door handle -1- out of door -arrow-.





1.16.2 Installing

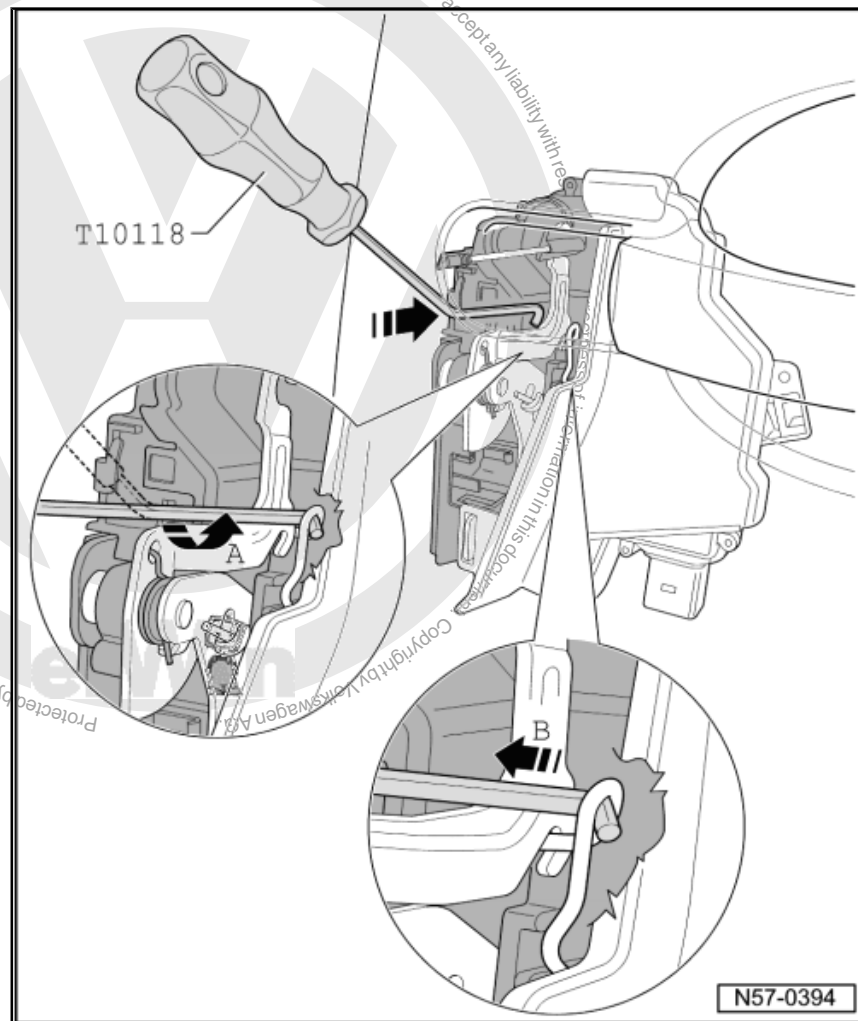
- Guide assembly tool -T10118- into door through opening in door outer panel.
- Use a hand torch to illuminate inside of door for improved visibility.
- Hook assembly tool -T10118- in spring -arrow A-.
- Hook spring onto door lock by pulling assembly tool -T10118- -arrow B-.

The release lever is now secured.



Note

Hooking the spring into the operating lever secures the lock. This prevents incorrect attachment of the Bowden cable to the door handle later.



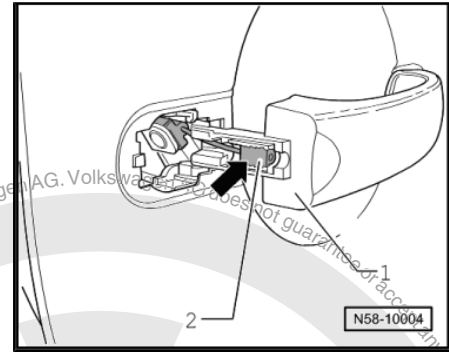


- Swivel door handle -1- into door.
- Pull clip -2- in the panel opening and engage clip in door handle -1- -arrow-.



Note

- ◆ *Press door handle -1- against door panel when assembling.*
 - ◆ *Clip -2- must engage in door handle -1- with a clearly audible click.*
- Install housing ⇒ [page 125](#) .



Then always check function while door is still open, as an incorrectly fitted and adjusted Bowden cable cannot open the door.

1.17 Removing bearing bracket



Note

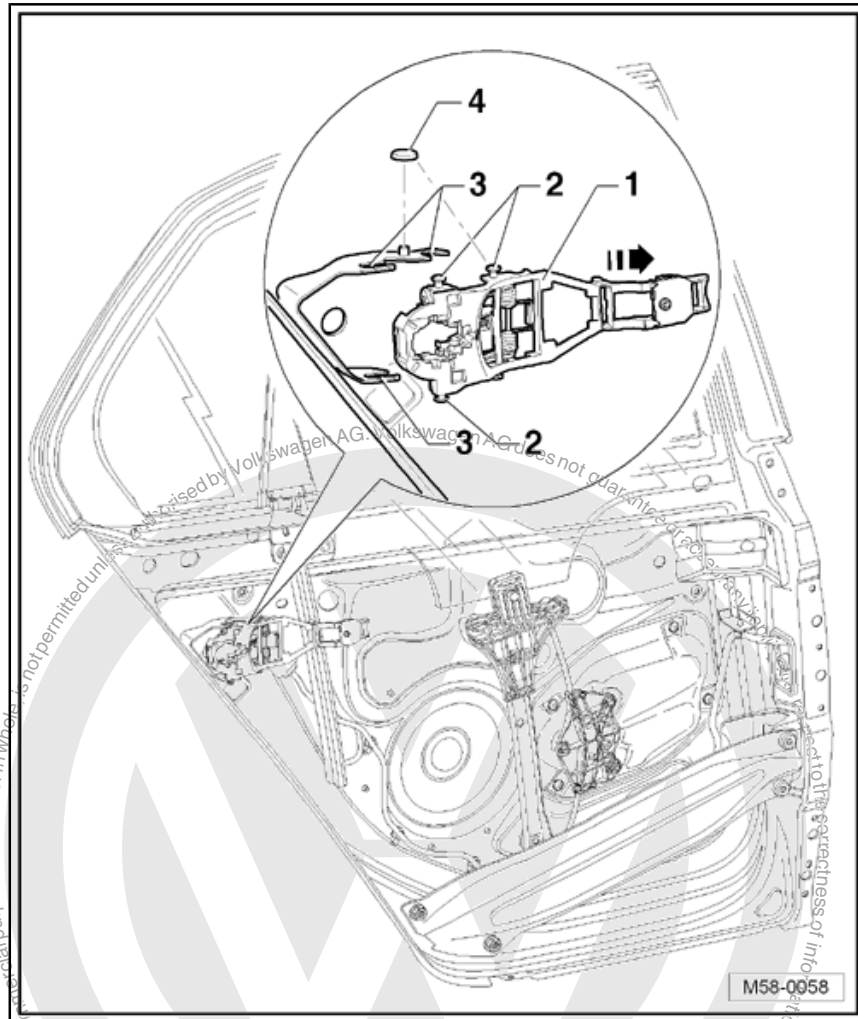
Removal and installation are described only for the right bearing bracket. The removal and installation of the left bearing bracket is similar.

1.17.1 Removing

- Remove housing ⇒ [page 124](#) .
- Remove door handle ⇒ [page 125](#) .
- Remove door outer panel ⇒ [page 112](#) .
- Pull retaining rubber -4- off upwards from guide pins and retaining pins on mounting.



- Pull bearing bracket -1- with guide pins -2- out of mountings -3-.

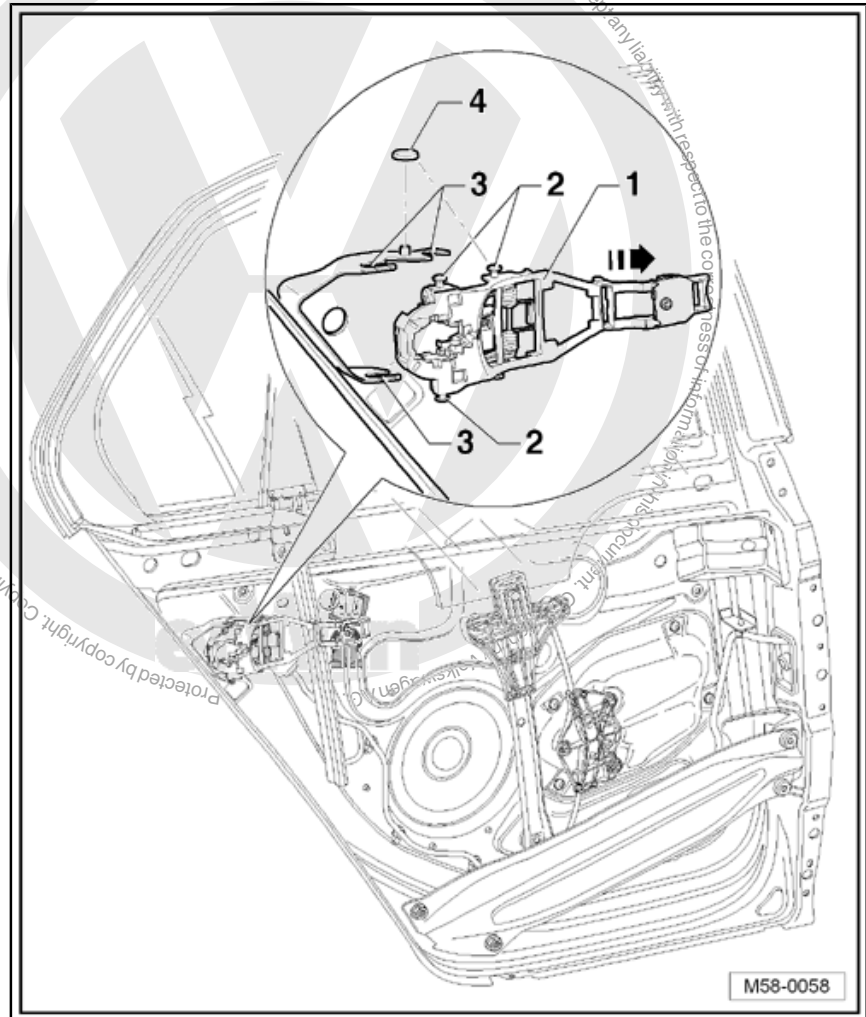


1.17.2 Installing

- Push bearing bracket -1- with guide pins -2- in mountings -3-.
- Secure retaining rubber -4- to guide pin and retaining pin on mounting.



Further installation is performed in reverse order of removal.



1.18 Removing and installing door lock



Note

The removal and installation sequence is only for the right door lock. The removal and installation of the left door lock is similar.

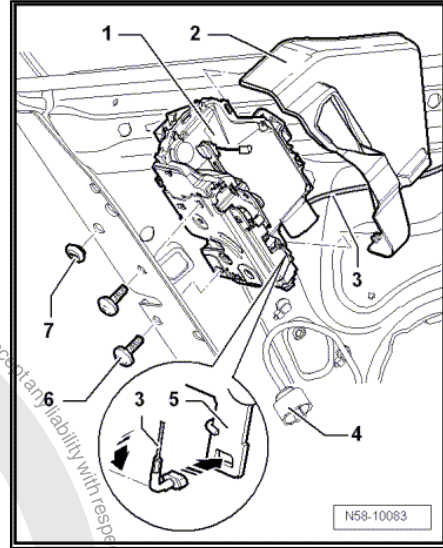
1.18.1 Removing

- Remove housing ⇒ [page 124](#) .
- Remove door handle ⇒ [page 125](#) .
- Remove door outer panel ⇒ [page 112](#) .



- Remove bearing bracket ⇒ [page 127](#) .
- Separate connector -4-.
- Remove bolts -6-.
- Release cable -3- from relay lever -5- and remove door lock -1-.

Cover -2- is not supplied with door lock.



1.18.2 Installing

Install in reverse order of removal.

Specified torque for bolts: 18 Nm.

Then always check function while door is still open, as an incorrectly fitted and adjusted Bowden cable cannot open the door.



1.19 Assembly overview - side impact protection

1 - Side impact protection

- ❑ To remove and install, remove outer panel for door => [page 112](#)

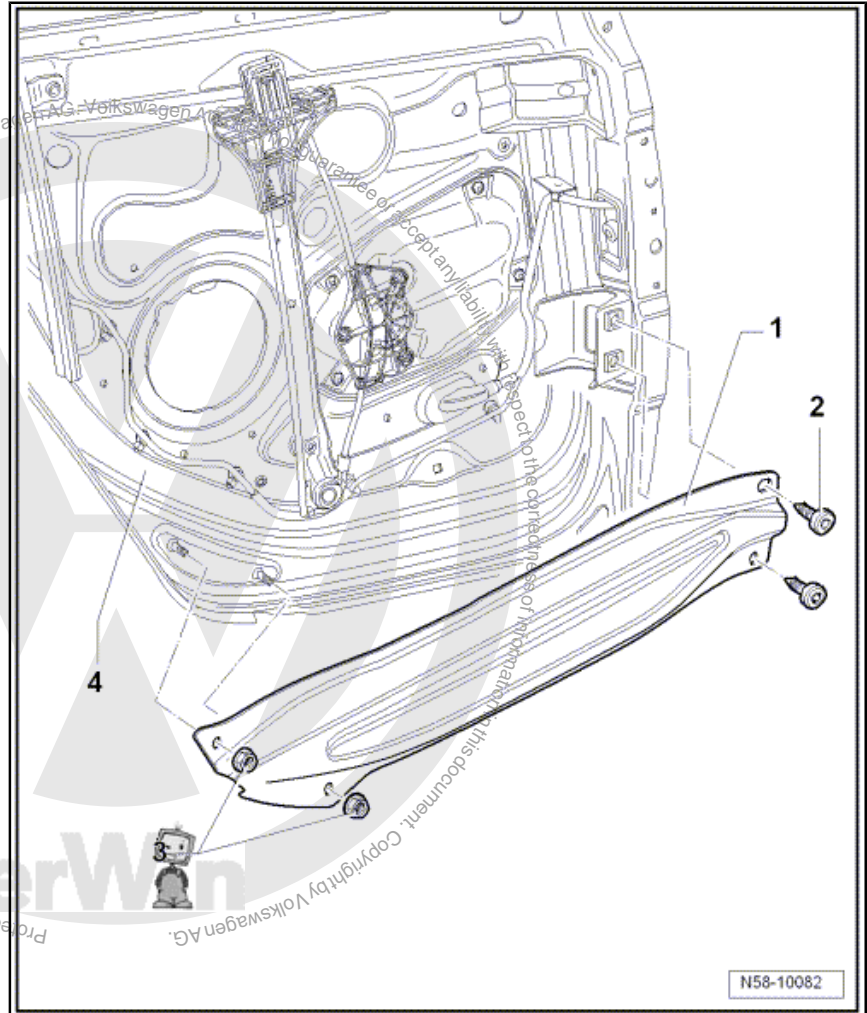
2 - Bolts

- ❑ Qty. 2
- ❑ 20 Nm

3 - Nut

- ❑ Qty. 2
- ❑ 20 Nm

4 - Door inner part



1.20 Door inner seals

During production, a sealant is applied to the door inner seals, which are then placed on the door flange and rolled on.



Note

- ◆ *When seals are removed, the sealant will spread to the inside of the seal and the flanks will be bent out slightly. If the seal is then refitted, a tight seal is not guaranteed.*
- ◆ *Therefore each seal which is removed completely should be replaced by a so-called "tap-on" seal.*
- ◆ *If a seal has been partially removed, squeeze sides of seal together before refitting.*



1.21 Removing and installing door inner seal

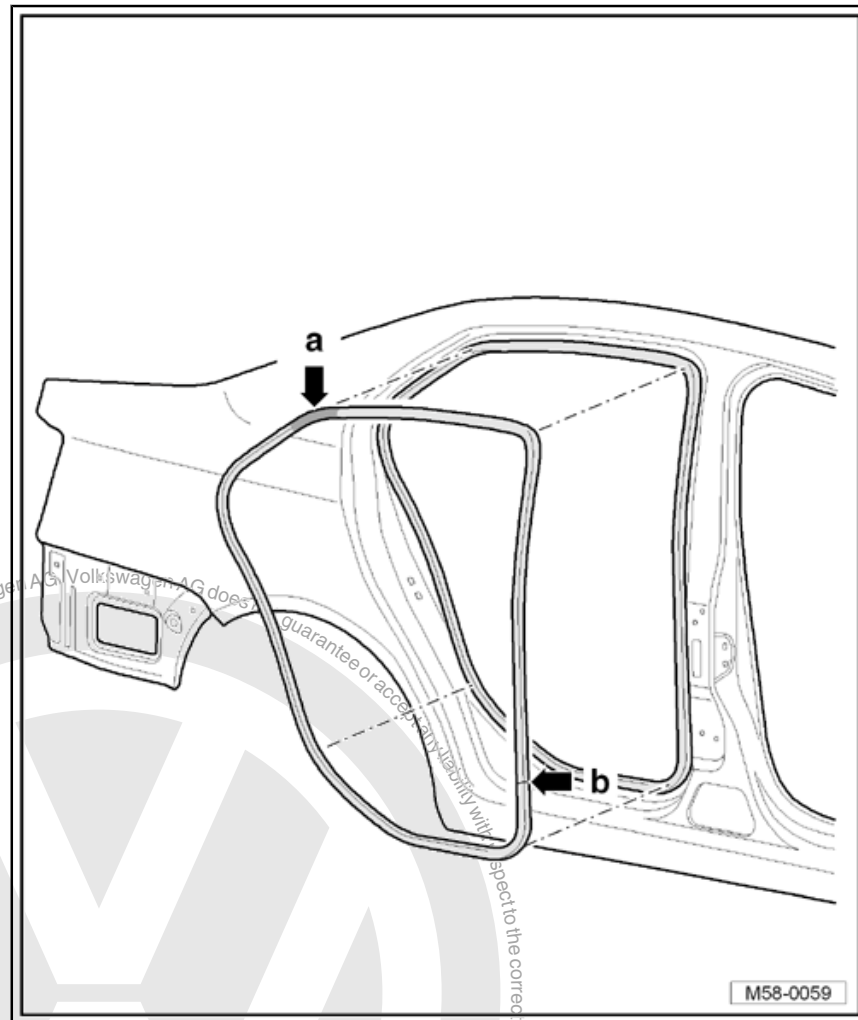


Note

The removal and installation sequence is only for the right door inner seal. The removal and installation of the left door inner seal is similar.

1.21.1 Removing

- Pull door inner seal off body flange.

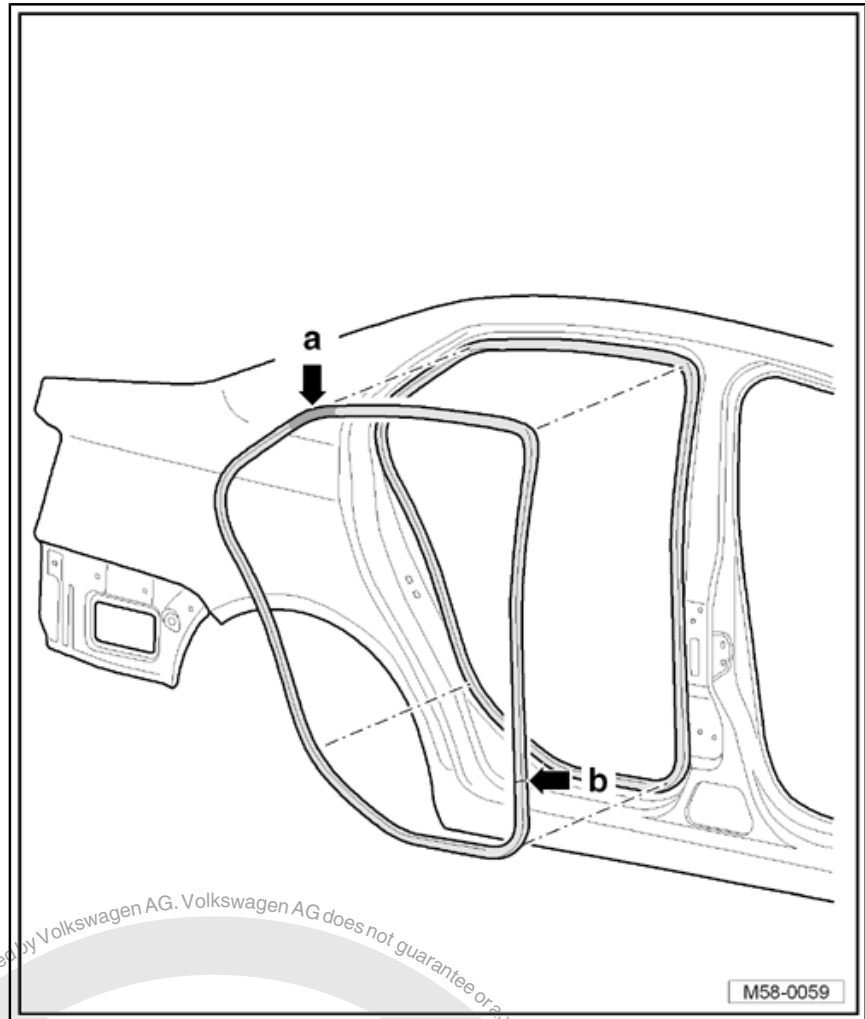


1.21.2 Installing

- Align door inner seal so that the vulcanised point -arrow b- is located at the height of the lower hinge.



- Start installing door inner seal at top radius -arrow a- of door aperture.



1.22 Removing and installing door outer seal



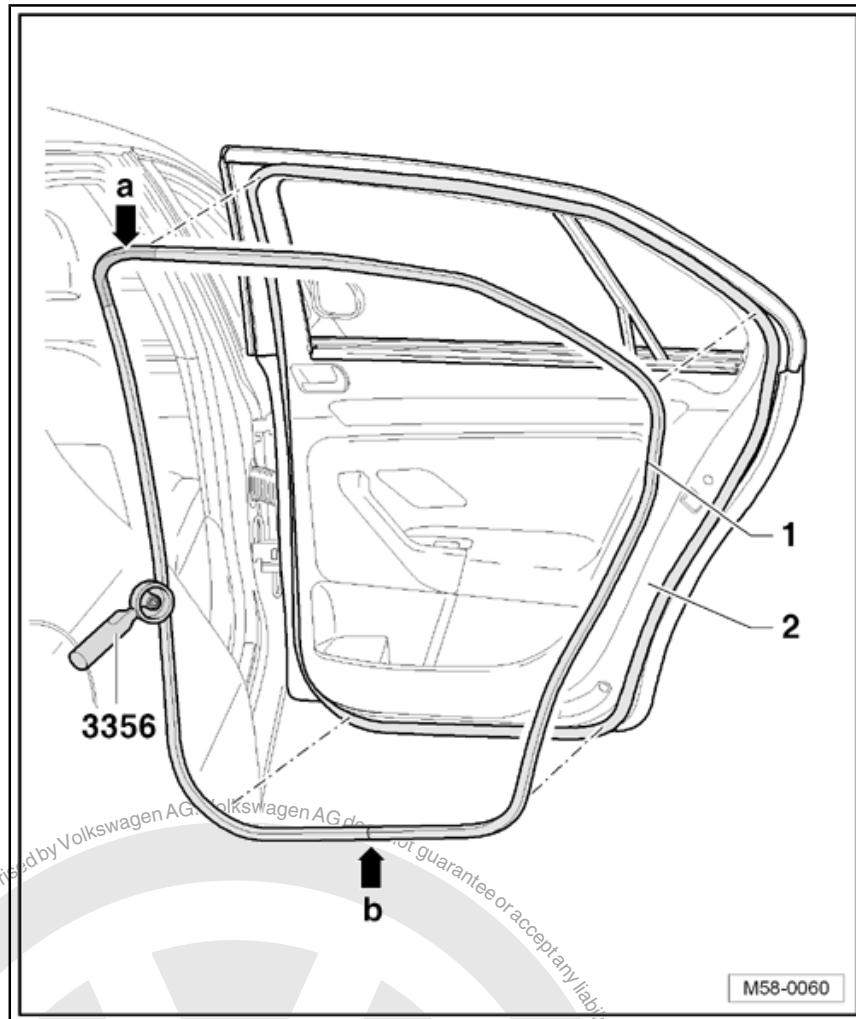
Note

- ◆ *Removal and installation are described only for the right door outer seal. Removal and installation of the left door outer seal are similar.*
- ◆ *Remove protective backing immediately before installation. Working temperature approx. 20 °C.*



1.22.1 Removing

- Pull door outer seal -1- off door -2-.

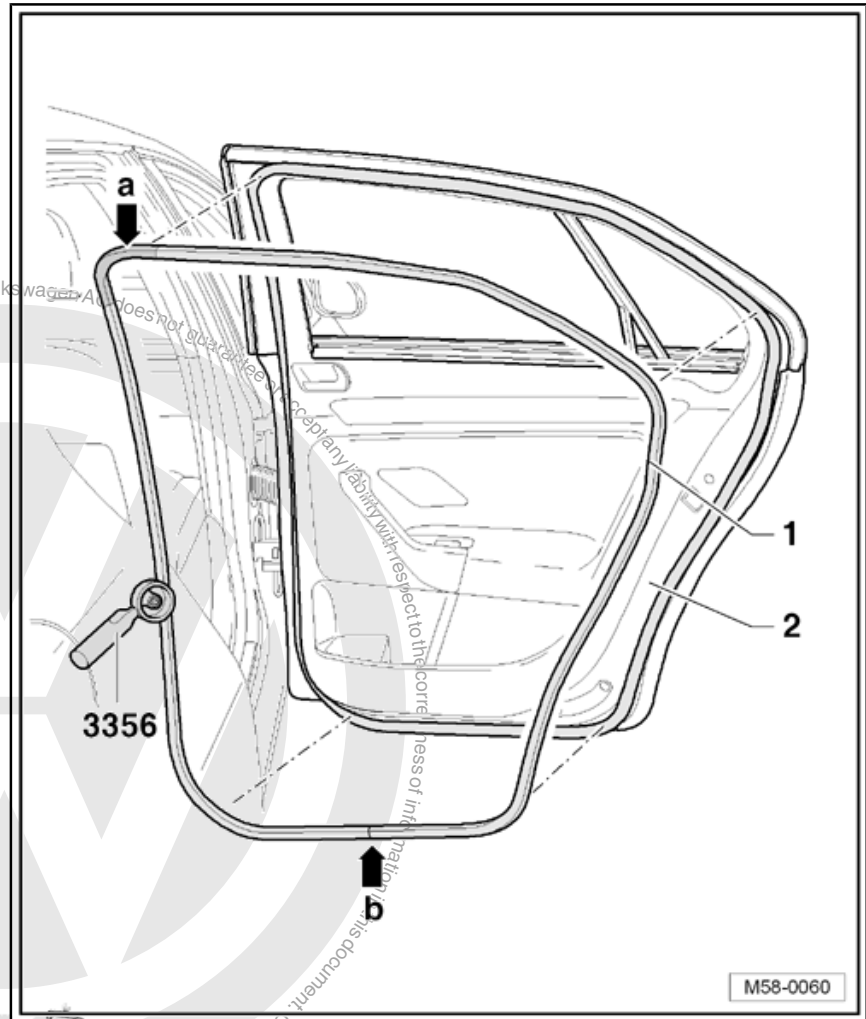


1.22.2 Installing

- Remove adhesive residues with erasure disc of adhesive strip remover -VAS 6349- .
- Immediately before bonding outer seal for door, clean bonding surface thoroughly with adhesive remover -D 002 000 10- .
- Bonding surfaces must be free of dust and grease and there should be no adhesive residues.
- The vulcanised point -arrow b- of door outer seal -1- must be located in centre of sill.



- Pull off protective backing and start fitting seal in upper radius -arrow a- of door. Do not pull door outer seal excessively to avoid stretching seal.



- Press complete bonding surface of seal -3- onto door -1- all around using roller -3356- .
- To do this, push seal aside -arrow a- so that the roller -3356- runs directly over the contact surface of the seal.

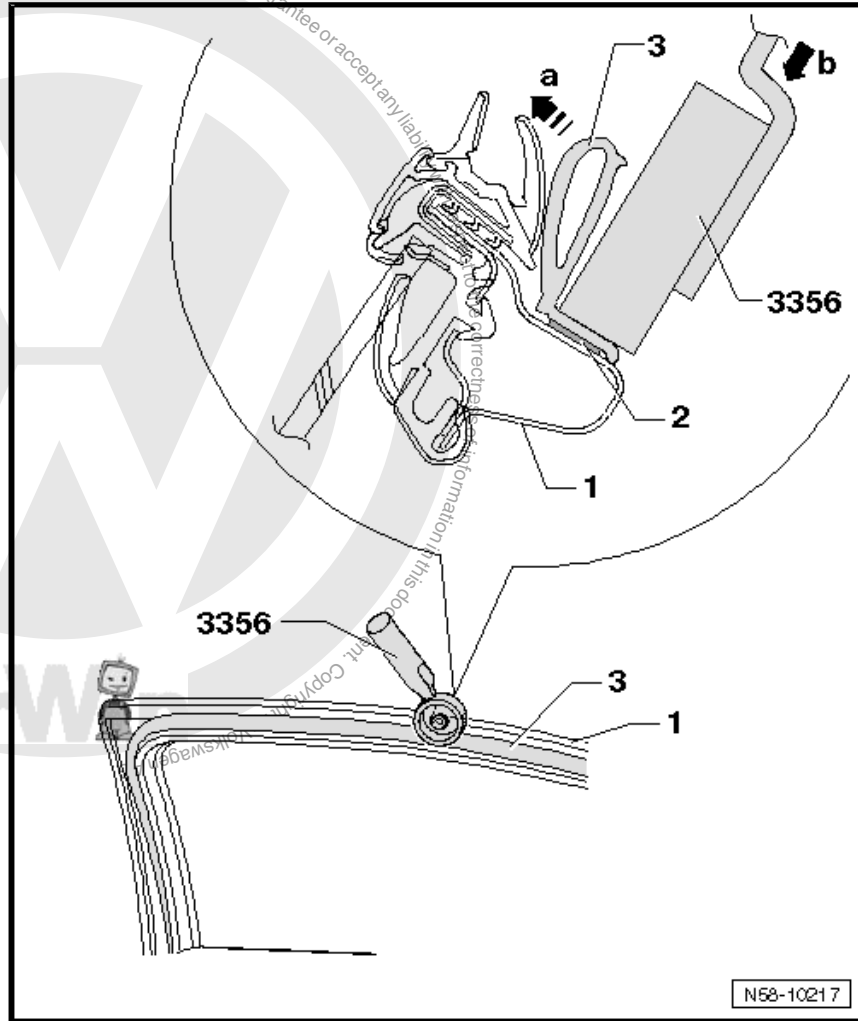
The roller can apply the necessary force -arrow b- to the bonding surface -2- only when procedure described above is followed.

- If the seal has stretched, cut seal to required length and press on butt joint well.
- If seal -3- comes loose in small areas again, press seal on well again using roller -3356- .



Note

The door must not be closed for a period of 2 hours to ensure the door outer seal does not move or loosen again.





2 Rear door (Variant)



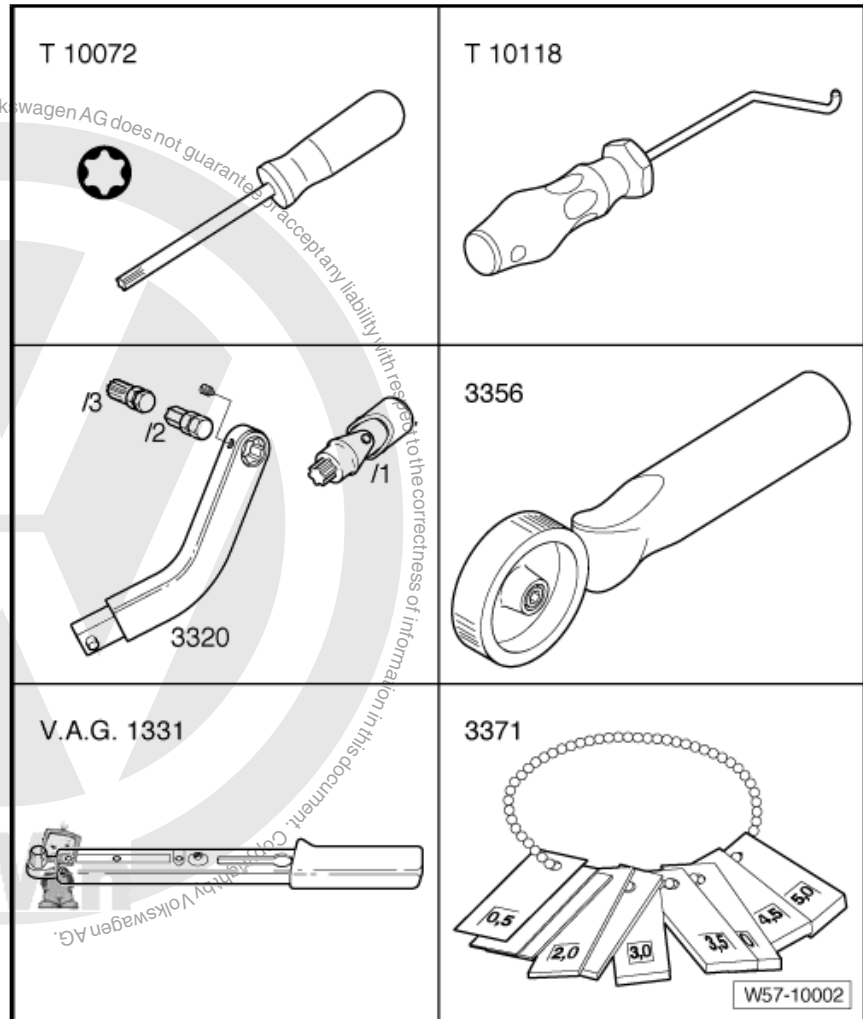
Note

The rear doors of the Variant are of a different concept when compared with the rear doors of the saloon. The door outer panel is no longer removable. The window lifter and the door lock are accessible via a removable assembly carrier.

2.1 Tools

Special tools and workshop equipment required

- ◆ Socket -T10072-
- ◆ Assembly tool -T10118-
- ◆ Door alignment tool -3320- with -3320/1- , -3320/2- and -3320/3-
- ◆ Roller for door insulation foil -3356-
- ◆ Torque wrench -V.A.G 1331-
- ◆ Setting gauge -3371-





2.2 Assembly overview - rear door

1 - Door

- ❑ Removing and installing
⇒ [page 140](#)
- ❑ Adjusting door
⇒ [page 142](#)

2 - Door handle with base

- ❑ Removing and installing
⇒ [page 151](#)

3 - Lock cylinder housing

- ❑ Removing and installing
⇒ [page 151](#)
- ❑ Without cylinder lock.

4 - Door lock

- ❑ The door lock can be removed only together with the assembly carrier
⇒ [Item 5 \(page 138\)](#) .
- ❑ Removing and installing
⇒ [page 155](#)

5 - Assembly carrier

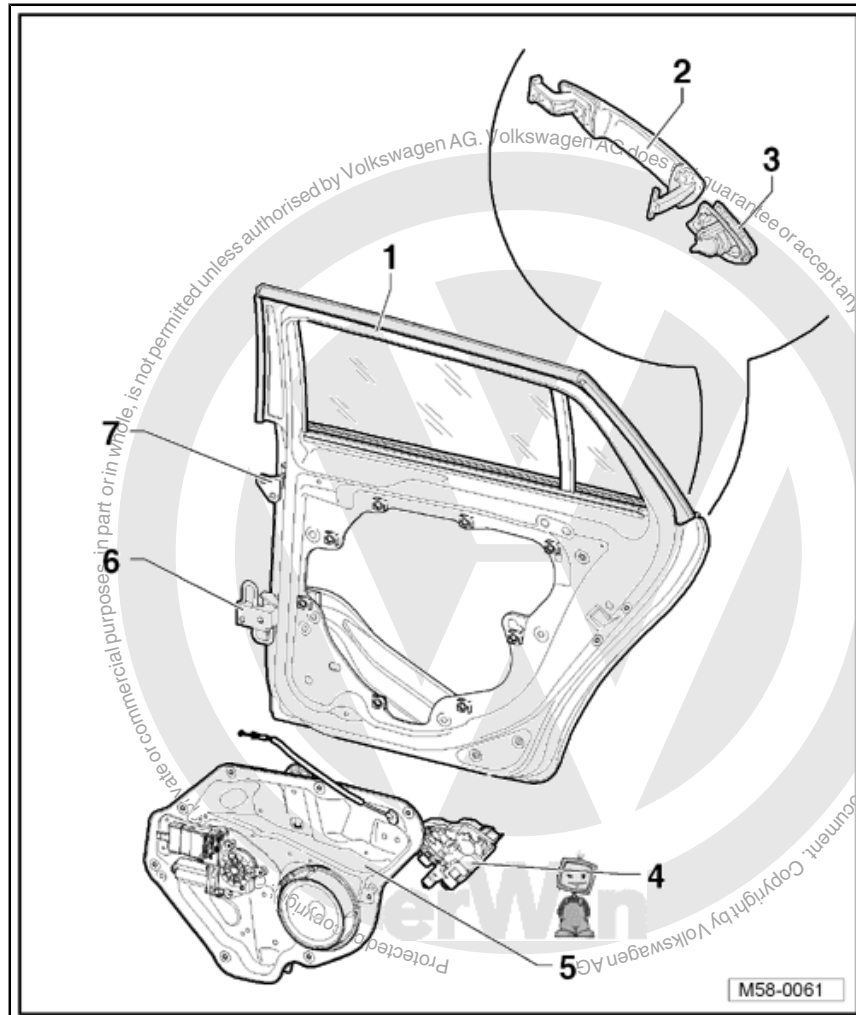
- ❑ Removing and installing
⇒ [page 145](#)

6 - Door hinge

- ❑ Removing and installing
⇒ [page 138](#)

7 - Door hinge

- ❑ Removing and installing
⇒ [page 138](#)



2.3 Assembly overview - door hinges



Caution

Nut of eccentric bolt -9- should not be loosened under any circumstances. It cannot be tightened again using normal workshop tools.



Note

- ◆ *The right side is shown. The left side is similar.*
- ◆ *The hinge bolts must always be renewed if loosened.*
- ◆ *Hinges are now one piece.*

1 - Door

- Removing and installing
 ⇒ [page 140](#)
- Adjusting door
 ⇒ [page 142](#)

2 - Guide bolt

- 10 Nm

3 - Door hinge with arrester

4 - Multi-point socket head bolt

- 20 Nm + 1/4 turn further (90°).
- Always renew after loosening

5 - Multi-point socket head bolt

- 20 Nm + 1/4 turn further (90°).
- Always renew after loosening

6 - Multi-point socket head bolt

- 20 Nm + 1/4 turn further (90°).
- Always renew after loosening

7 - Multi-point socket head bolt

- 20 Nm + 1/4 turn further (90°).
- Always renew after loosening

8 - Guide bolt

- 10 Nm

9 - Nut

- For eccentric pin
- Do not loosen
- Serves as a means of adjustment during production only

10 - Door hinge

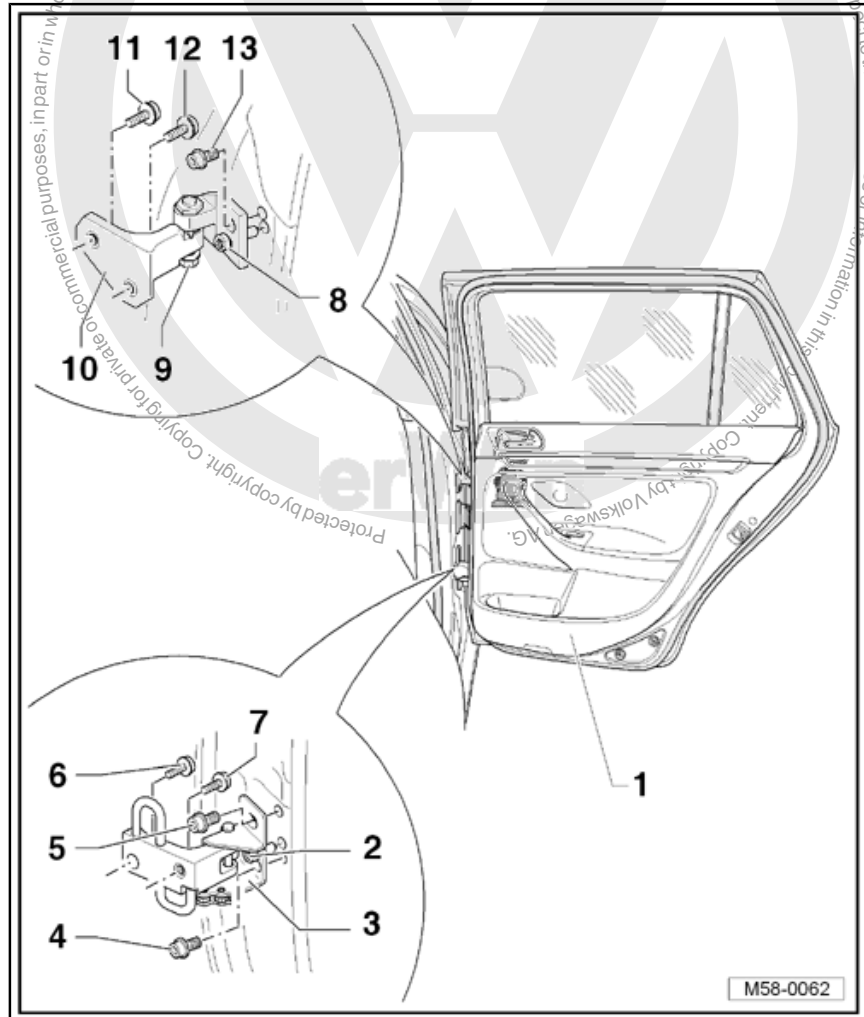
- Hinge no longer comprises of more than one part.

11 - Multi-point socket head bolt

- 20 Nm + 1/4 turn further (90°).
- Always renew after loosening

12 - Multi-point socket head bolt

- 20 Nm + 1/4 turn further (90°).





- Always renew after loosening

13 - Multi-point socket head bolt

- 20 Nm + 1/4 turn further (90°).
- Always renew after loosening

2.4 Removing and installing door

2.4.1 Removing



Note

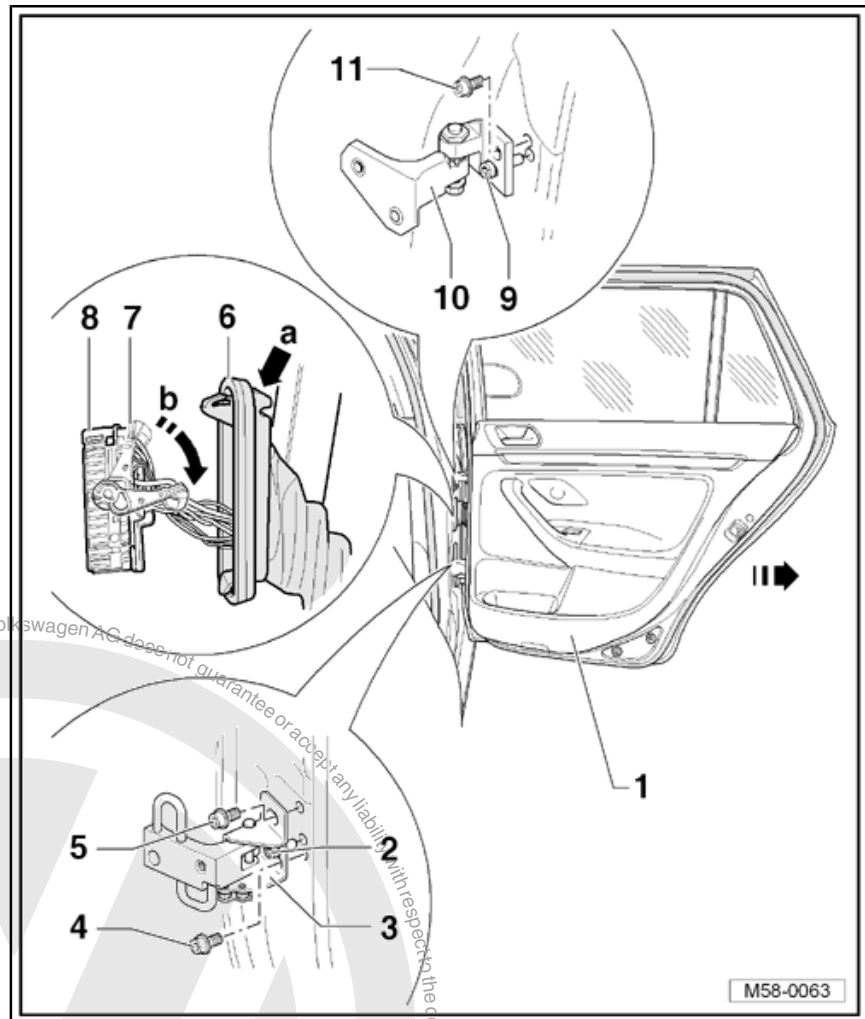
The removal and installation sequence is only for the right door. The removal and installation of the left door is similar.

- Release boots -6- by pressing fastener -arrow a- and pull boots off B-pillar.
- Swing release lever -7- downwards -arrow b- and disconnect electrical connector -8- from coupling station.
- Remove bolts -4-, -5- and -11- from hinge using special door alignment tool -3320- and bit -3320/3- .





- Pull door -1- in direction of -arrow- off guide bolts -2- and -9-.



2.4.2 Installing

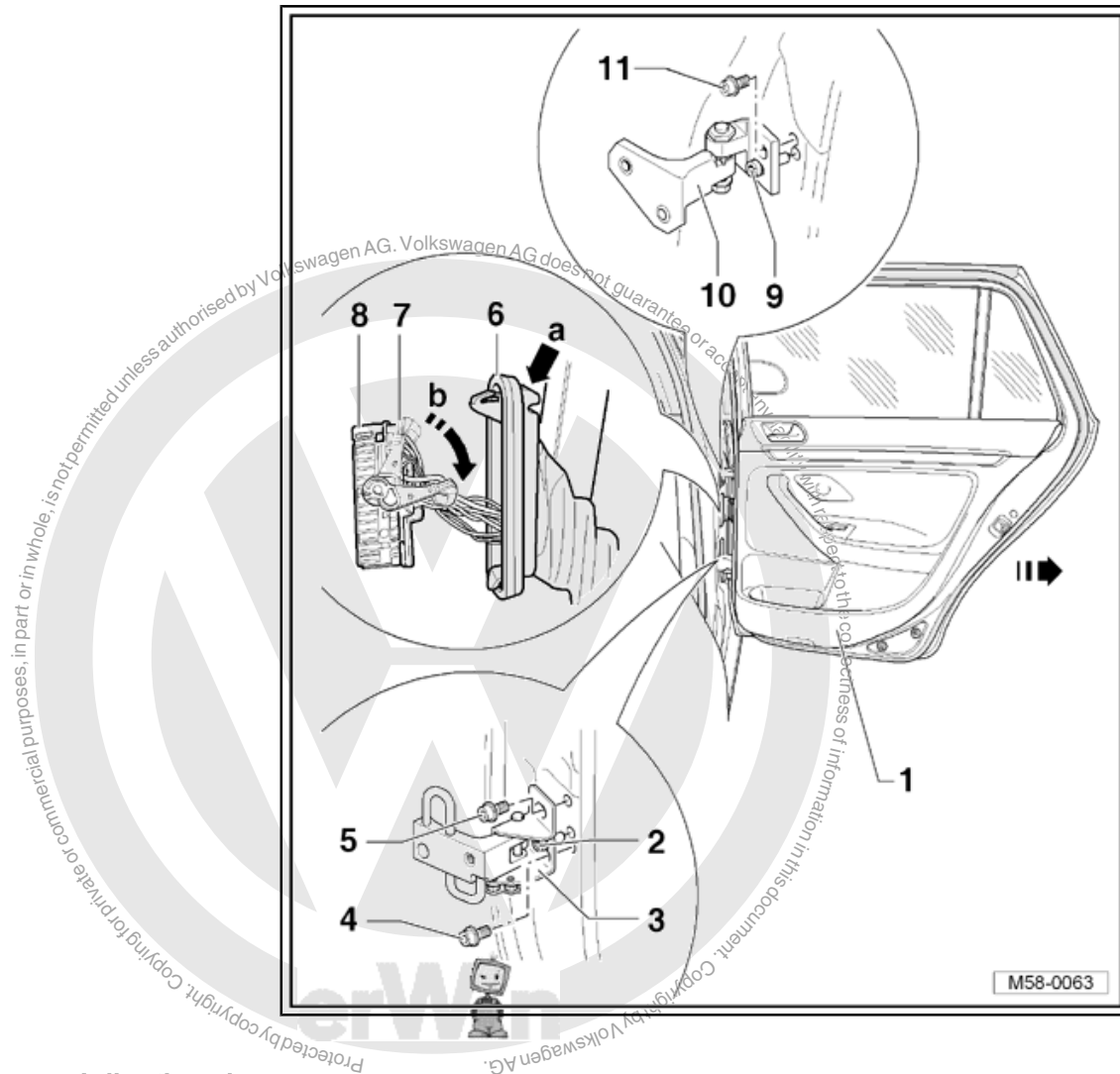
Install in reverse order of removal.

Specified torque for bolts -4-, -5- and -11-: 20 Nm + 1/4 turn further (90°).

Always renew bolts -4-, -5- and -11-.



Observe rear door gap/shut lines ⇒ Body Repairs; Rep. Gr. 00 ;
Body dimensions .



2.5 Adjusting door



Caution

Nut of eccentric bolt -9- should not be loosened under any circumstances. It cannot be tightened again using normal workshop tools.



Note

- ◆ *The door is adjusted correctly if the gaps/shut lines are even all around, the door is not too deep or does not stand proud and all contours align when the door is closed.*
- ◆ *Vehicle must be standing on its wheels when adjustments are performed.*

Observe rear door gap/shut lines ⇒ Body Repairs; Rep. Gr. 00 ;
Body dimensions .

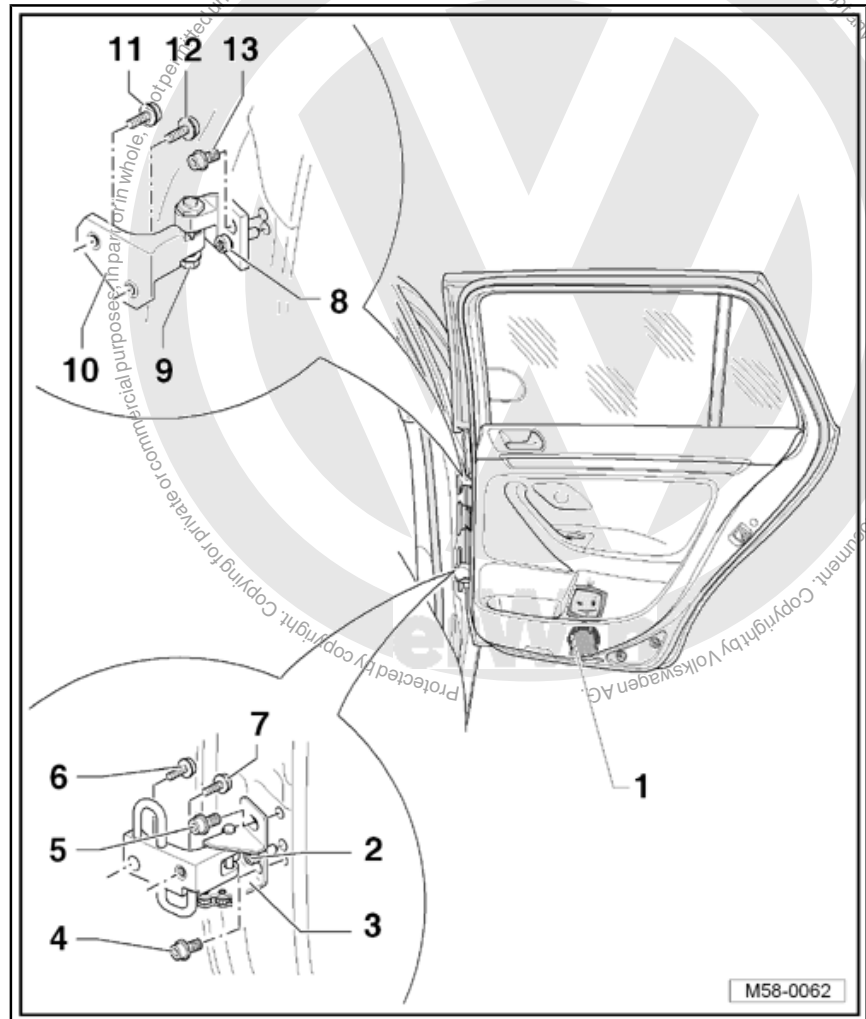


To be able to adjust gaps correctly, bolts -6-, -7-, -11- and -12- must be loosened.

Other measures such as raising the door have no effect. Subsequent pressure from above will cause the door to sack again.

Bolts -4-, -5- and -13- and also guide bolts -2- and -8- must be loosened to correctly adjust the flush fitting of the door.

Use door alignment tool -3320- with bit -3320/3- for this.



2.5.1 Adjusting striker pin



Note

- ◆ *The rear door must lock fully when closing without any additional force being required and must not have any play.*
- ◆ *The rear door must not be pushed up or down as a result of the striker pin adjustment.*

The following can be adjusted at the striker pin:

- ◆ When rear door does not align with side panel.



- Loosen striker pin -1- by loosening bolts -2- on side panel.
- Adjust rear door at striker pin -1- so that rear door is flush with rear side panel when shut (wind noise).

Maximum twist tolerance -A- of striker pin: $\pm 3^\circ$

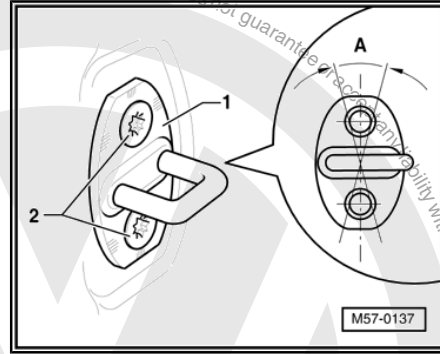
- Retighten bolts -2-.

Specified torque: 20 Nm



WARNING

Only use this adjustment to adjust door inwards or outwards, never use for vertical adjustment. Door must not move upwards or downwards when opening and closing. This indicates that the vertical adjustment is incorrect.



2.6 Assembly overview - assembly carrier



Note

The right side is shown. The left side is similar.

1 - Bolt

- Qty. 2
- 18 Nm

2 - Door lock

- Removing and installing
[=> page 155](#)

3 - Assembly carrier

- Removing and installing
[=> page 145](#)

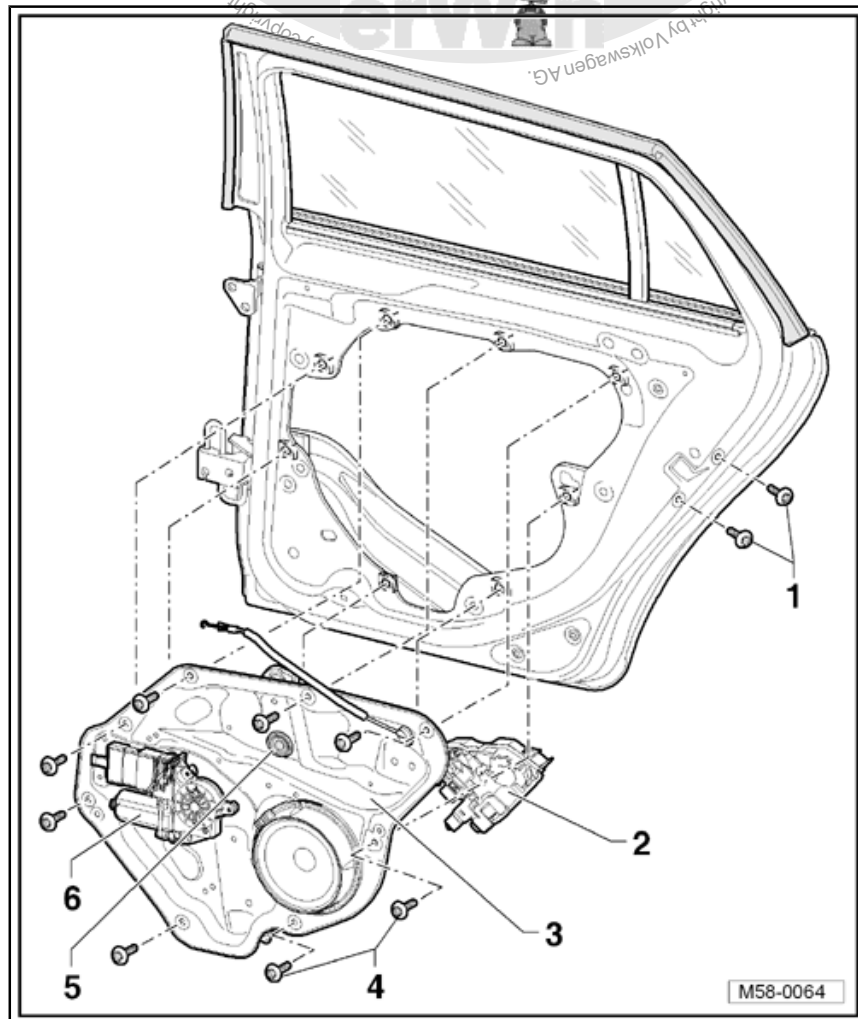
4 - Bolt

- Qty. 8
- 8 Nm

5 - Cover

6 - Window regulator motor

- Removing and installing





⇒ [page 317](#)

2.7 Removing and installing assembly carrier



Note

The removal and installation sequence is only for the right assembly carrier. The removal and installation of the left assembly carrier is similar.

Window regulator, door lock and loudspeaker are secured to the assembly carrier.

The door lock can be removed only together with the assembly carrier.

If door window cannot be lowered on electric window version, first determine the cause of the fault.

To do this, read the fault memory of the convenience system using vehicle diagnostic, testing and information system -VAS 5051 A- or -VAS 5052- ⇒ Vehicle diagnosis, testing and information system VAS 5051.

If an electrical fault exists, rectify it first.

If an electric fault occurs on window regulator motor, it can be unscrewed from assembly carrier and door window can be slid by hand in the necessary repair position.

2.7.1 Removing

Remove door handle ⇒ [page 152](#) .

- Remove door trim ⇒ General body repairs, interior; Rep. Gr. 70 ; Roof trims .





- Lever out caps -5-.
- Lower door window -1- until spreader pin -3- and spreader plug -4- are accessible in cut-out of window regulator.

i Note

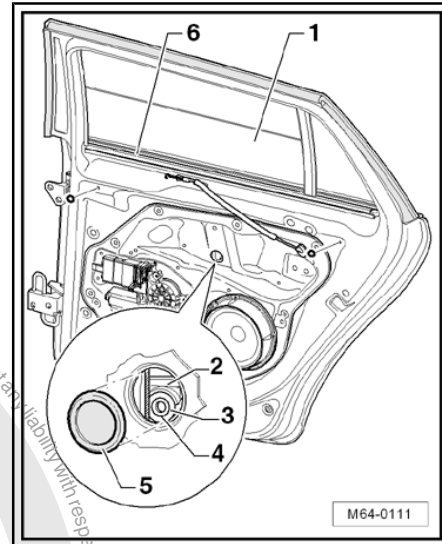
If the procedure cannot be carried out because there is a fault with the electric window regulator, remove electric window motor to slide window down.

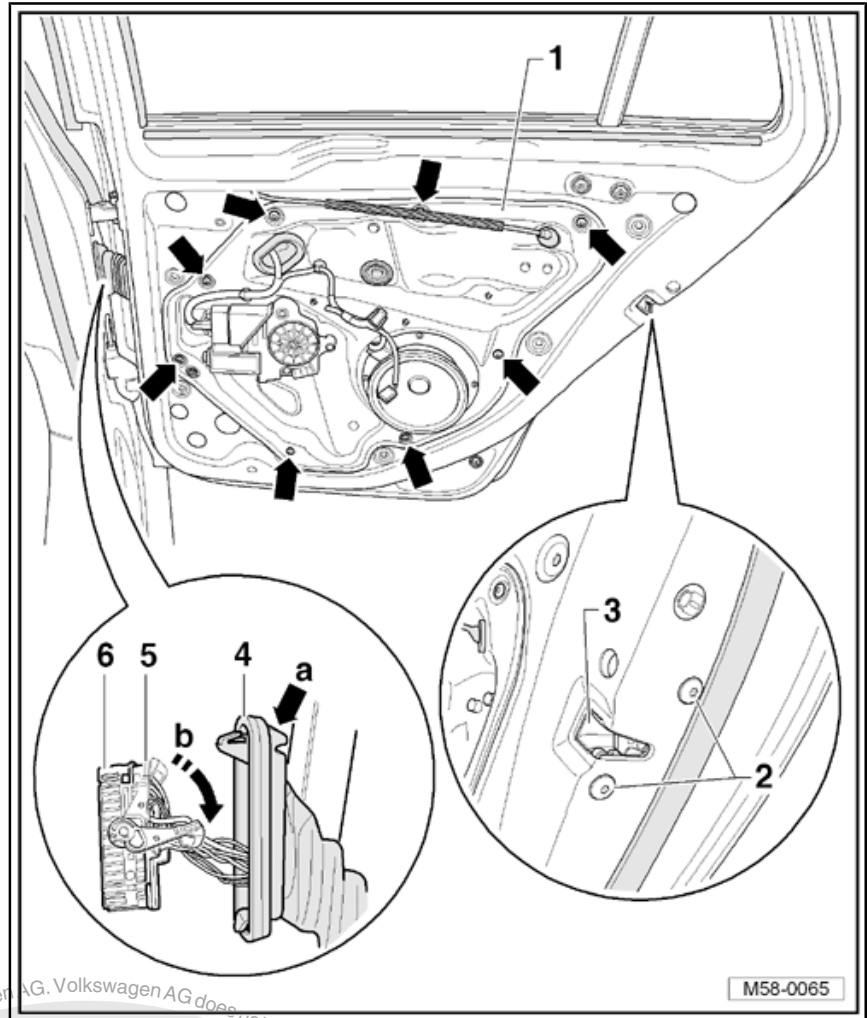
- Screw a 5 mm bolt (approx. 70 mm long) into spreader pin -3-.
- Pull bolt and spreader pin out of spreader plug -4-.
- Screw an 8 mm bolt (approx. 80 mm long) into spreader plug -4-.

i Note

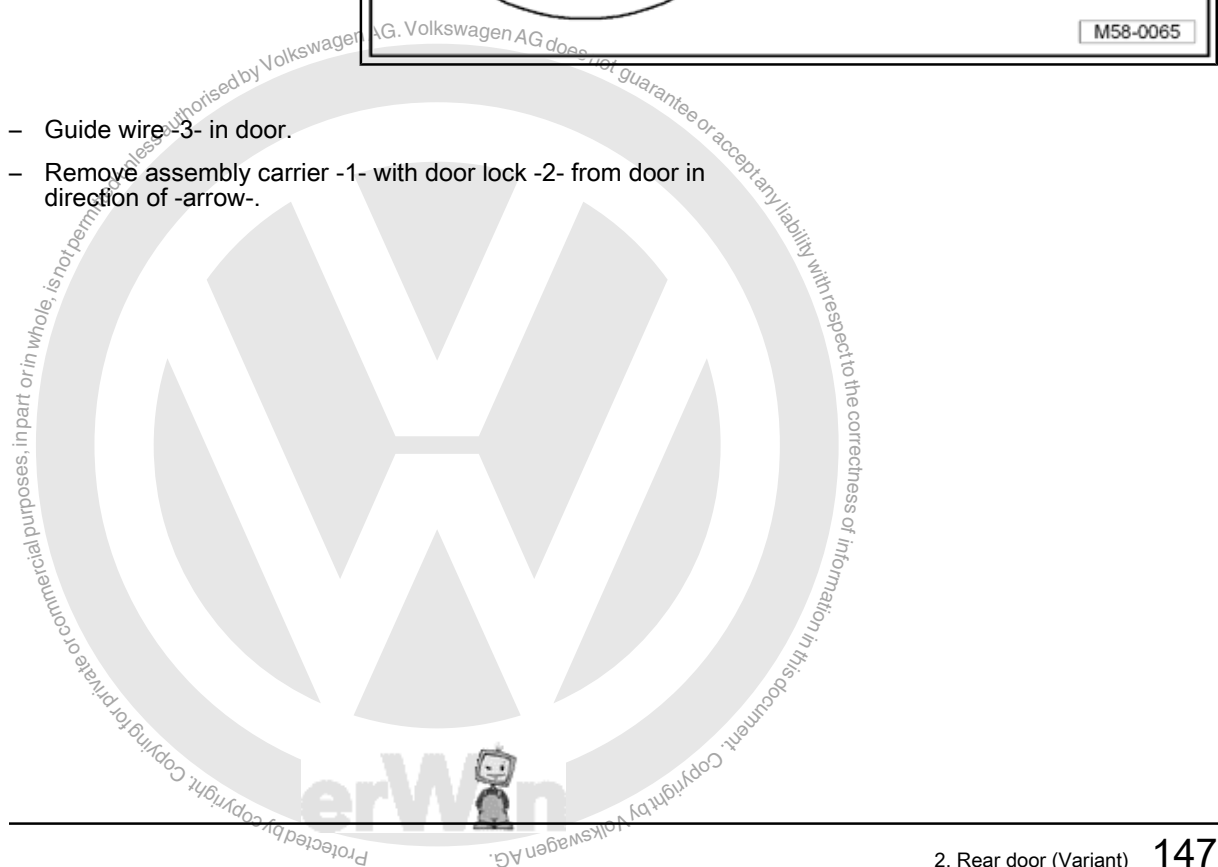
Do not exert too great a pressure on the plug because otherwise the plug will fall into the door.

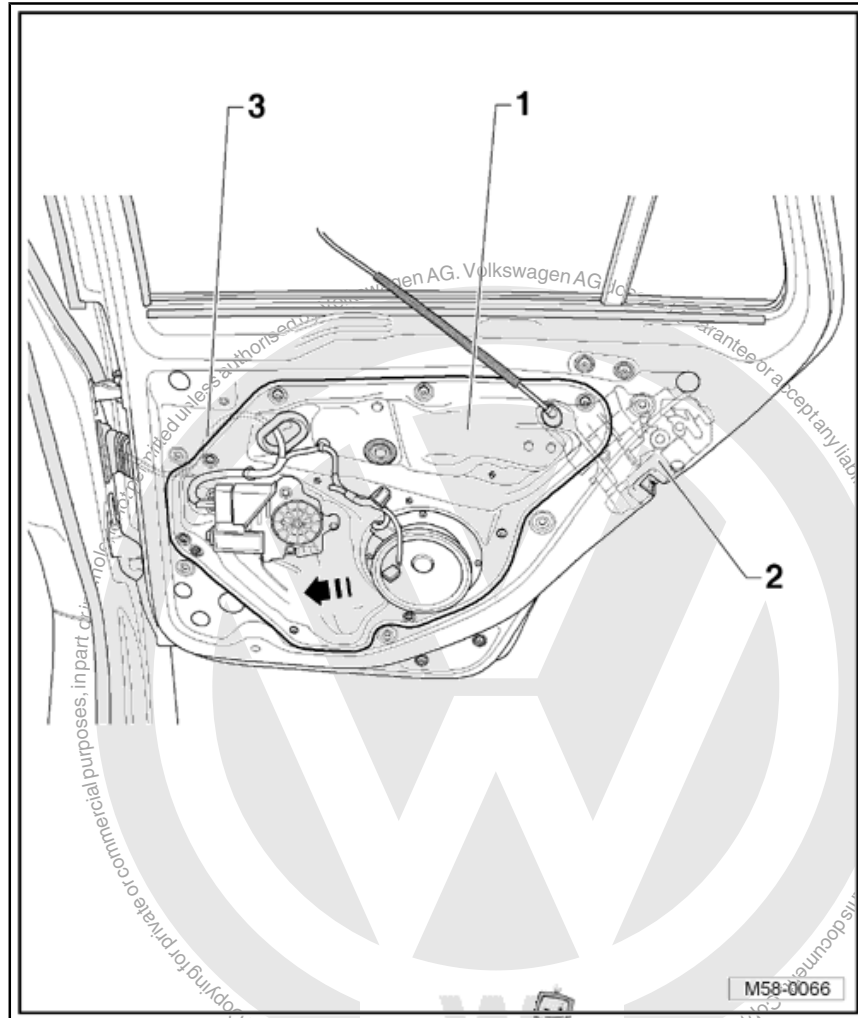
- Pull spreader plug -4- out of clamping jaws -2- and therefore out of door window.
- Push window -1- upwards and secure in position (e.g. with adhesive tape).
- Release boots -4- by pressing fastener -arrow a- and pull boots off B-pillar.
- Swing release lever -5- downwards -arrow b- and disconnect electrical connector -6- from coupling station.
- Unscrew bolts -2- from door lock -3-.
- Unscrew bolts -arrow- from assembly carrier -1-.





- Guide wire -3- in door.
- Remove assembly carrier -1- with door lock -2- from door in direction of -arrow-.





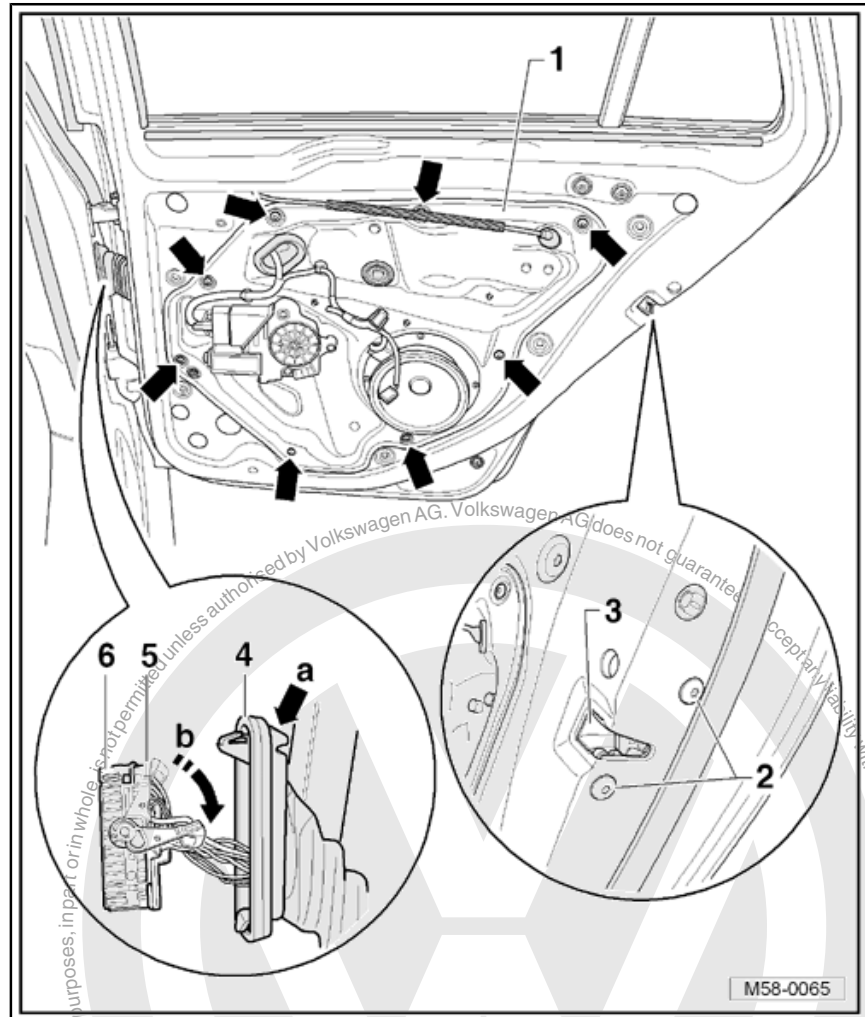
2.7.2 Installing

Install in reverse order of removal.

- Secure door window ⇒ [page 310](#) .
- Specified torque for assembly carrier bolt -arrow-: 8 Nm



- Specified torque for door lock bolt -2-: 18 Nm





2.8 Assembly overview - door handle and door lock

Note

The right side is shown. The left side is similar.

1 - Door lock

- ❑ Removing and installing
⇒ [page 155](#)

2 - Cable

- ❑ To lock release from interior door handle.

3 - Cover

- ❑ Not supplied with door lock.
- ❑ Secured on door lock with locking lugs

4 - Bearing bracket

- ❑ Removing and installing
⇒ [page 154](#)

5 - Torx bolt

- ❑ 4.5 Nm

6 - Base

- ❑ Part of door handle.

7 - Door handle with base

- ❑ Removing and installing
⇒ [page 151](#)

8 - Cover

- ❑ For housing
- ❑ Secured on housing with locking lugs

9 - Housing

- ❑ Removing and installing
⇒ [page 151](#)

10 - Base

11 - Door lock bracket

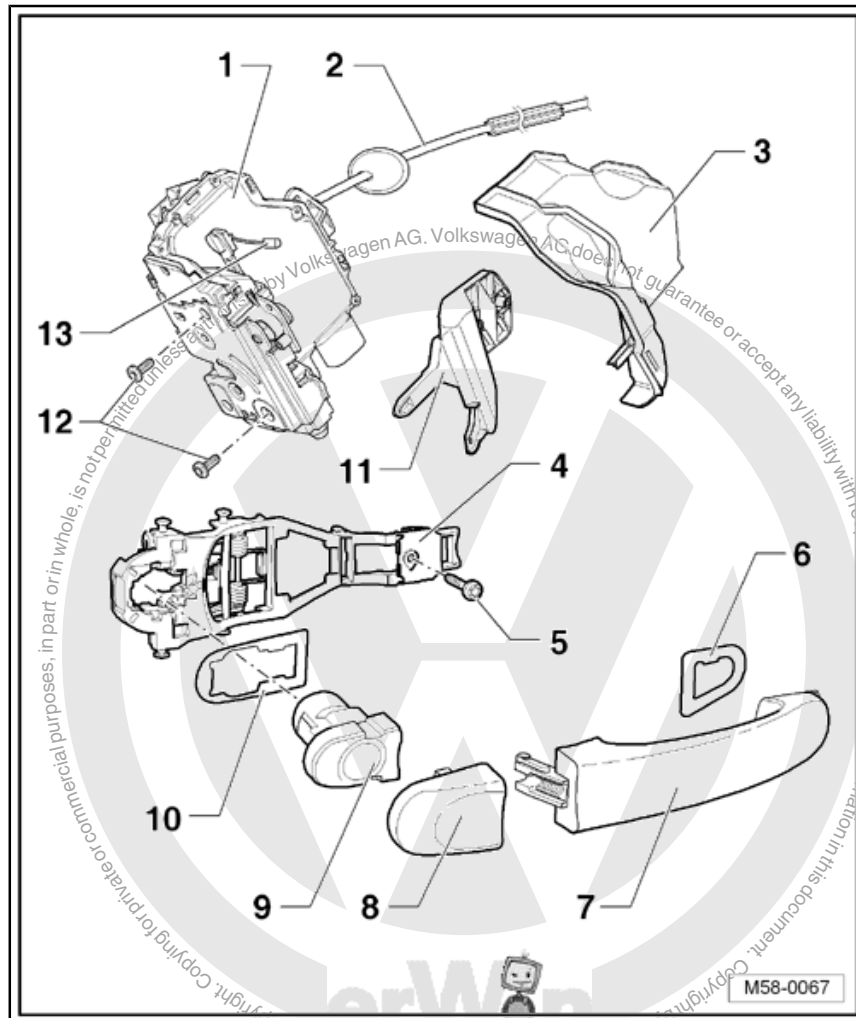
- ❑ Not supplied with door lock.
- ❑ Pushed onto door lock and riveted.

12 - Bolt

- ❑ 18 Nm

13 - Cable

- ❑ To release lock from door exterior handle.





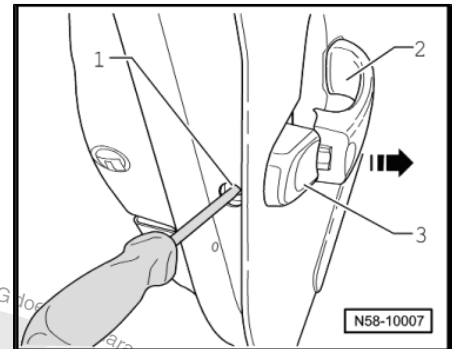
2.9 Removing and installing housing



Removal and installation sequence is only for right housing. Removal and installation of left housing is similar.

2.9.1 Removing

- Lever out caps in front of bolts -1-.
- Pull door handle -2- in direction of -arrow- and unbolt bolt -1- onto stop using socket wrench -T10072- .
- Pull housing -3- out of door handle bearing bracket at right angles to door.



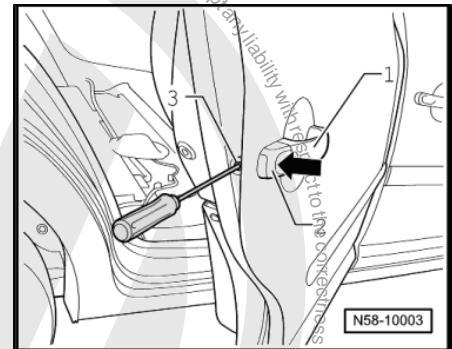
2.9.2 Installing

- Fit housing -2- in door handle -1- bearing bracket at right angles -arrow-.
- Door handle -1- must rest only lightly against door panel.
- Now tighten bolt -3- in bearing bracket using socket wrench -T10072- .

The door handle engages in housing again with an audible click.



During installation, housing must be pressed against door panel. The door handle just rests lightly against the door panel.



Further installation is performed in reverse order of removal.

Then always check function while door is still open, as an incorrectly fitted and adjusted Bowden cable cannot open the door.

2.10 Removing and installing door handle

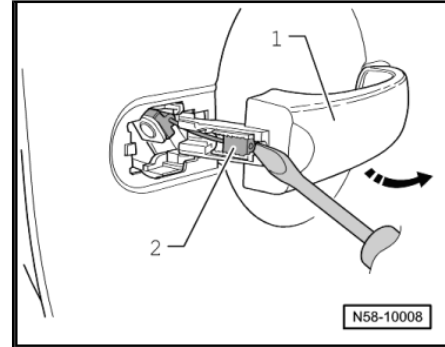


The removal and installation sequence is only for the right door handle. The removal and installation of the left door handle is similar.



2.10.1 Removing

- Remove housing ⇒ [page 151](#) .
- Lever clip -2- out of door handle -1-.
- Swivel door handle -1- out of door -arrow-.



2.10.2 Installing

- Guide assembly tool -T10118- into door through opening in door outer panel.
- Use a hand torch to illuminate inside of door for improved visibility.
- Hook assembly tool -T10118- in spring -arrow A-.
- Hook spring onto door lock by pulling assembly tool -T10118- -arrow B-.

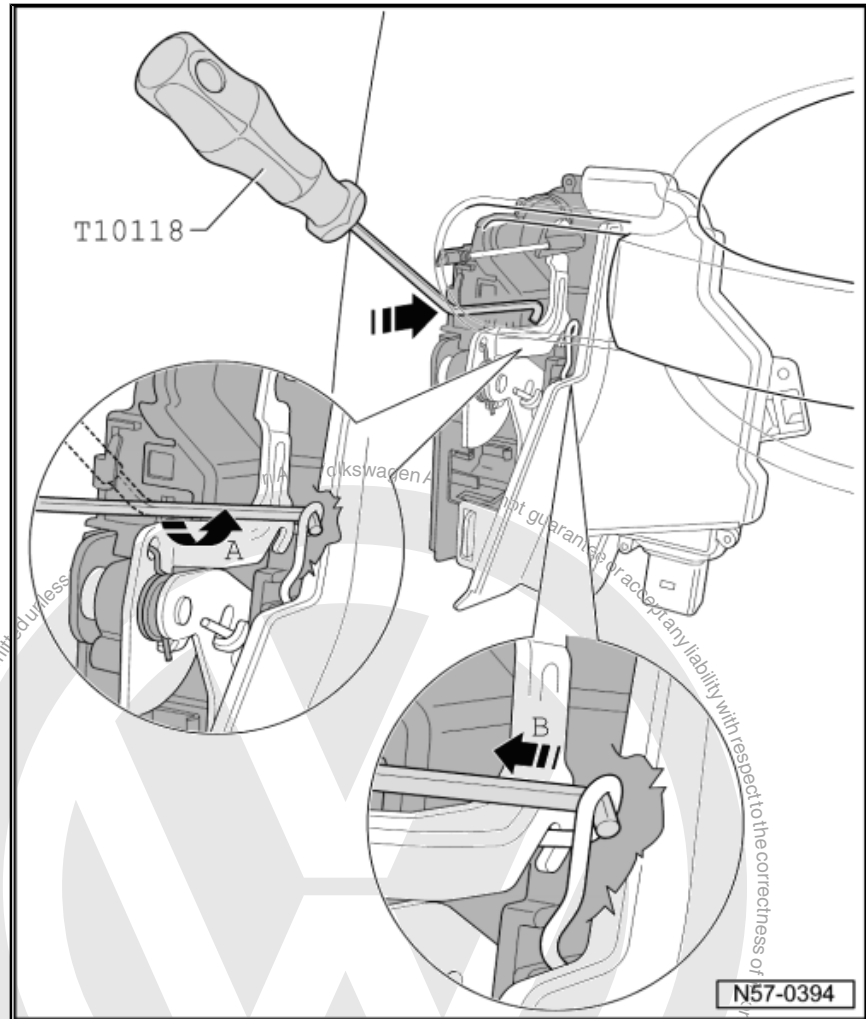
The release lever is now secured.





i Note

Hooking the spring into the operating lever secures the lock. This prevents incorrect attachment of the Bowden cable to the door handle later.



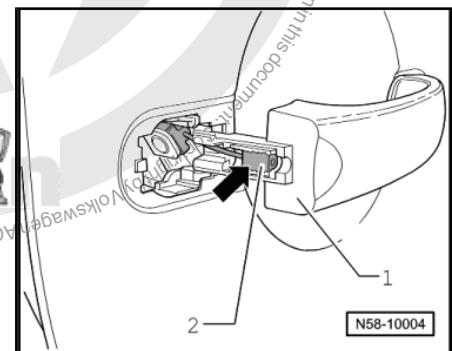
- Swivel door handle -1- into door.
- Pull clip -2- in the panel opening and engage clip in door handle -1- -arrow-.

i Note

- ◆ Press door handle -1- against door panel when assembling.
- ◆ Clip -2- must engage in door handle -1- with a clearly audible click.

- Install housing ⇒ [page 151](#) .

Then always check function while door is still open, as an incorrectly fitted and adjusted Bowden cable cannot open the door.





2.11 Removing and installing bearing bracket

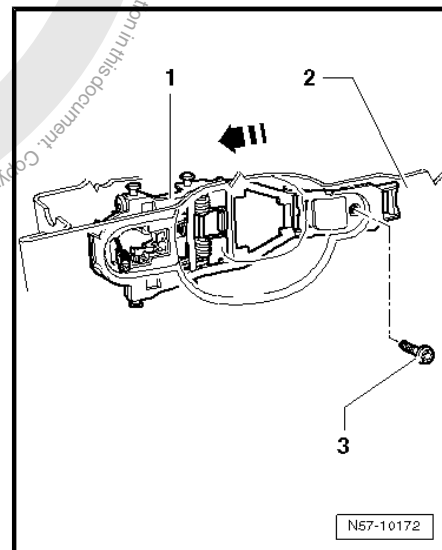
2.11.1 Removing



Note

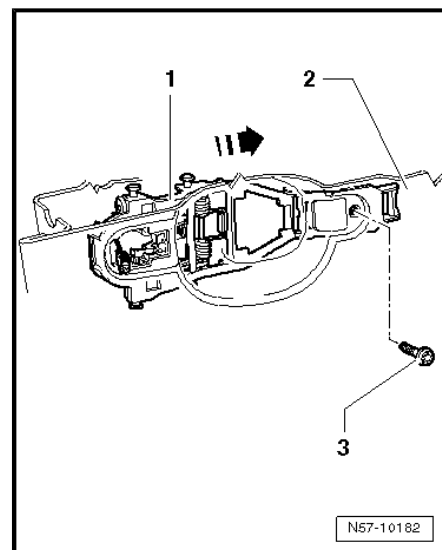
Removal and installation are described only for the right bearing bracket. The removal and installation of the left bearing bracket is similar.

- Remove housing ⇒ [page 151](#) .
- Remove door handle ⇒ [page 152](#) .
- Remove door assembly carrier ⇒ [page 145](#) .
- Remove bolt -3- from bearing plate -1-.
- Remove bearing plate -1- inwards in -direction of arrow- out of door cut-out in door -2-.



2.11.2 Installing

- Insert bearing plate -1- into door -2- in -direction of arrow-. Further installation is performed in reverse order of removal.
- Specified torque for bolt -3-: 4.5 Nm.





2.12 Removing and installing door lock

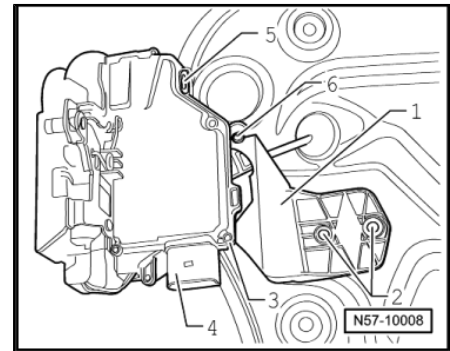


Note

The removal and installation sequence is only for the right door lock. The removal and installation of the left door lock is similar.

2.12.1 Removing

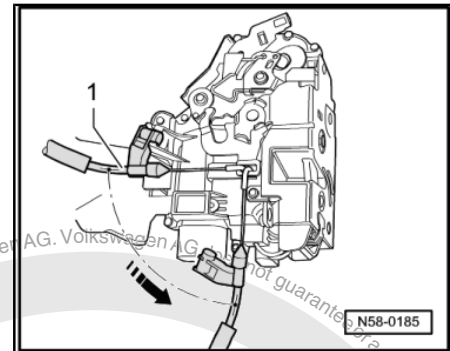
- Remove door assembly carrier ⇒ [page 145](#) .
- Turn assembly carrier around and pull connections -4- off door lock -5-.
- Drive clip -2- out using a punch.
- Lever door lock -5- with retaining bracket -1- out of assembly carrier using a screwdriver.



Note

The retaining bracket is not supplied with the door lock -5-. The door lock is pushed onto the retaining bracket -1- and secured with a pop rivet -6-.

- Unclip Bowden cable -1- from door lock.
- Turn cable nipple through 90° -arrow- and remove cable from eye.



2.12.2 Installing

Install in reverse order of removal.

- Then always check function while door is still open, as an incorrectly fitted and adjusted Bowden cable cannot open the door.

2.13 Door inner seals

During production, a sealant is applied to the door inner seals, which are then placed on the door flange and rolled on.



Note

- ◆ When seals are removed, the sealant will spread to the inside of the seal and the flanks will be bent out slightly. If the seal is then refitted, a tight seal is not guaranteed.
- ◆ Therefore each seal which is removed completely should be replaced by a so-called "tap-on" seal.
- ◆ If a seal has been partially removed, squeeze sides of seal together before refitting.



2.14 Removing and installing door inner seal

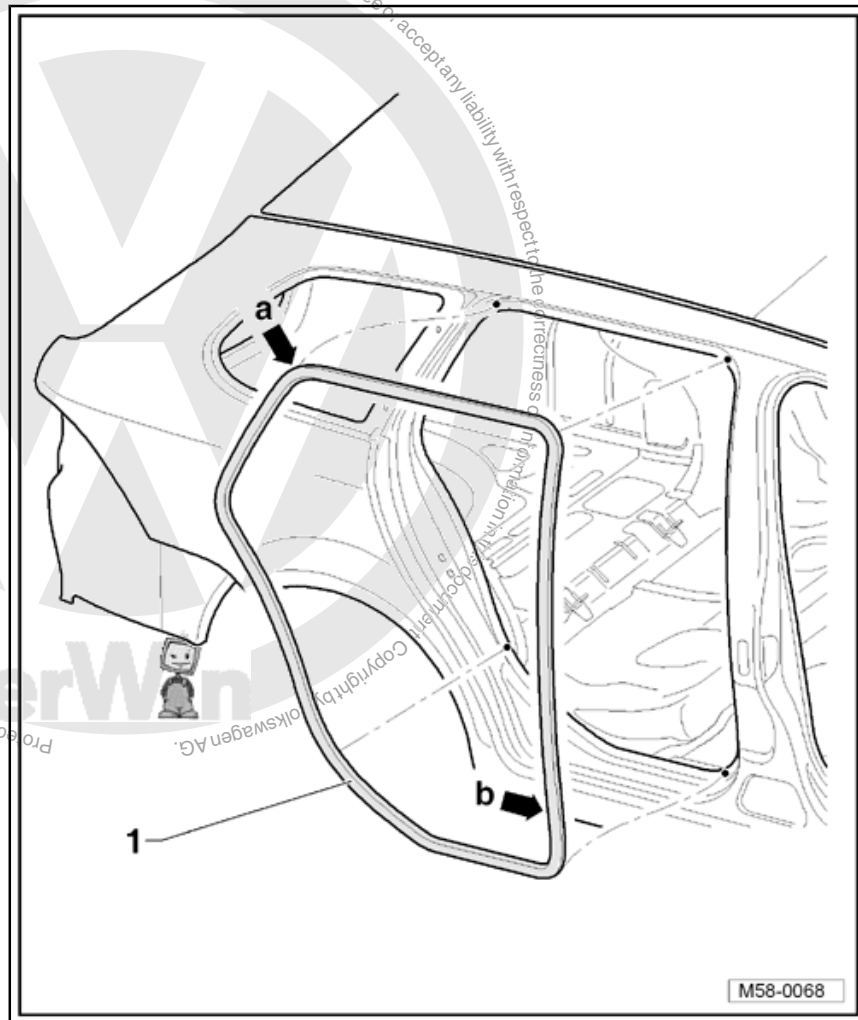


Note

The removal and installation sequence is only for the left door inner seal. The removal and installation of the right door inner seal is similar.

2.14.1 Removing

- Pull door inner seal -1- off body flange.

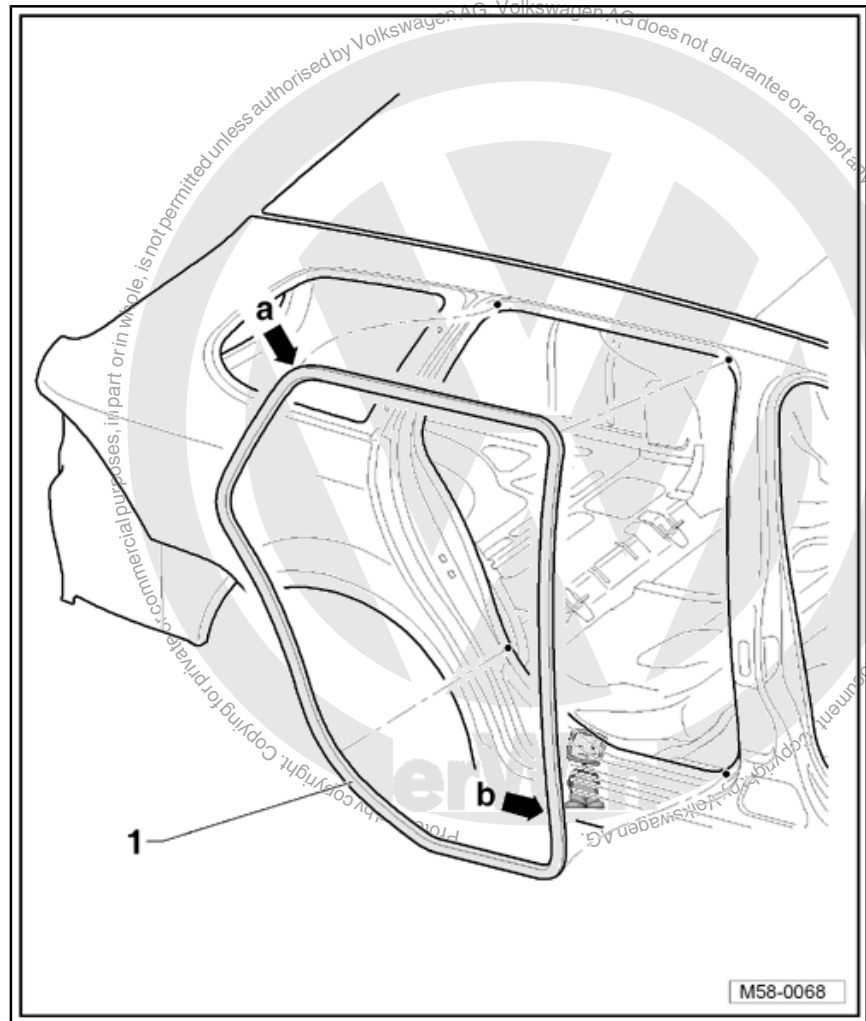


2.14.2 Installing

- Align door inner seal -1- so that vulcanised point -arrow b- is at same height as lower hinge.



- Start installing door inner seal at top radius -arrow a- of door aperture.



2.15 Removing and installing door outer seal



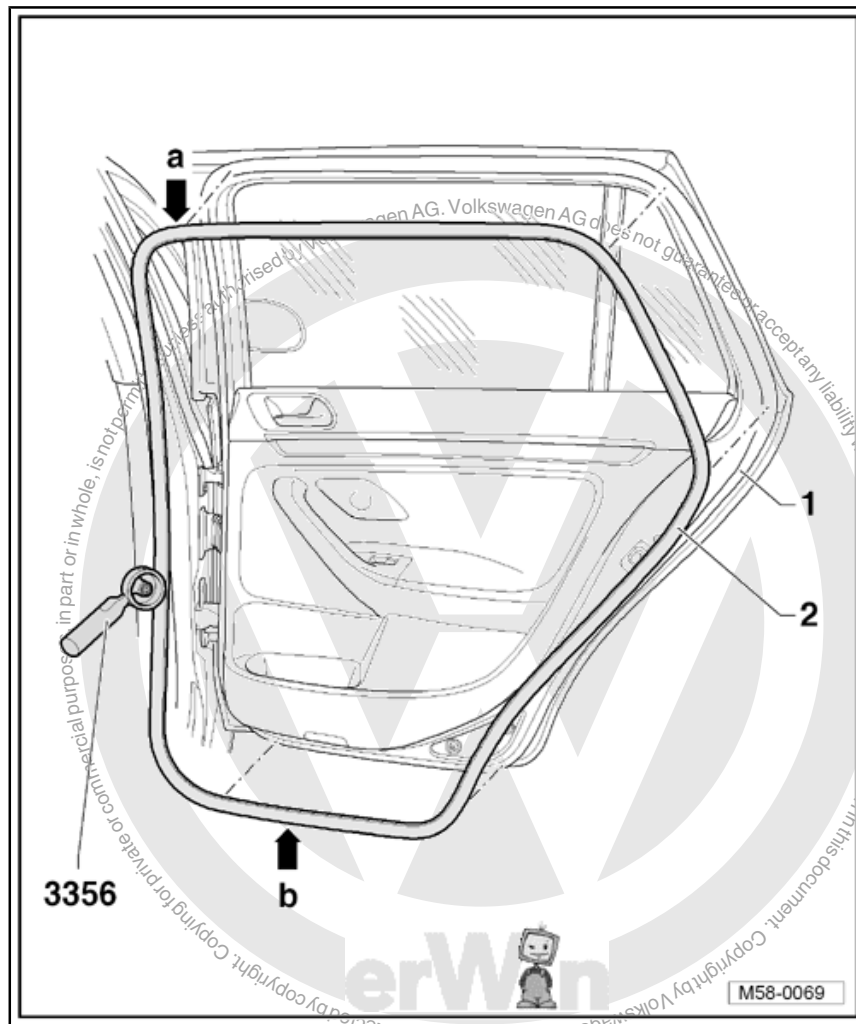
Note

- ◆ *Removal and installation are described only for the right door outer seal. Removal and installation of the left door outer seal are similar.*
- ◆ *Remove protective backing immediately before installation. Working temperature approx. 20 °C.*
- ◆ *Adhesive remover -D 002 000 10- must be used exclusively.*
- ◆ *The door outer seal must be bonded in place immediately after cleaning.*



2.15.1 Removing

- Pull door outer seal -1- off door -2-.

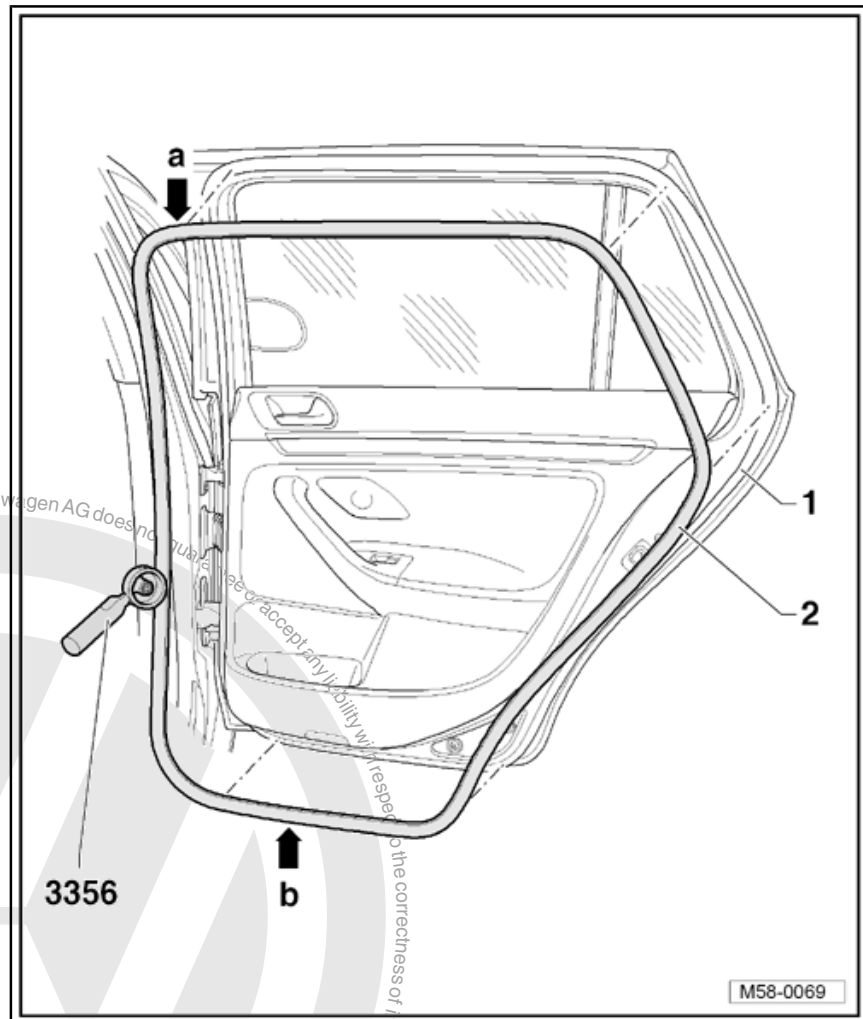


2.15.2 Installing

- Remove adhesive residues with erasure disc of adhesive strip remover -VAS 6349- .
- Immediately before bonding outer seal for door, clean bonding surface thoroughly with adhesive remover -D 002 000 10- .
- Bonding surfaces must be free of dust and grease and there should be no adhesive residues.
- The vulcanised point -arrow b- of door outer seal -1- must be located in centre of sill.



- Pull off protective backing and start fitting seal in upper radius -arrow a- of door. Do not pull door outer seal excessively to avoid stretching seal.



- Press complete bonding surface of seal -3- onto door -1- all around using roller -3356- .
- To do this, push seal aside -arrow a- so that the roller -3356- runs directly over the contact surface of the seal.

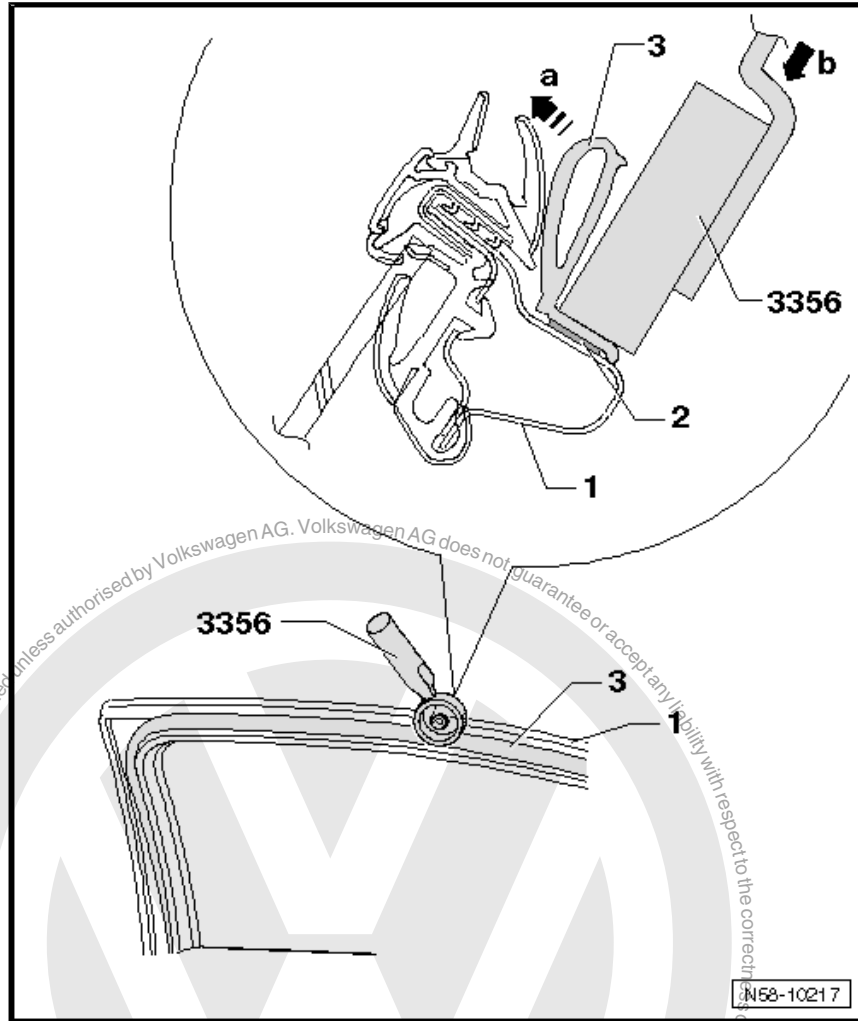
The roller can apply the necessary force -arrow b- to the bonding surface -2- only when procedure described above is followed.

- If the seal has stretched, cut seal to required length and press on butt joint well.
- If seal -3- comes loose in small areas again, press seal on well again using roller -3356- .



Note

The door must not be closed for a period of 2 hours to ensure the door outer seal does not move or loosen again.



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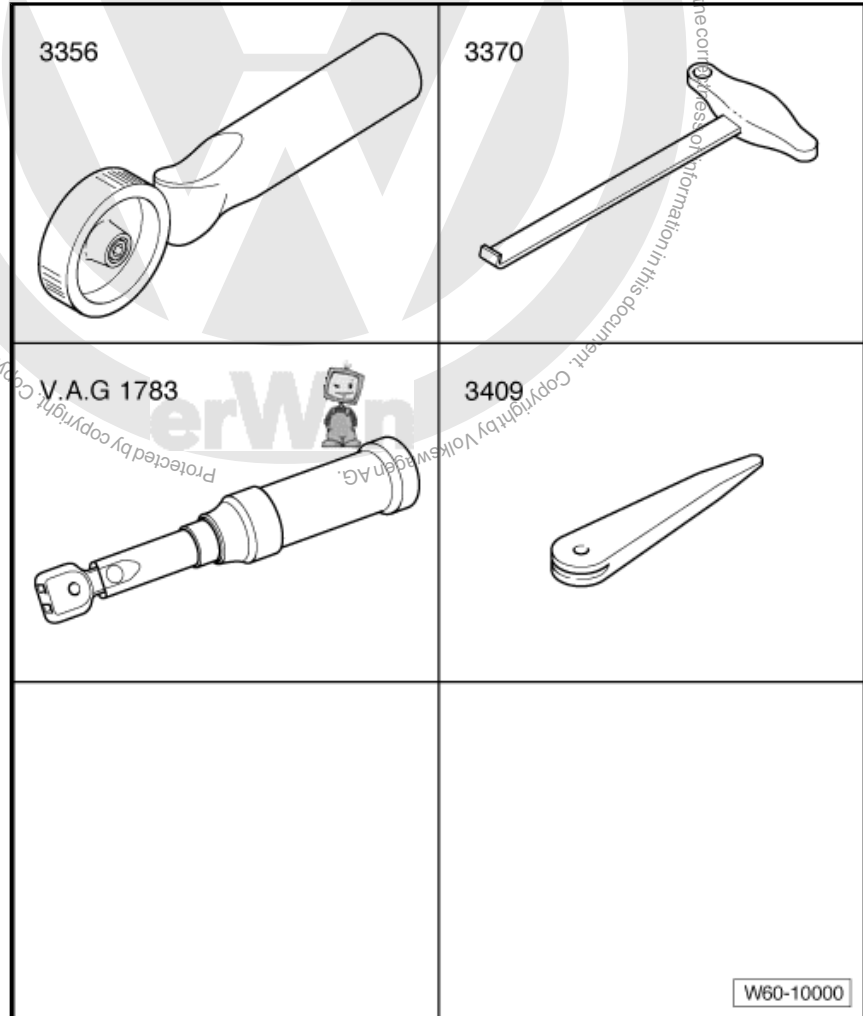
60 – Sunroof

1 Sliding/tilting sunroof with glass panel (Meritor)

1.1 Tools

Special tools and workshop equipment required

- ◆ Roller for door insulation foil -3356-
- ◆ Front end hook -3370-
- ◆ Torque wrench -V.A.G 1783-
- ◆ Removal wedge -3409-



1.2 Function

All actions of the sliding/tilting sunroof with glass panel can be performed with the ignition switched on.

After the ignition is switched off, actions can be performed until either the driver or front passenger door is opened.

The opening of the glass panel in sliding or tilting positions can be preselected using the rotary switch.

On the rotary switch there are marks for preset sliding and tilting positions of the glass panel.



Opening sliding/tilting sunroof to the so called comfort position, prevents to a large extent wind noise while driving, which can occur when sunroof is fully open.

Pre-selector switch

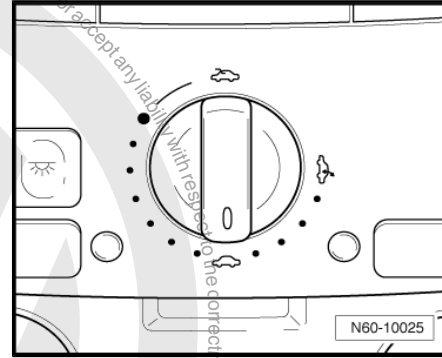
The sliding/tilting sunroof with glass panel is equipped with a force limitation (roll back) feature while closing. If the sunroof encounters an obstruction while closing from tilting or sliding position, it will open automatically.

In addition, there is an emergency closure function. If problems occur during closure, the sliding/tilting roof with glass panel can be forced to shut by pressing the preselector switch when it is in the "close sliding/tilting roof" position.

The roll-back function is disabled when the emergency closure function is active.

The drive for the sliding/tilting sunroof with glass panel is protected against overheating by a time limit. The protective mechanism activates when the sunroof is operated continuously for approx. 2 minutes. It is functional again after a cooling-off phase.

In the event of power failure, the sliding/tilting sunroof with glass panel can be moved using a hexagon key directly on the drive. Hexagon key is located in vehicle tool kit.





1.3 Assembly overview - sliding/tilting sunroof with glass panel

1 - Glass panel for sliding/tilting sunroof (single pane safety glass)

- Removing and installing ⇒ [page 166](#)
- Adjusting ⇒ [page 167](#)

2 - Panel seal

- Renewing ⇒ [page 169](#)
- Adjusting ⇒ [page 168](#)
- Joint of seal centred at rear

3 - Sliding headliner

- Removing and installing ⇒ [page 170](#)

4 - Bolt

- Bolts are microencapsulated and must always be renewed after loosening.
- Qty. 4
- 1.8 Nm

5 - Spring slide

- Screwed to sliding headliner
- Qty. 4
- Can be renewed individually.
- Removing ⇒ [page 170](#)

6 - Bellows

- To cover guide plate.
- Removing and installing ⇒ [page 164](#)

7 - Water channel

- Removing ⇒ [page 178](#)

8 - Latch guide

- Is removed together with guide plate ⇒ [page 178](#)

9 - End piece upper part

- Clipped to end piece upper part.
- Removing ⇒ [page 178](#)

10 - End piece lower part

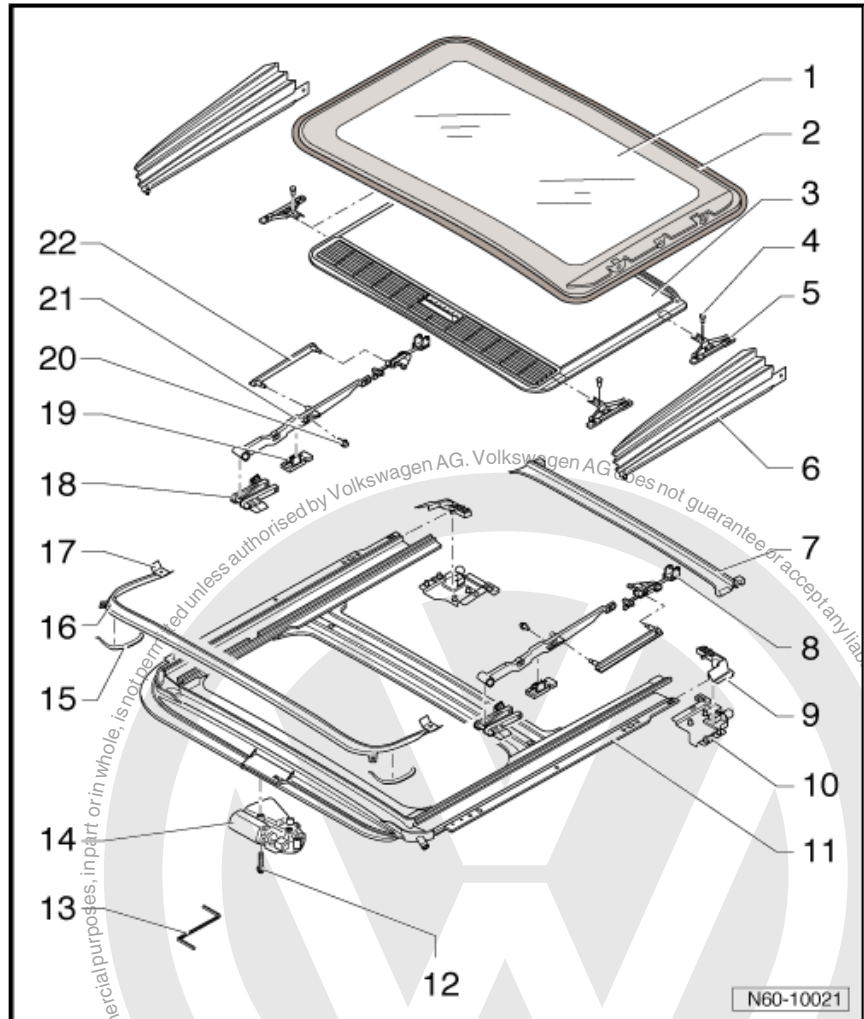
- Can be renewed individually.
- To seal use butyl adhesive sealing cord -AKL 450 005 05- .

11 - Carrier unit

- Removing and installing ⇒ [page 174](#)
- If needed, guide channels may be greased only with special grease -G 000 450 02- , otherwise correct operation cannot be guaranteed.

12 - Bolt

- Bolts are microencapsulated and must always be renewed after loosening.



N60-10021



- Qty. 3
- 3.5 Nm

13 - Crank for emergency operation

- Hexagon key is located in vehicle tool kit

14 - Electric drive

- Removing and installing ⇒ [page 171](#)
- Adjusting drive (0 position) ⇒ [page 172](#) .

15 - Spring

- Qty. 2
- Pushes up wind deflector.
- Clipped onto wind deflector and can be renewed individually
- Removing ⇒ [page 169](#)

16 - Wind deflector

- Removing and installing ⇒ [page 169](#)

17 - Wind deflector bearing

- Qty. 2
- Clipped onto wind deflector and can be renewed individually
- Removing ⇒ [page 169](#)

18 - Front guide

- Can be pushed out of guide rail individually
- Removing ⇒ [page 178](#)

19 - Lower rear guide

- Is removed together with guide plate ⇒ [page 178](#)

20 - Torx bolt

- Qty. 3 on each side
- 5 Nm

21 - Guide plate

- Removing and installing ⇒ [page 177](#)

22 - Spacer

- Removing and installing ⇒ [page 177](#)

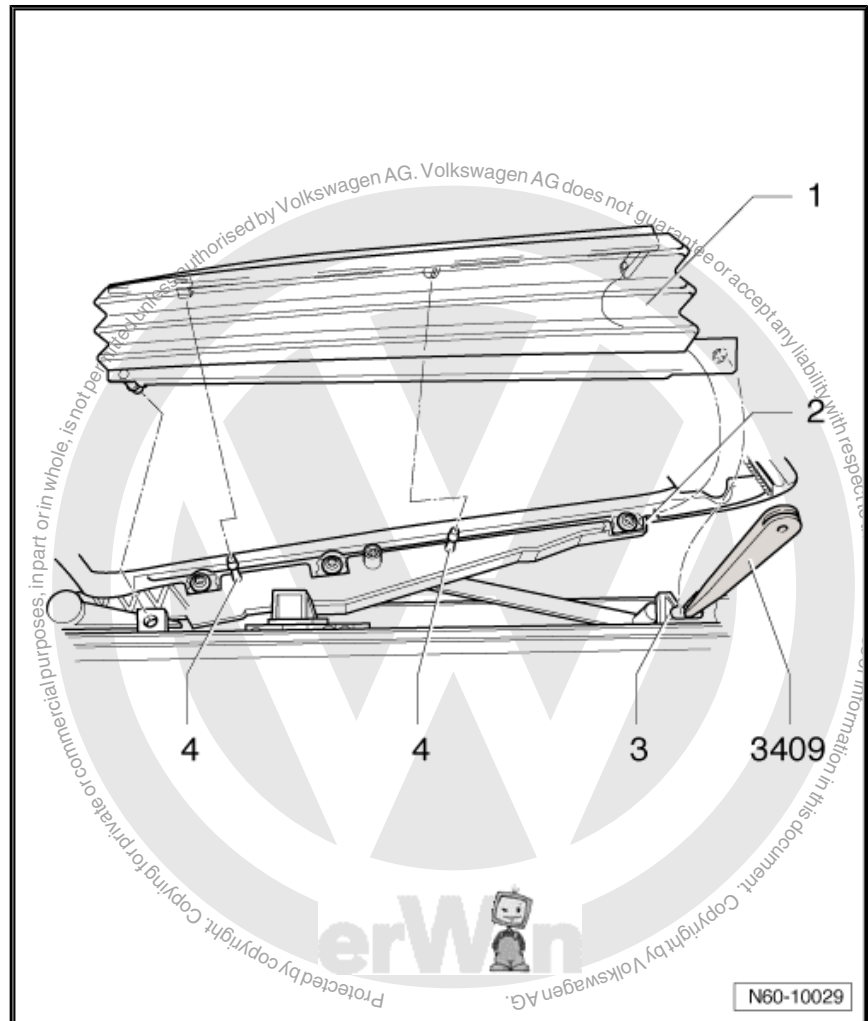
1.4 Removing and installing bellows

1.4.1 Removing

- Slide sliding headlining to rear.
- Run sliding/tilting sunroof glass panel to tilted position.
- Carefully unclip bellows -1- from lower part of guide plate -3- using a removal wedge -3409- .
- Pull bellows -1- off securing pins -4- .
- Detach bellows -1- at top rear -2- .



- Remove bellows -1-.

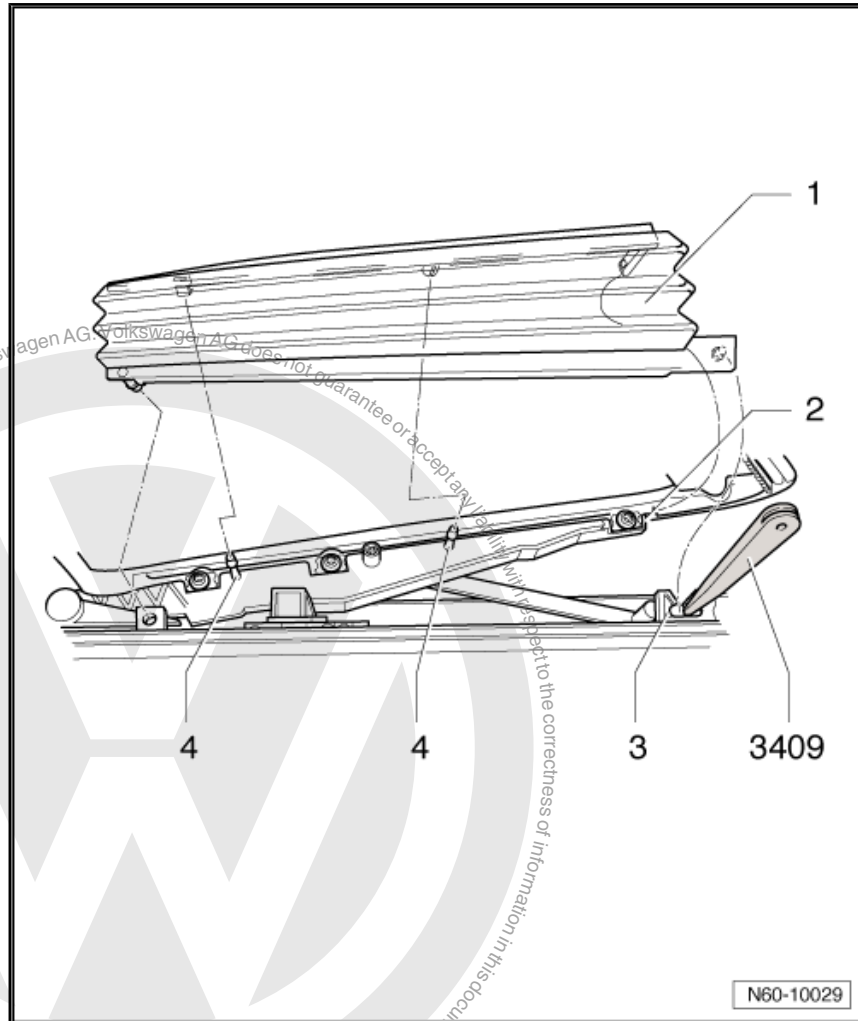


1.4.2 Installing

- Slide sliding headlining to rear.
- Run sliding/tilting sunroof glass panel to tilted position.
- Fit bellows -1- first at top rear -2-.
- Clip bellows -1- in securing pins -4- in guide plate.



- Hook in bellows -1- at bottom front and clip in bellows in lower part of guide plate -3-.



1.5 Removing and installing sliding/tilting sunroof glass panel

1.5.1 Removing

- Remove bellows ⇒ [page 164](#) .

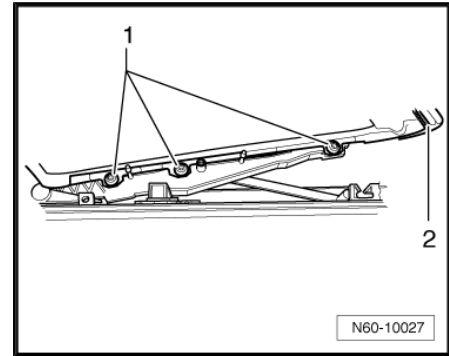


- Remove bolts -1- on left and right.
- Remove sliding/tilting sunroof glass panel -2- out upwards.



Caution

The guide plate must not be moved to "Open" position when removed, because the water channel will not be compressed by the glass panel and can become wedged together in the roof.



1.5.2 Installing

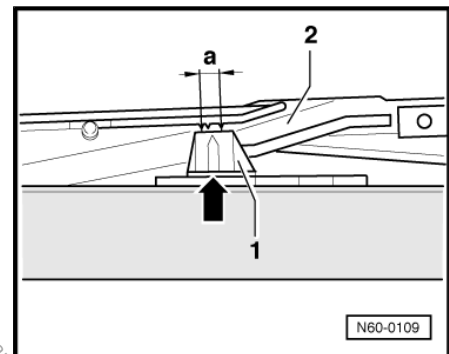
- Panel must be installed in the zero position (panel closed).

Zero position:

The mark -arrow- on the rear of the guide upper section -1- must, on both sides, lie within the marks dimension -a- on the guide plate -2-.

The guide plate -2- must be located in the guide rails (cannot be moved by hand).

If this is not the case, adjust parallel running => [page 173](#) .

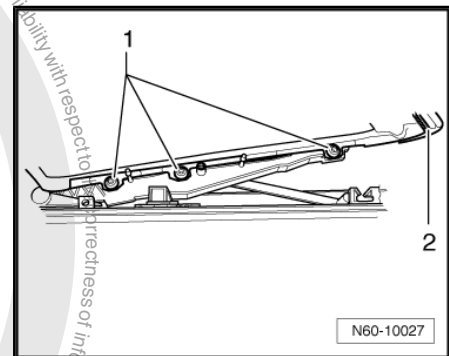


- Insert sliding/tilting sunroof glass panel -2- from above and fit bolts -1-.
- Lightly tighten bolts -1-.
- Adjust sliding/tilting sunroof glass panel (height adjustment) => [page 167](#) .



Note

- ◆ After adjusting panel height, tighten securing screws (5 Nm).
- ◆ Install bellows after adjusting height of panel => [page 164](#) .



1.6 Adjusting height of sliding/tilting sunroof glass panel



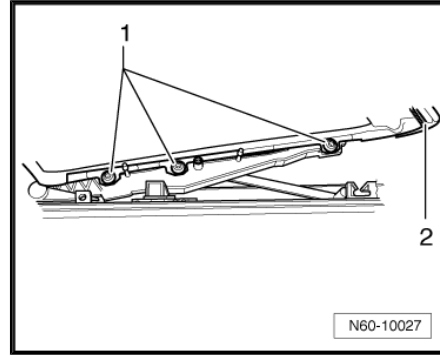
Note

The glass panel height adjustment is performed after the glass panel has been closed from tilt position.

Sliding/tilting sunroof glass panel 0 (zero) position OK (checking => [page 167](#)).

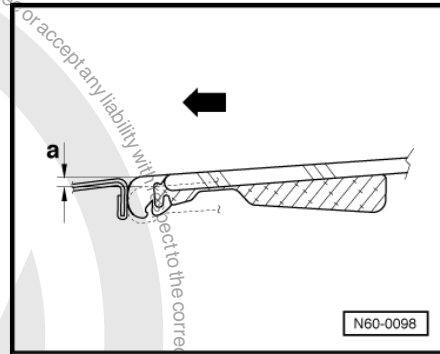


- Remove bellows ⇒ [page 164](#) .
- Loosen sliding/tilting sunroof glass panel -2- securing bolts
 -1- on left and right (do not remove).
- Run sliding/tilting sunroof glass panel to “open” position.
- Run sliding/tilting sunroof glass panel to “closed” position.
- Carry out height adjustment of sliding/tilting sunroof glass panel at front and rear on both sides as follows:



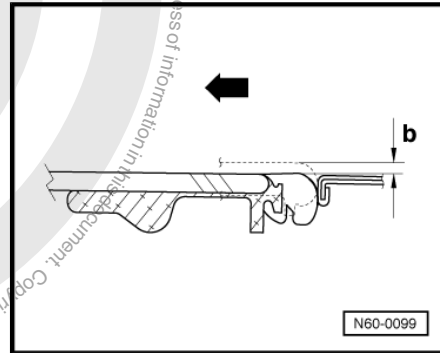
Front panel adjustment:

- a- = 0...1 mm lower than roof
- Arrow- points forwards
- Tighten foremost left and right bolts (5 Nm).



Rear panel adjustment:

- b- = 0...1 mm higher than roof
- Arrow- = Forwards
- First tighten middle and then rear bolts on left and right (5 Nm).



Note

- ◆ To achieve the best possible optical appearance, ensure that adjustments on left and right are as far as is possible uniform (symmetric).
- ◆ The glass panel should not be higher than the roof at any point at the front or lower than the roof at any point at the rear.

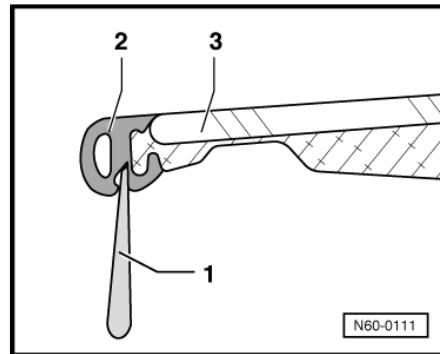
- Install bellows ⇒ [page 164](#) .

1.7 Adjusting panel seal

- Check that the pre-loading between panel seal -2- and body is uniform all-round using a 0.3 mm thick strip of paper (a visiting card for example).
- It must be possible to pull the paper strip through tightly between the panel seal and body.

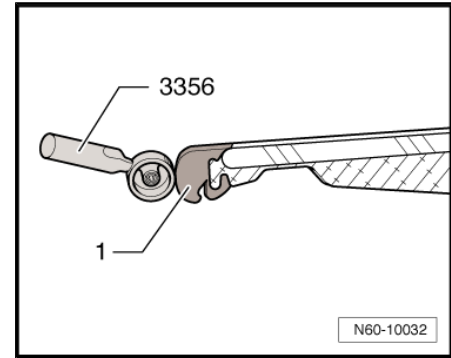
If this is not the case:

- Removing glass panel for sunroof ⇒ [page 166](#) .
- If the pressure is too little, roof seal -2- can be pushed apart with removal wedge -3409- -1-.



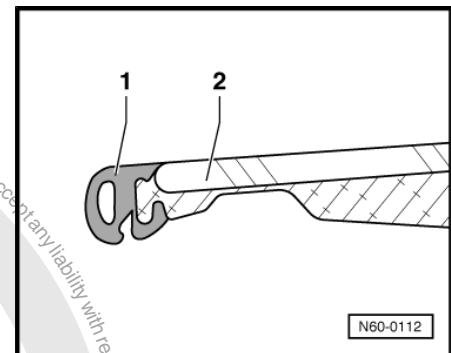


- If the pressure is too great, roof seal -1- can be pushed together all round by rolling with roller -3356- .



1.8 Renewing panel seal

- Removing glass panel for sunroof => [page 166](#) .
- Pull seal -1- off sliding/tilting sunroof glass panel -2-.

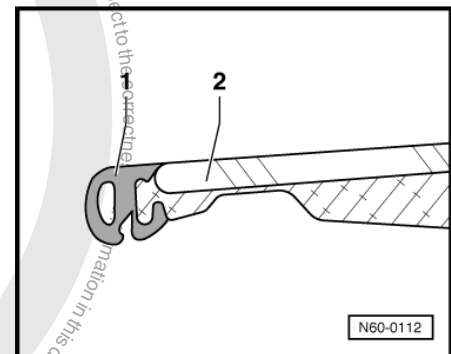


- Fit new seal -1- to rear edge of panel, start in middle and push onto sliding/tilting sunroof glass panel -2- from bottom to top.



Note

- ◆ To ease fitting of seal, coat panel edge with a soapy solution.
 - ◆ If the seal is not correctly installed, the surface will ripple.
 - ◆ The panel seal must be shortened to suit the panel circumference.
- Install sliding/tilting roof glass panel => [page 166](#) .
 - Adjust panel seal => [page 168](#) .



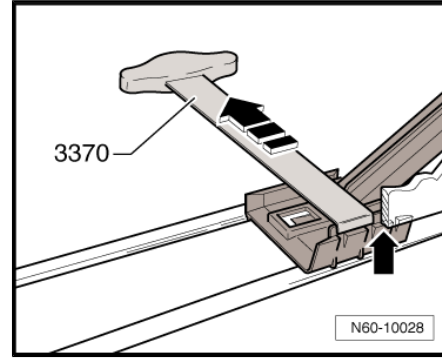
1.9 Removing and installing wind deflector

1.9.1 Removing

- Fully open sliding/tilting sunroof glass panel.
- Push wind deflector and height limit stop out of front of roof aperture and set wind deflector vertical.



- Insert front-end hook -3370- between edge of roof and wind deflector bearing -arrow-.
- Pull wind deflector bearings out of detents on left and right, in direction of -arrow-, using front-end hook -3370- .
- Remove wind deflector upwards out of guide rails.



1.9.2 Installing

- Place wind deflector in guide rails and slide wind deflector with height limit stop under front of roof aperture on both sides.
- Using light pressure press wind deflector bearings into guide rails.



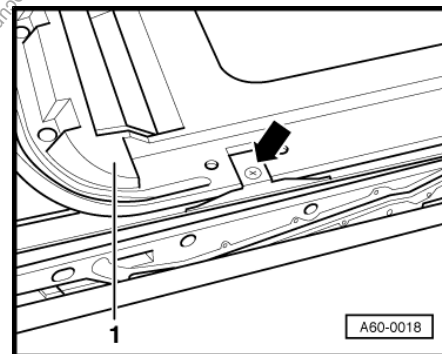
Note

Wind deflector bearings must audibly engage in the guide rails.

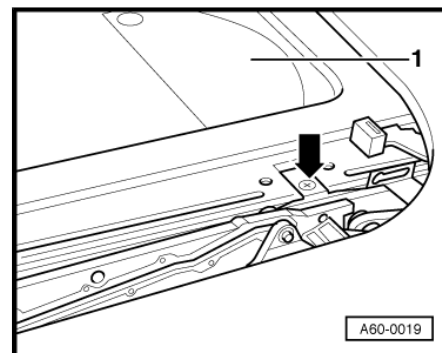
1.10 Removing and installing sliding headliner

1.10.1 Removing

- Removing glass panel for sunroof ⇒ [page 166](#) .
- Move sliding headliner backwards slightly.
- Remove front bolts -arrow- on left and right.
- Push spring slide forwards past the stop -1-.
- Move sliding headliner forwards and lift sliding headliner slightly above roof aperture.



- Remove rear bolt -arrow- on left and right.
- Push spring slide to rear and remove sliding headliner -1- out upwards.





1.10.2 Installing

Install in reverse order of removal.

Finally carry out a functional check.

1.11 Removing and installing sliding/tilting sunroof glass panel drive

1.11.1 Removing

- Removing lights and front operating unit ⇒ Electrical system;
Rep. Gr. 96 ; Lights and switches in roof trim .

Motor change - preselection switch recognition:



Note

- ◆ *To interrupt the authorization signal and therefore to activate the switch recognition, the requirements described below must be fulfilled.*
- ◆ *If this is not the case, it can lead to, that the drive does not correctly recognise the preselection switch and does not run to the selected positions. This can be seen if the sunroof stops approx. 10 cm before the fully closed position when the switch is in the closed position.*



Caution

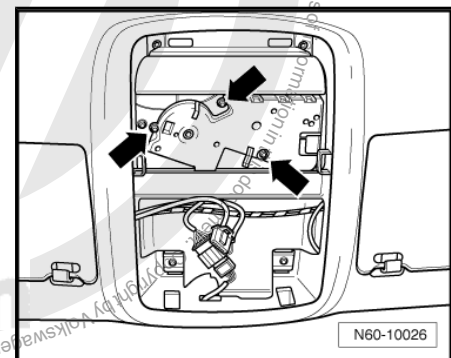
Remove or install drive for tilting/sliding sunroof glass panel only when sunroof is closed (0 position).

The requirements for removing and installing drive are: engine not running and ignition off, key not in ignition and door open.

- Switch off engine and ignition, withdraw key and open door.

This condition must remain until drive has been installed.

- Remove screws -arrows- and pull off sliding/tilting sunroof drive.
- Separate connector for sliding/tilting sunroof drive.



1.11.2 Installing

The screws for the sliding/tilting sunroof drive are microencapsulated and must always be renewed (3.5 Nm).

Install in reverse order of removal.

After installation is complete, key can be inserted into lock cylinder of ignition/starter switch again.



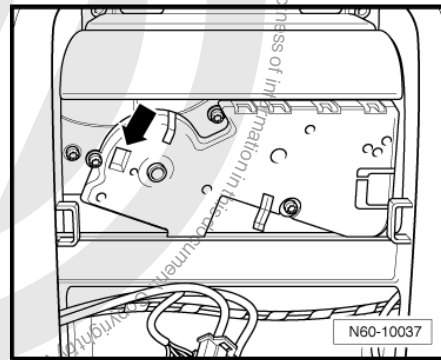
- Finally carry out a functional check.

1.12 Adjusting drive for sliding/tilting sunroof glass panel (0 position)

There may be a requirement to adjust the zero (0) position if the drive was removed when not in the zero position or the sliding/tilting sunroof glass panel was opened or closed using the emergency key.

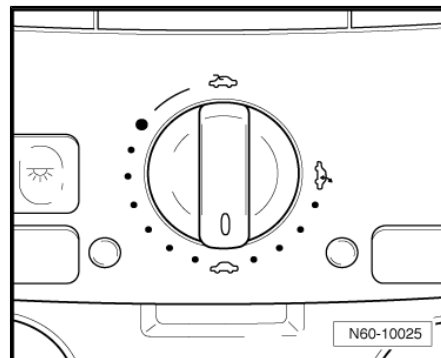
- Drive removed but still connected electrically.
- Select "open sunroof" using preselection control rotary switch.
- Select "close sunroof" using preselection control rotary switch.
- Select "tilt sunroof" using preselection control rotary switch.
- Select "close sunroof" using preselection control rotary switch.
- Install drive in this position (zero position) with sunroof closed.

The sliding/tilting sunroof glass panel drive is in zero (0) position, if a white dot can be seen in the drive aperture -arrow-.



1.13 Removing and installing sliding/tilting sunroof glass panel automatic preselection switch

- Removing preselector for sliding/tilting sunroof roof glass panel => Electrical system; Rep. Gr. 96 ; Lights and switches in roof trim .



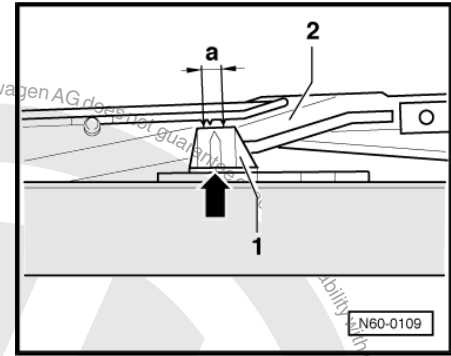
1.14 Checking parallel running

- Removing glass panel for sunroof => [page 166](#) .



The mark -arrow- on the rear of the guide upper section -1- must, on both sides, lie within the marks dimension -a- on the guide plate -2-.

- The guide plate -2- must be located in the guide rails (cannot be moved by hand).



1.15 Adjusting parallel running



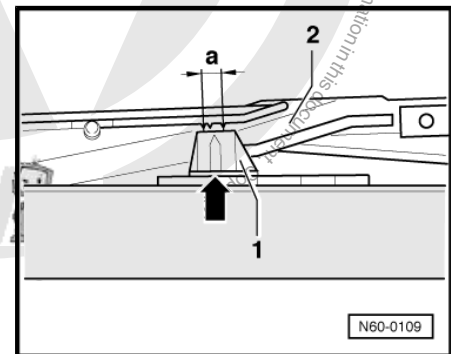
Note

The parallel running adjustment can only be made when the drive and glass panel are removed ("0" position).

- Remove sliding/tilting sunroof glass panel drive ⇒ [page 171](#) .

The mark -arrow- on the rear of the guide upper section -1- must, on both sides, lie within the marks dimension -a- on the guide plate -2-.

- The guide plate -2- must be located in the guide rails (cannot be moved by hand).
- Push guide upper part -1- both sides centrally between the marks.
- Install drive in this position (zero position) ⇒ [page 171](#) .
- Then check zero position ⇒ [page 172](#) .





1.16 Assembly overview - carrier unit

1 - Carrier unit

- ❑ Removing and installing
⇒ [page 174](#)

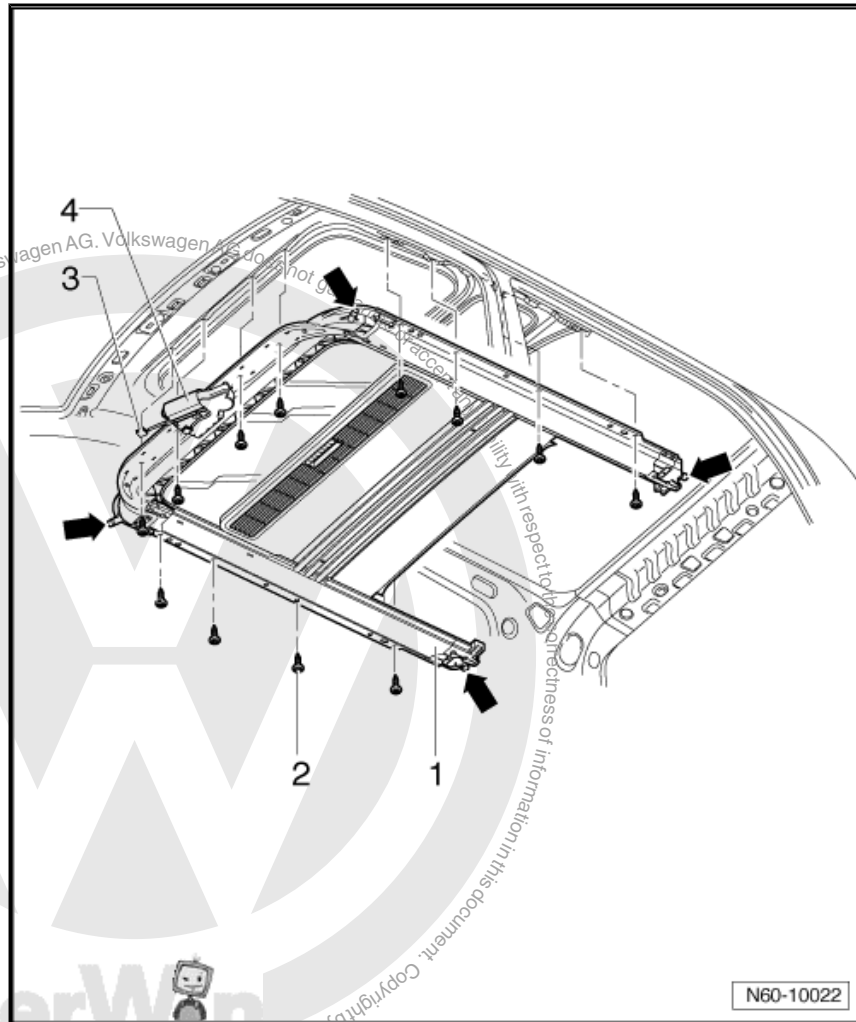
2 - Bolt

- ❑ Qty. 12
- ❑ 8 Nm

3 - Connector

4 - Sliding/tilting sunroof glass panel drive

- ❑ Removing and installing
⇒ [page 171](#)



1.17 Removing and installing carrier unit



Caution

Remove or install drive for tilting/sliding sunroof glass panel only when sunroof is closed (0 position).

The requirements for removing and installing drive are: engine not running and ignition off, key not in ignition and door open.

1.17.1 Removing



Caution

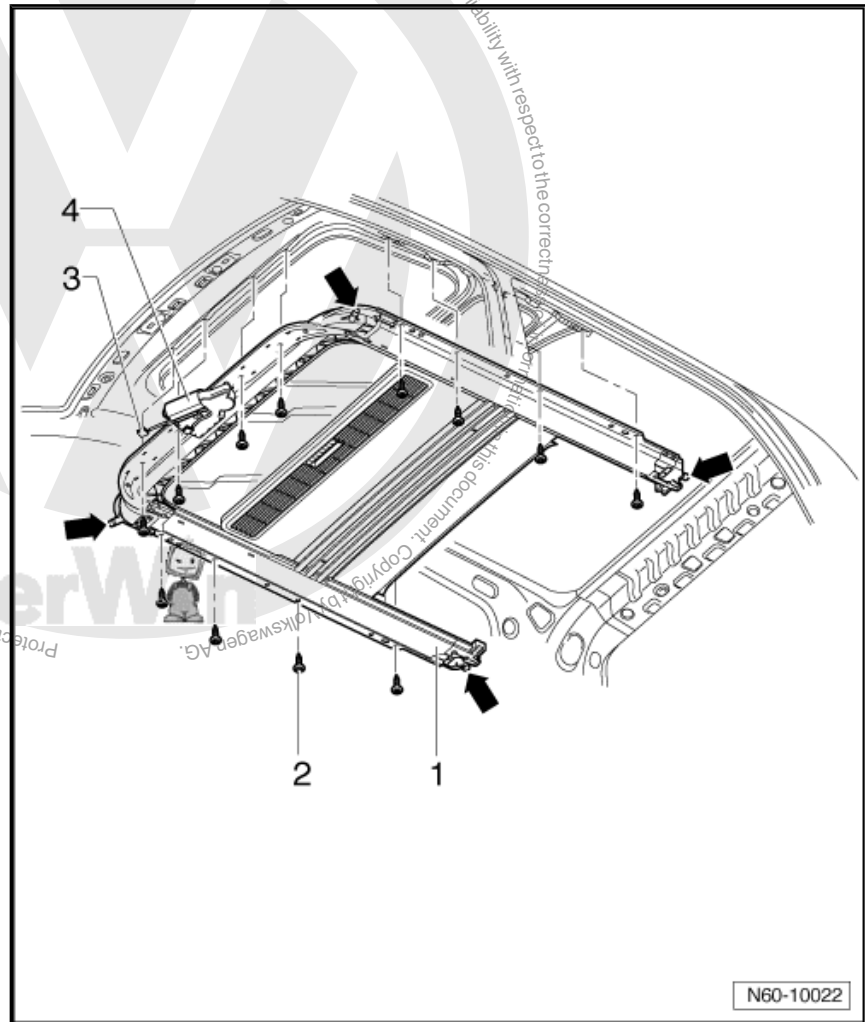
Carry out following sequences using extreme care so as not to damage the moulded headliner.

- Lower moulded headliner (moulded headliner is not removed from the vehicle, the front seats and front passenger door are



not removed) => General body repairs, interior; Rep. Gr. 70 ;
Roof trims .

- Pull water drain hoses -arrows- off carrier unit -1-.
- Separate connector -3- on sliding/tilting sunroof glass panel drive -4-.
- Remove bolts -2- and remove carrier unit -1- from vehicle with the help of a second mechanic.



1.17.2 Installing



Caution

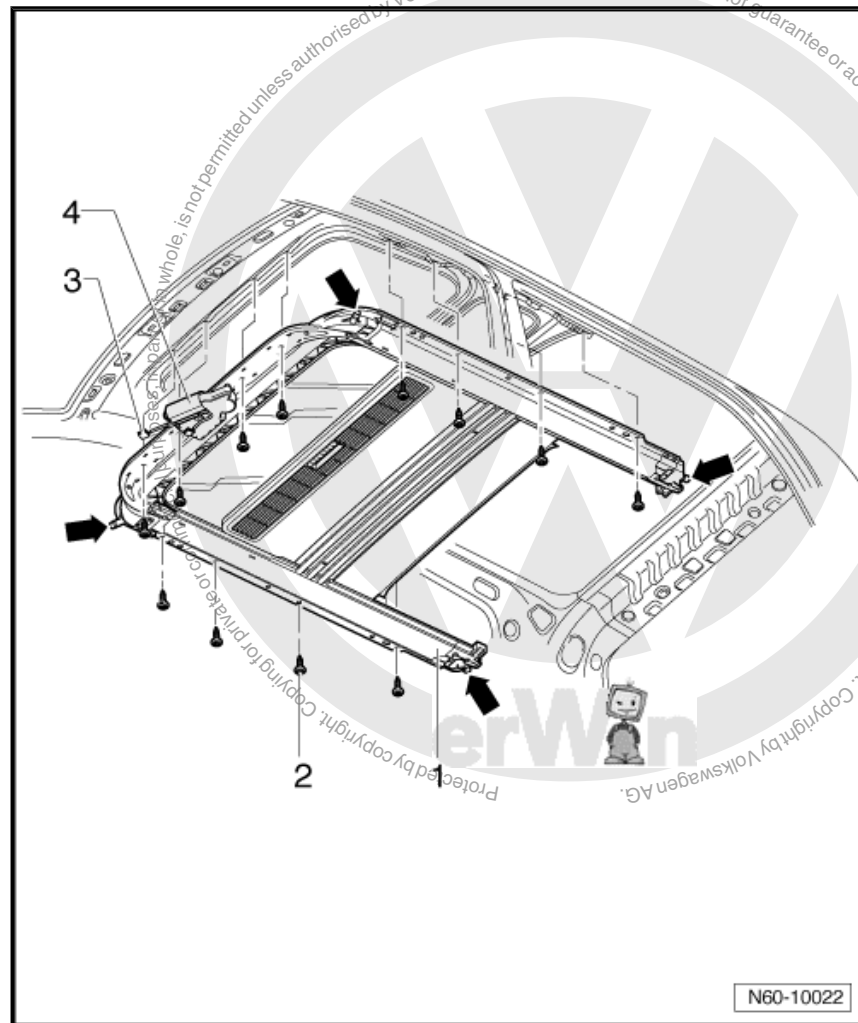
Carry out following sequences using extreme care so as not to damage the moulded headliner.

- Fit carrier unit -1- into roof aperture with the help of a second mechanic.
- During installation align carrier unit -1- in roof using two cylindrical pins (shank end of drill) 12 mm front right and 10 mm rear left.



Carrier unit must not contact roof frame.

- Install bolts -2-.
- Check routing of wiring and connectors of electrical consumers in roof and correct as necessary.
- Tighten screws (8 Nm) for carrier unit -1-, starting at sunroof drive -4- and moving rearward, alternating between left and right sides.
- Install water drain hoses -arrows-.
- Attach connector -3- on sliding/tilting sunroof glass panel drive -4-.
- Install moulded headliner ⇒ General body repairs, interior;
Rep. Gr. 70 ; Roof trims .





1.18 Operating without current

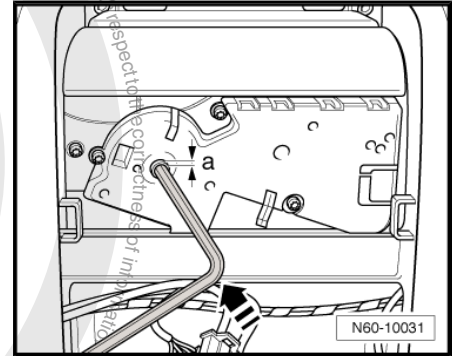


Note

In the event of power failure, the sliding/tilting sunroof with glass panel can be moved using a hexagon key directly on the drive. Hexagon key is located in vehicle tool kit.

- Removing lights and front operating unit ⇒ Electrical system; Rep. Gr. 96 ; Lights and switches in roof trim .
- Guide hexagon key into bolt on drive.
- Press key upwards -arrow- to release the drive.

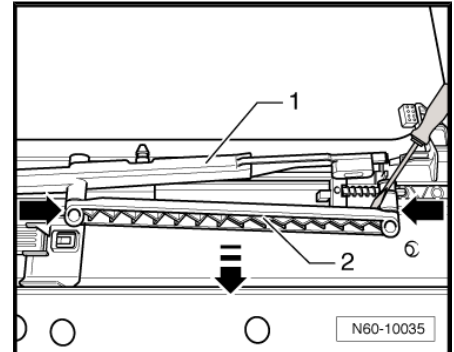
The bolt will be pressed a few millimetres inwards -a-. Sliding/tilting sunroof glass panel can only be moved in this position.



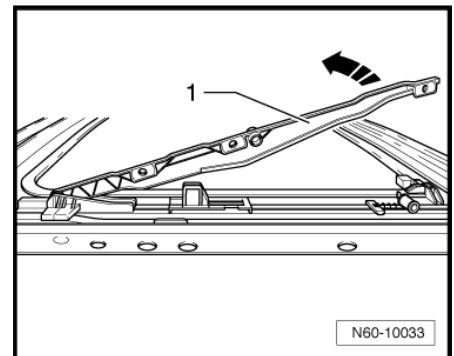
1.19 Removing and installing guide plate

1.19.1 Removing

- Removing glass panel for sunroof ⇒ [page 166](#).
- Using a screwdriver, unclip spacer -2- from guide plate -1- at front and rear -arrows-.
- Pull spacer -2- in -direction of arrow- out of guide plate -1-.

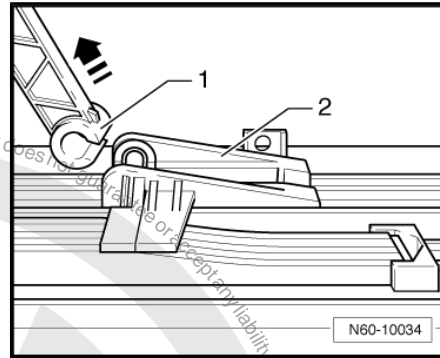


- Lift guide plate up -1- in -direction of arrow-.





- Slide front guide -2- forwards and pull guide plate -1- in -direction of arrow- out of front guide -2-.



1.19.2 Installing

Install in reverse order of removal.

1.20 Removing and installing guide plate

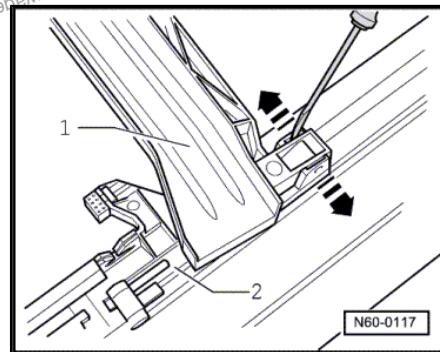
1.20.1 Removing



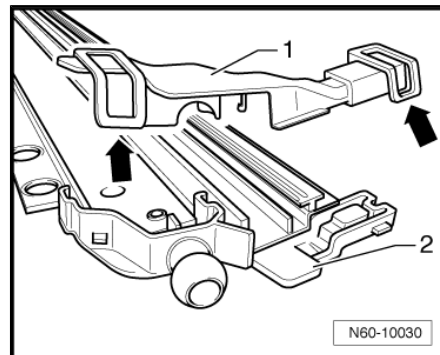
Note

Always renew guides with cables as a pair.

- Removing glass panel for sunroof ⇒ [page 166](#) .
- Remove sliding/tilting sunroof glass panel drive ⇒ [page 171](#) .
- Remove carrier unit ⇒ [page 174](#) .
- Remove guide plate ⇒ [page 177](#) .
- Detach water channels -1- carefully using a screwdriver at both sides on guide locating hook -2- in -direction of arrow- and remove water channels.

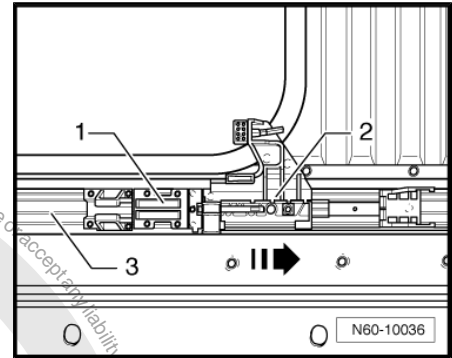


- Release end piece upper part -1- fastening -arrows- from end piece lower part -2- and pull off upwards.





- Slide rear guide lower part -1- in -direction of arrow- in guide rail -3-, until the locating hook guide locking mechanism -2- is released.
- Pull out rear guide lower part -1- and locking hook guide -2- together in -direction of arrow- from guide rail -3- and remove.



1.20.2 Installing

Install in reverse order of removal.

1.21 Cleaning water drain hoses



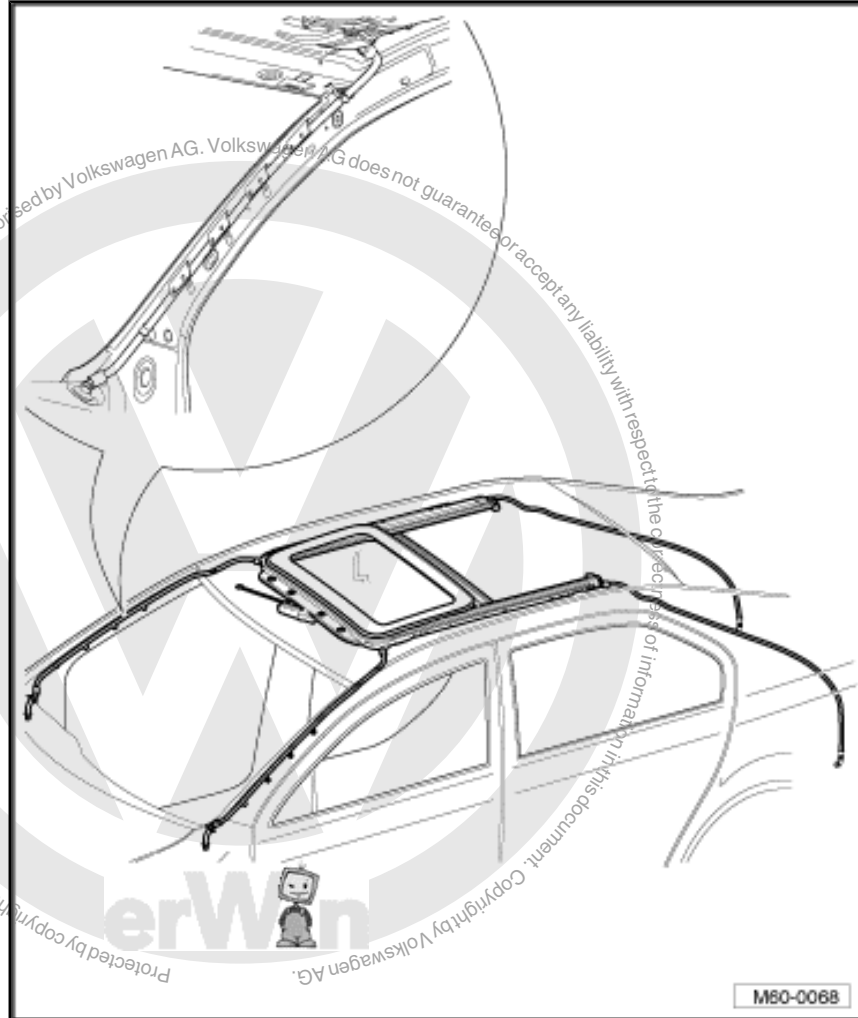
Note

For cleaning, a locally manufactured tool made from a speedometer inner cable, approx. 2300 mm long is recommended.



1.21.1 Front water drain hoses

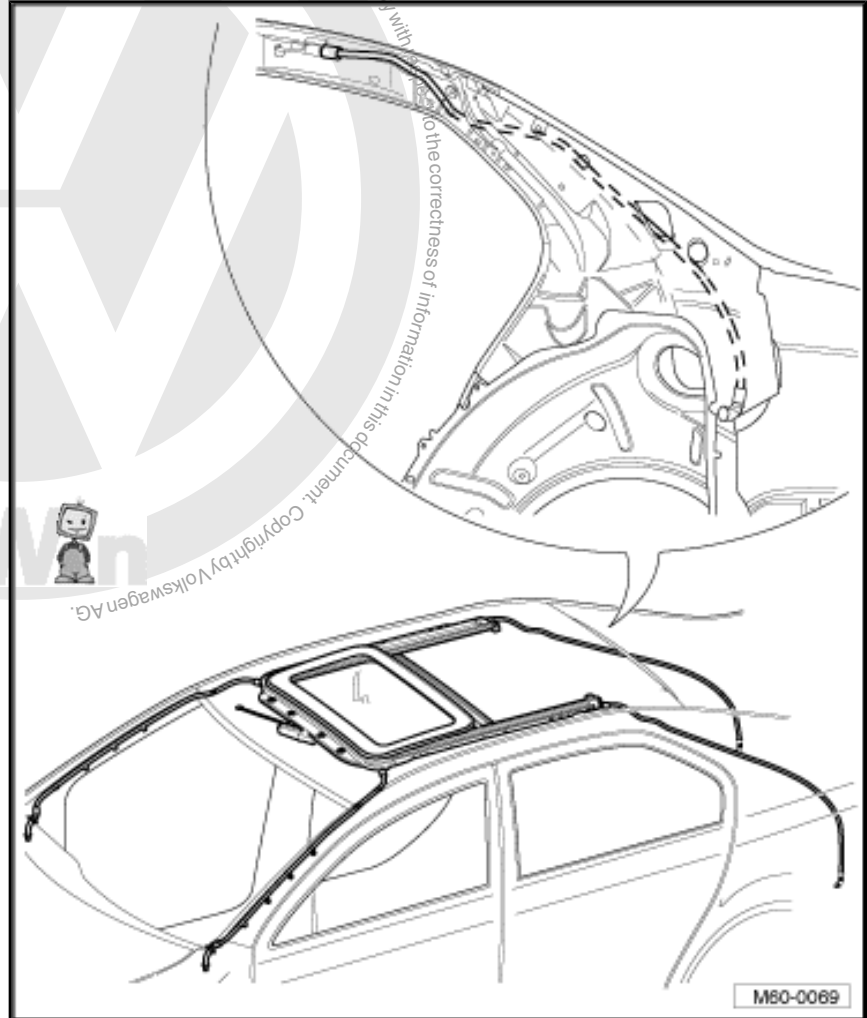
The front water drain hoses run through the A-pillars and end at the bulkhead cross member. Cleaning is done from the sunroof panel aperture.





1.21.2 Rear water drain hoses

The rear water drain hoses run through the C-pillars and end in the rear wheel housings. Cleaning is done from the wheel housing. The wheel housing liner must be removed => [page 323](#).



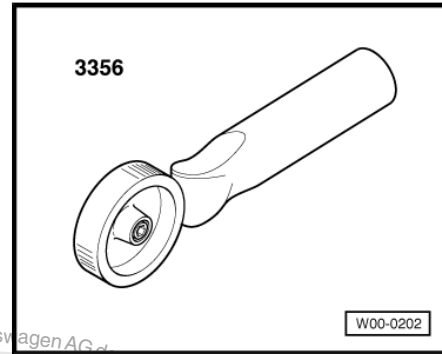


2 Panorama sliding sunroof (Arvin-Meritor)

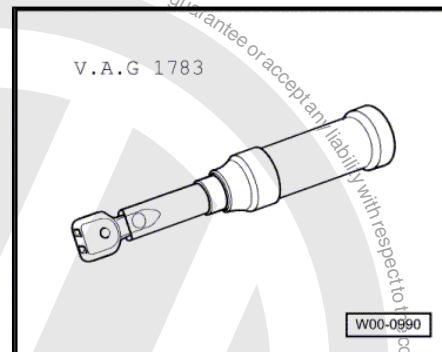
2.1 Tools

Special tools and workshop equipment required

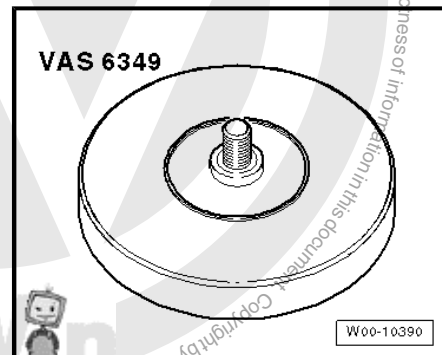
- ◆ Roller for door insulation foil -3356-



- ◆ Torque wrench -V.A.G 1783-



- ◆ Adhesive strip remover -VAS 6349-



2.2 Function

All actions of the panorama sliding roof can be performed with ignition switched on.

After the ignition is switched off, actions can be performed until either the driver or front passenger door is opened.



Opening of front glass panel can be preselected using rotary switch -1-.

Opening glass panel to the so called comfort position -4-, prevents to a large extent wind noise while driving, which can occur when roof is fully open.

Glass panel can be tilted and closed using pull and push function on rotary switch.

Sun blind opening button -2- and sun blind closing button -3- are integrated into rotary switch.

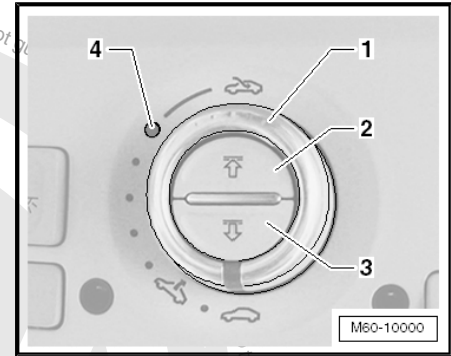
The panorama sliding roof is equipped with a roll-back function. If the glass panel encounters an obstruction while closing from tilting or sliding position, it will open automatically.

In addition, there is an emergency closure function. If problems occur during closure, panorama sliding roof can be forced to close by pulling rear end of rotary switch. Rotary switch must thus be in "Sliding sunroof closed" position.

The roll-back function is disabled when the emergency closure function is active

The sliding sunroof motor is equipped with an overheating protection, whose activation depends on various parameters. The sliding sunroof motor is functional again after a cooling-off phase.

In the event of power failure, front glass panel and sun blind can be moved manually => [page 217](#) .



2.3 Establishing reference points of panorama sliding roof



Note

- ◆ After renewal of glass panel, motor, tilting mechanism or sun blind, establish reference points of panorama sliding roof for respective drive.
- ◆ Roll-back function is switched off when establishing reference points.

Establishing reference points of sliding sunroof motor

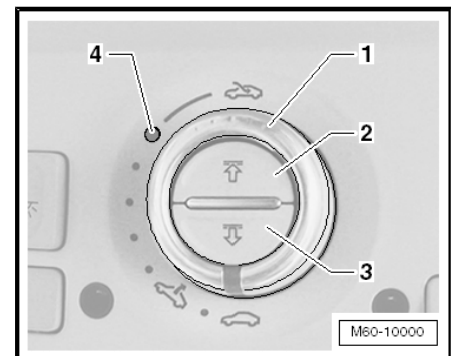
Ignition is switched on.

Rotary switch must be in "Sliding sunroof closed" position.

- Pull rotary switch -1- downwards and hold during whole process to establish reference points (approx. 20 s) in this position.
- When establishing reference points, glass panel first closes and then moves approx. 200 mm towards the rear.
- After glass panel is closed again, establishment of reference points is finished and rotary switch must be released.

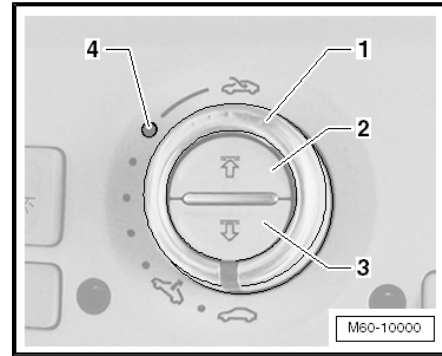
Establishing reference points for sun blind motor

Ignition is switched on.





- Press sun blind closing button -3- and hold during whole standardization run (approx. 20 s) in this position.
- When establishing reference points, sun blind first closes and then moves approx. 200 mm towards the rear.
- After sun blind is closed completely again, establishment of reference points is finished and button must be released.



2.4 Assembly overview - panorama sliding roof

1 - Exterior seal

- Renewing ⇒ [page 191](#)

2 - Rear glass panel

- Removing and installing ⇒ [page 187](#)
- Adjusting ⇒ [page 188](#)

3 - Front glass panel

- Removing and installing ⇒ [page 185](#)
- Adjusting ⇒ [page 188](#)

4 - Assembly frame

- Assembly overview ⇒ [page 203](#)
- Removing and installing ⇒ [page 207](#)

5 - Sun blind

- Removing and installing ⇒ [page 199](#)

6 - Sun blind motor

- Removing and installing ⇒ [page 198](#)
- Standardization ⇒ [page 183](#)

7 - Sliding sunroof motor

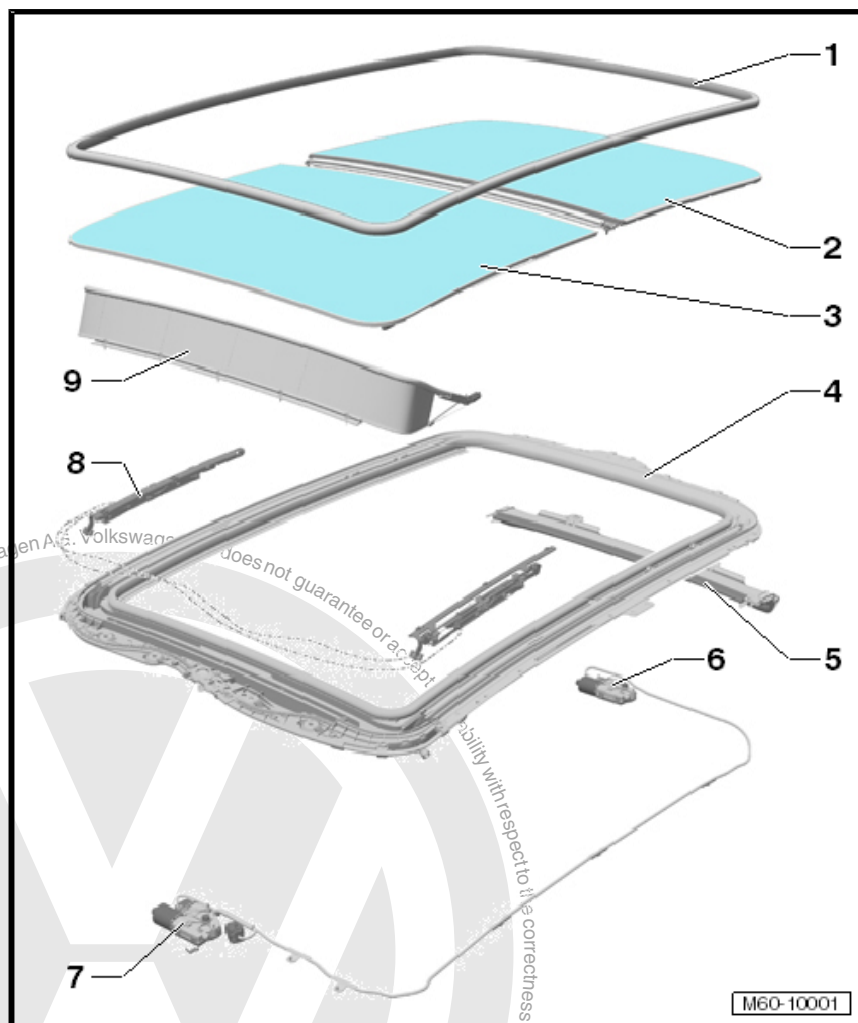
- Removing and installing ⇒ [page 196](#)
- Standardization ⇒ [page 183](#)

8 - Tilting mechanism

- Removing and installing ⇒ [page 215](#)

9 - Wind deflector

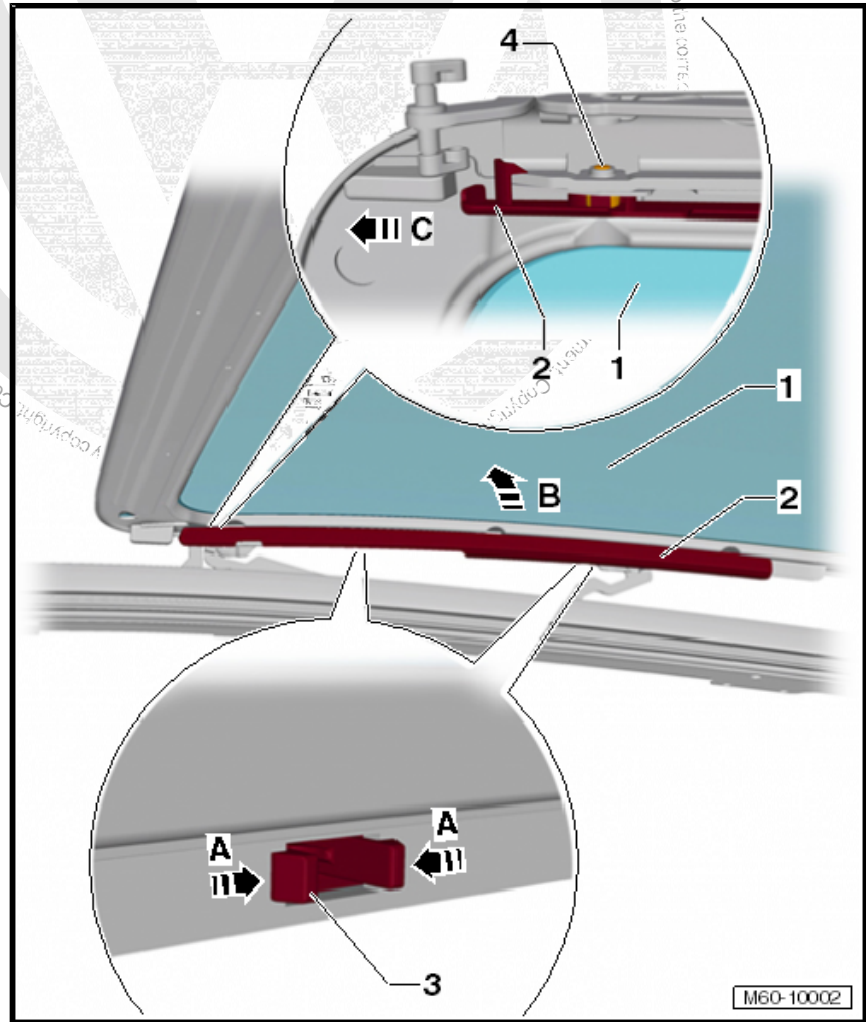
- Removing and installing ⇒ [page 193](#)





2.5 Removing and installing front glass panel

2.5.1 Removing



- Open glass panel -1- until trim -2- is accessible.
- Unclip locking lugs -3- by pressing together in direction of -arrow A- on back.
- First pull off trim panel -2- downwards at rear and then inwards in direction of -arrow B- and remove it from bolt -4-.
- Push trim panel in direction of -arrow C- forwards and remove.



- Remove bolts -2- from glass panel -1- on left and right.

i Note

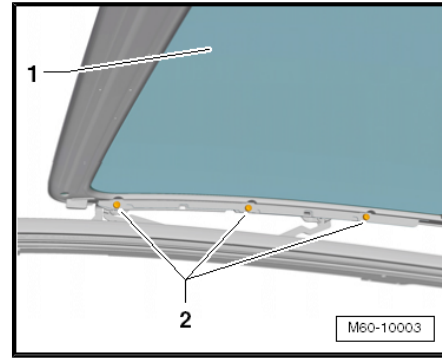
To remove bolts, use a magnetic tool so that bolts do not fall into mechanism of panorama sliding roof.

- Remove glass panel upwards.



Caution

To avoid damaging wind deflector, do not move tilting mechanism when glass panel is removed.

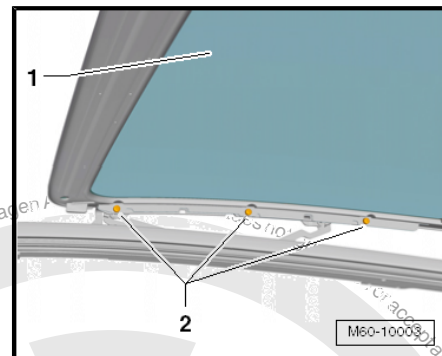


2.5.2 Installing

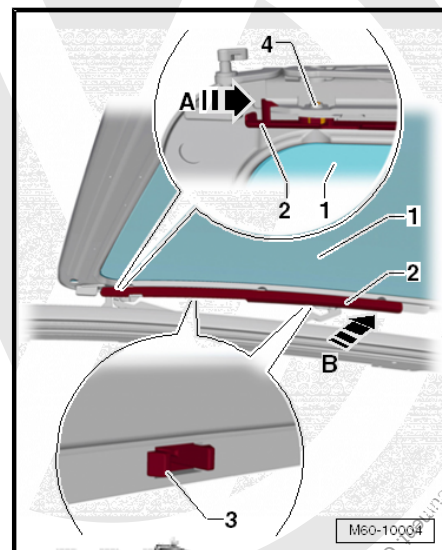
i Note

- ◆ Always use new bolts when installing or removing glass panel.
- ◆ To screw in bolts, use a magnetic tool so that bolts do not fall into mechanism of panorama sliding roof.

- Set glass panel -1- from top and screw bolts -2- without tightening them.
- Adjust front glass panel ⇒ [page 188](#) .
- Tighten bolts -2- (5 Nm).



- Fit front trim panel -2- into glass panel -1- and slide in direction of -arrow A-.
- Push trim panel in direction of -arrow B- onto bolt -4- and clip locking lugs -4- on back.
- On completion of work, establish reference points of sliding sunroof motor ⇒ [page 183](#) .





2.6 Removing and installing rear glass panel

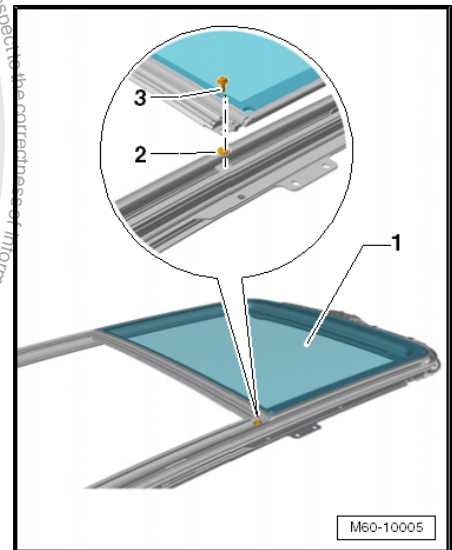
2.6.1 Removing



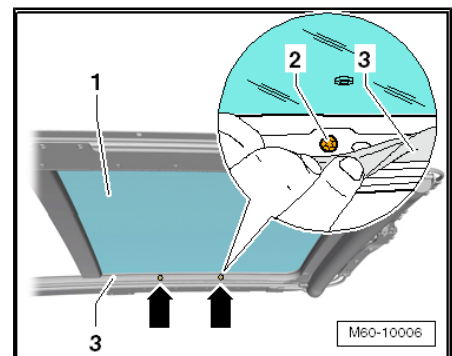
Note

To remove bolts, use a magnetic tool so that bolts do not fall into mechanism of panorama sliding roof.

- Open front glass panel completely by pressing rotary switch beyond comfort position.
- Remove bolts -3- of rear glass panel -1-.
- Remove spacer -2- under bolting point.
- Move front glass panel into "tilted" position.



- Pull inner seal -3- inwards slightly at point -arrow- and remove bolts -2-.
- Remove rear glass panel upwards -1-.



2.6.2 Installing

Install in reverse order of removal.

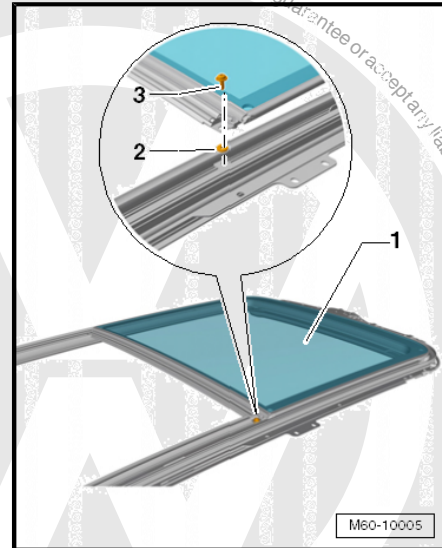


Note

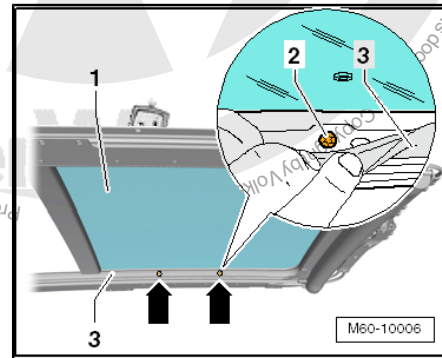
- ◆ Always use new bolts when installing or removing glass panel.
- ◆ To screw in bolts, use a magnetic tool so that bolts do not fall into mechanism of panorama sliding roof.



- Fit glass panel -1- from top into roof.
- Install spacer -2- and tighten bolt -3- (5 Nm).



- Pull inner seal -3- slightly backwards at -arrow- positions and screw bolts -2- without tightening them.
- Adjust rear glass panel => [page 188](#) .
- After adjusting rear glass panel, tighten bolts (5 Nm).
- On completion of work, establish reference points of sliding sunroof motor => [page 183](#) .



2.7 Adjusting height of front and rear glass panel



Note

- ◆ *Front glass panel must only be adjusted on front edge and rear glass panel on rear edge.*
- ◆ *To achieve the best possible optical appearance, ensure that adjustments on left and right are as far as is possible uniform (symmetric).*



Checking height adjustment

- Check adjustment of front glass panel -1- and rear glass panel -2- with a depth gauge.
- ◆ Dimension -a- = 1.5 ± 1 mm
- ◆ Dimension -b- = 1 ± 1 mm
- ◆ Dimension -c- = 1 ± 1 mm

If measured values differ from specifications, respective glass panel must be adjusted.

- ◆ Adjusting front glass panel ⇒ [page 189](#)
- ◆ Adjusting rear glass panel ⇒ [page 189](#)

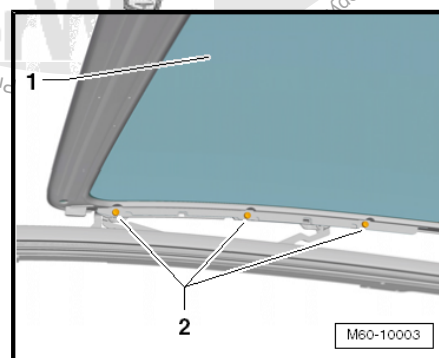
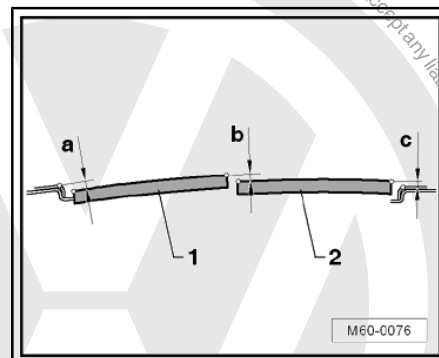
Adjusting front glass panel



Note

The glass panel height adjustment is performed after the glass panel has been closed from slide open position.

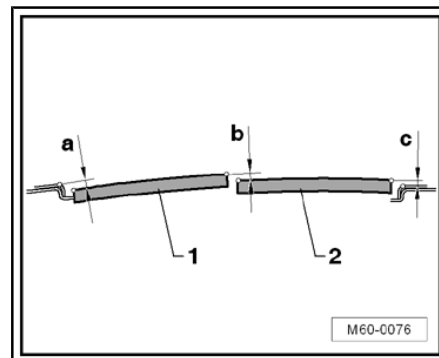
- Remove trim panel ⇒ [page 185](#) .
- Loosen only both front bolts -2- left and right for glass panel -1-.
- Close glass panel.



- Adjust glass panel -1- as shown in illustration.

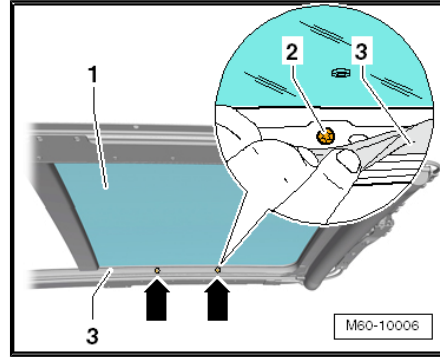
- ◆ Dimension -a- = 1.5 ± 1 mm
- ◆ Dimension -b- = 1 ± 1 mm
- ◆ Dimension -c- = 1 ± 1 mm
- Tighten left and right bolts (5 Nm).
- Install trim ⇒ [page 186](#) .

Adjusting rear glass panel



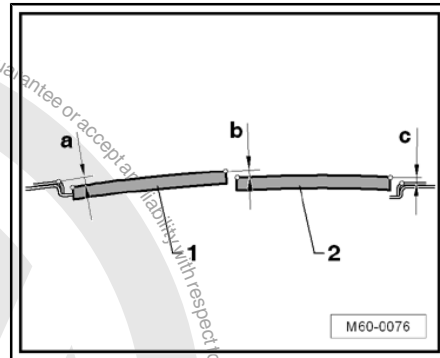


- Pull inner seal -3- slightly backwards at -arrow- positions and remove bolts -2- of rear glass panel -1-.



- Adjust rear glass panel -2- as shown in illustration.

- ◆ Dimension -a- = 1.5 ± 1 mm
- ◆ Dimension -b- = 1 ± 1 mm
- ◆ Dimension -c- = 1 ± 1 mm
- Tighten left and right bolts (5 Nm).



2.8 Renewing seals for rear glass panel

- Remove rear glass panel ⇒ [page 187](#) .

Renew front and inner seals

- Pull respective seal -1- off rear glass panel.
- ◆ 2 Front seal
- ◆ 3 Inner seal
- Remove existing adhesive residue using adhesive strip remover -VAS 6349-
- Bonding surface on glass panel must be free of dust and grease.
- Clean bonding surface completely using cleaning solution -D 009 401 04- .

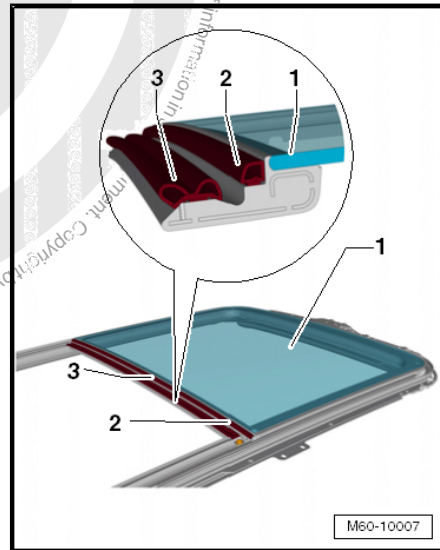


Note

To guarantee a good bonding of seal, do not bond at a temperature below 20°C.

- Remove protective backing from adhesive tape of new seal and press on seal at both ends.
- Sprain any seal excess length evenly.
- Press in seal evenly using roller for door insulation foil -3356- .
- Install rear glass panel ⇒ [page 187](#) .

Removing side seal



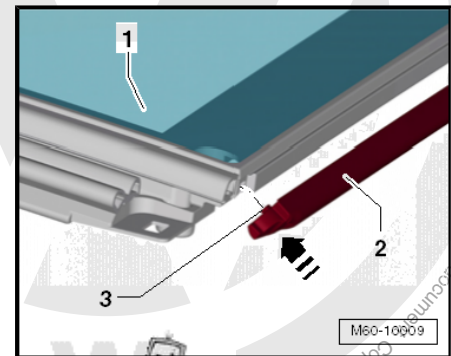
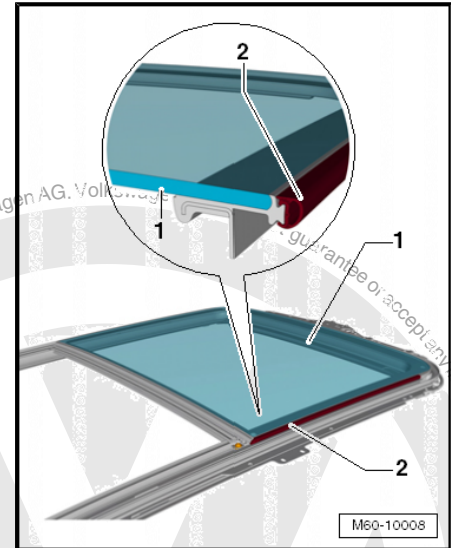


- Remove side seal -2- from profile of rear glass panel -1-.
- Remove existing adhesive residue using adhesive strip remover -VAS 6349- .
- Bonding surface on glass panel must be free of dust and grease.
- Clean bonding surface completely using cleaning solution -D 009 401 04- .

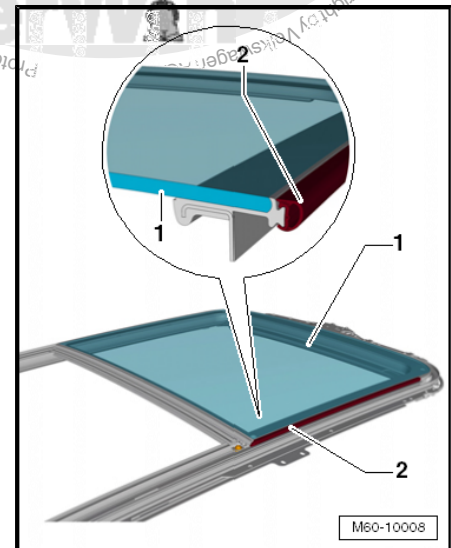


Note

- ◆ *New seal is supplied in excess length. Cut new seal to appropriate length. It is recommended to leave new seal 1-2 mm longer and to sprain any excess length.*
- ◆ *To guarantee a good bonding of seal, do not bond at a temperature below 20°C.*
- Pull off protective backing from adhesive tape of new seal.
- Set new seal -2- with fastener -3- on glass panel -1-.
- Press seal on both ends.



- Press seal -2- onto profile of glass panel -1- and sprain any excess length evenly.
- Press in seal evenly using roller for door insulation foil -3356- .
- Install rear glass panel ⇒ [page 187](#) .

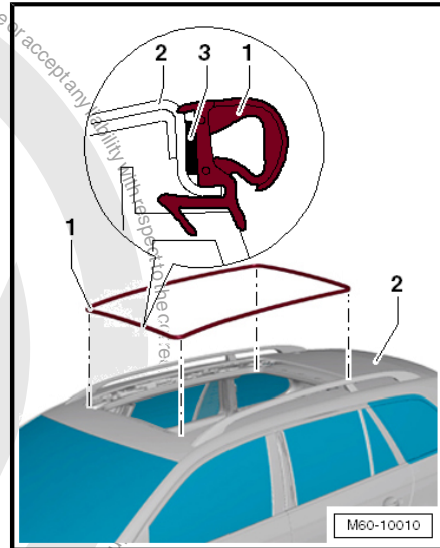


2.9 Renewing outer seal

- Remove front glass panel ⇒ [page 185](#) .
- Remove rear glass panel ⇒ [page 187](#) .



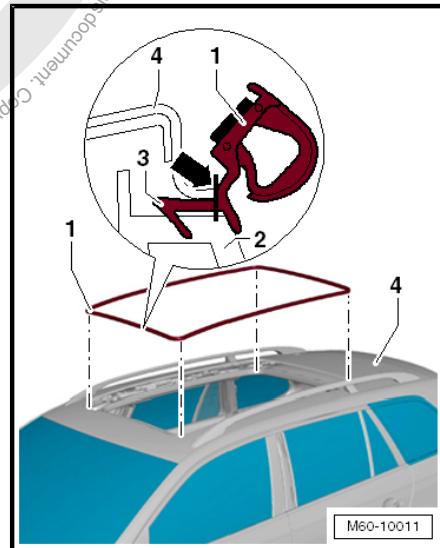
- Pull out outer seal -1- in bonding area -3- from roof -2-.



- Cut off all round profile of outer seal -1- in -arrow- area, flush with edge of roof -4-.
- Remaining part -3- stays between roof -4- and assembly frame -2-.
- Remove existing adhesive residue using adhesive strip remover -VAS 6349- .
- Entire bonding surface on roof cut-out must be free of dust and grease.
- Clean bonding surface completely using cleaning solution -D 009 401 04- .

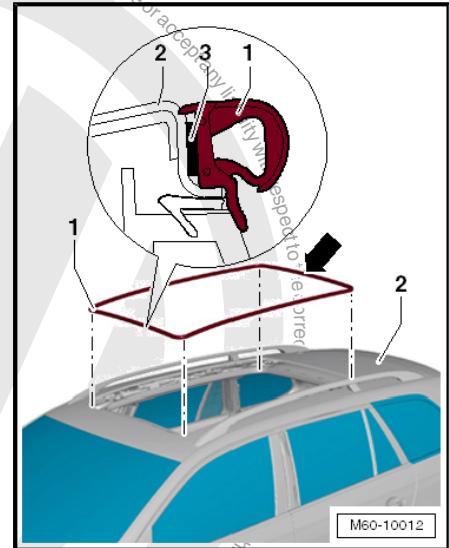
i Note

- ◆ *New seal is supplied in excess length. Cut new seal to appropriate length. It is recommended to leave new seal 1-2 mm longer and to sprain any excess length.*
- ◆ *To guarantee a good bonding of seal, do not bond at a temperature below 20°C.*
- ◆ *After bonding outer seal, wait at least 30 min before fitting glass panel to assure seal does not unstick.*





- Centre new outer seal -1- with butt -arrow- on rear centre of roof cut-out.
- Pull protective backing from adhesive tape -3- of new outer seal -1- and press seal on roof -2-.
- The seal must not pull into the radii, otherwise the seal will stretch and compress.
- Press in outer seal evenly and all round twice using roller for door insulation foil -3356- .
- Install rear glass panel ⇒ [page 187](#) .
- Install front glass panel ⇒ [page 185](#) .



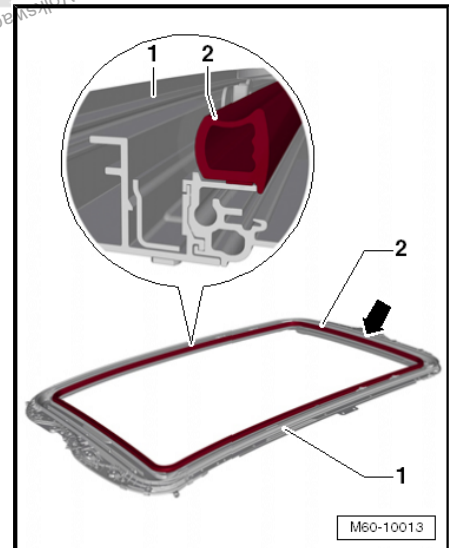
2.10 Renewing inner seal

- Remove front glass panel ⇒ [page 185](#) .
- Remove rear glass panel ⇒ [page 187](#) .
- Pull inner seal -2- off assembly frame -1-.
- Remove existing adhesive residue using adhesive strip remover -VAS 6349- .
- Bonding surface must be free of dust and grease.
- Clean bonding surface completely using cleaning solution -D 009 401 04- .

Note

To guarantee a good bonding of seal, do not bond at a temperature below 20°C.

- Place inner seal -2- with butt positioned on rear centre of roof cut-out, onto bonding surface of assembly frame -1-.
- Pull protective backing from adhesive tape of new inner seal section by section and press it on.
- The seal must not pull into the radii, otherwise the seal will stretch and compress.
- Press inner seal in evenly and all round twice using roller -3356- .
- Install rear glass panel ⇒ [page 187](#) .
- Install front glass panel ⇒ [page 185](#) .



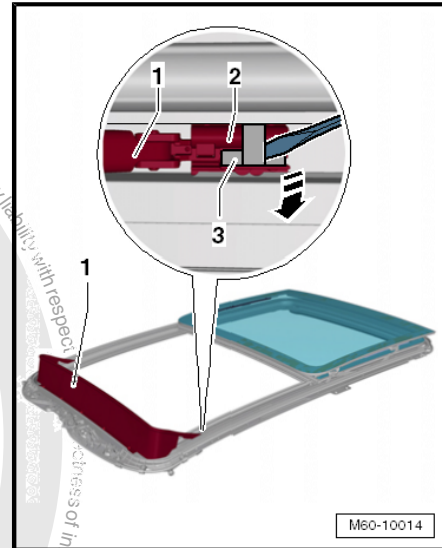
2.11 Removing and installing wind deflector

2.11.1 Removing

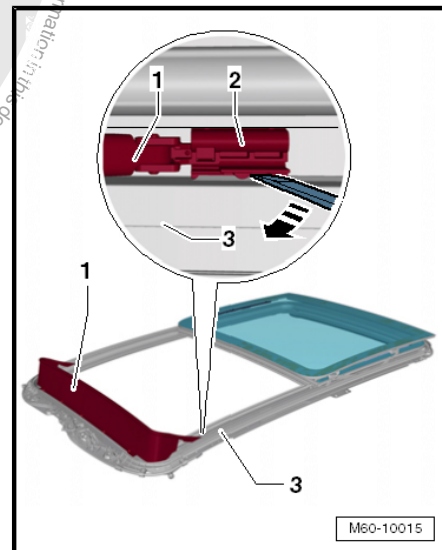
- Open front glass panel completely.



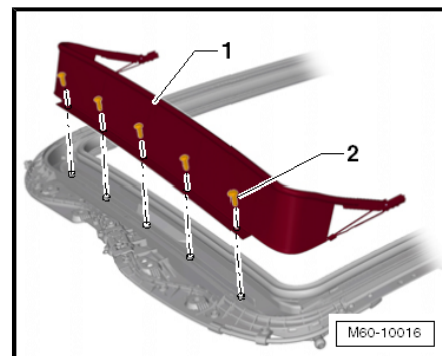
- Using a screwdriver, unclip securing clip -3- over mounting bracket -2- of wind deflector -1-.



- Using a screwdriver, unclip mounting bracket -2- of wind deflector -1- from assembly frame -3-.



- Remove bolts -2- from wind deflector -1-.
- Remove wind deflector -1- upwards.



2.11.2 Installing

Install in reverse order of removal.

Specified torque

Wind deflector bolts 2 Nm



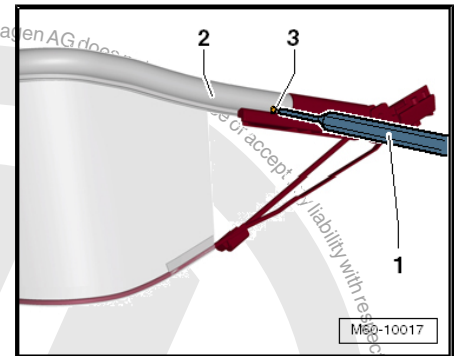
Note

- ◆ Wind deflector mounting bracket must engage audibly.
- ◆ Securing clip of mounting bracket must always be renewed after removal.

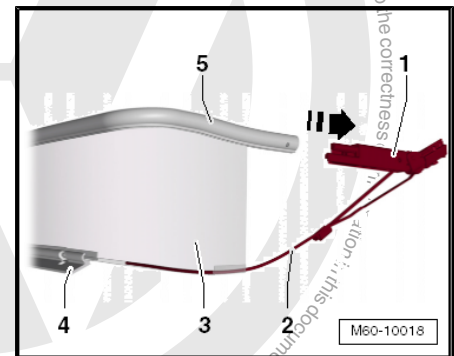
2.12 Removing and installing wind deflector bracket

2.12.1 Removing

- Remove wind deflector ⇒ [page 193](#) .
- Using a drift -1-, drive dowel pin -3- out of upper net strip -2-



- Pull wind deflector bracket -1- out of net strip -5- in direction of -arrow-.
- Pull tensioning wire -2- out of lower net strip -4- and net -3-.



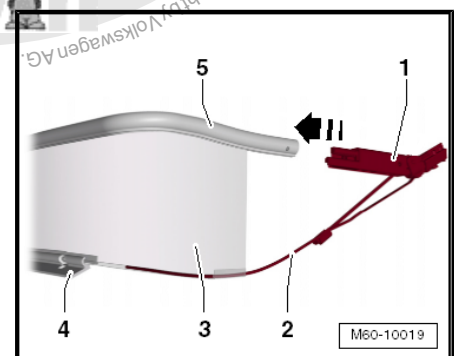
2.12.2 Installing

- Carefully push tensioning wire -2- through net -3- into lower net strip -4-.

Further installation is performed in reverse order of removal.

Use a new dowel pin to secure wind deflector bracket.

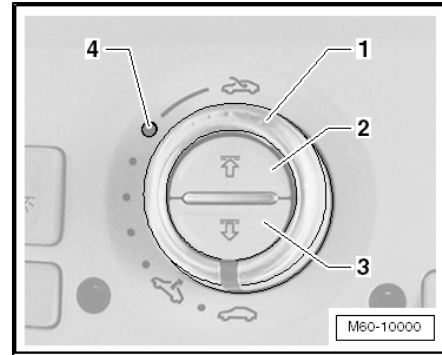
- Install wind deflector ⇒ [page 193](#) .





2.13 Removing and installing preselector for glass panel and sun blind

- Removing preselector for panorama sliding roof glass panel
⇒ Electrical system; Rep. Gr. 96 ; Lights and switches in roof trim .



2.14 Removing and installing sliding sunroof motor

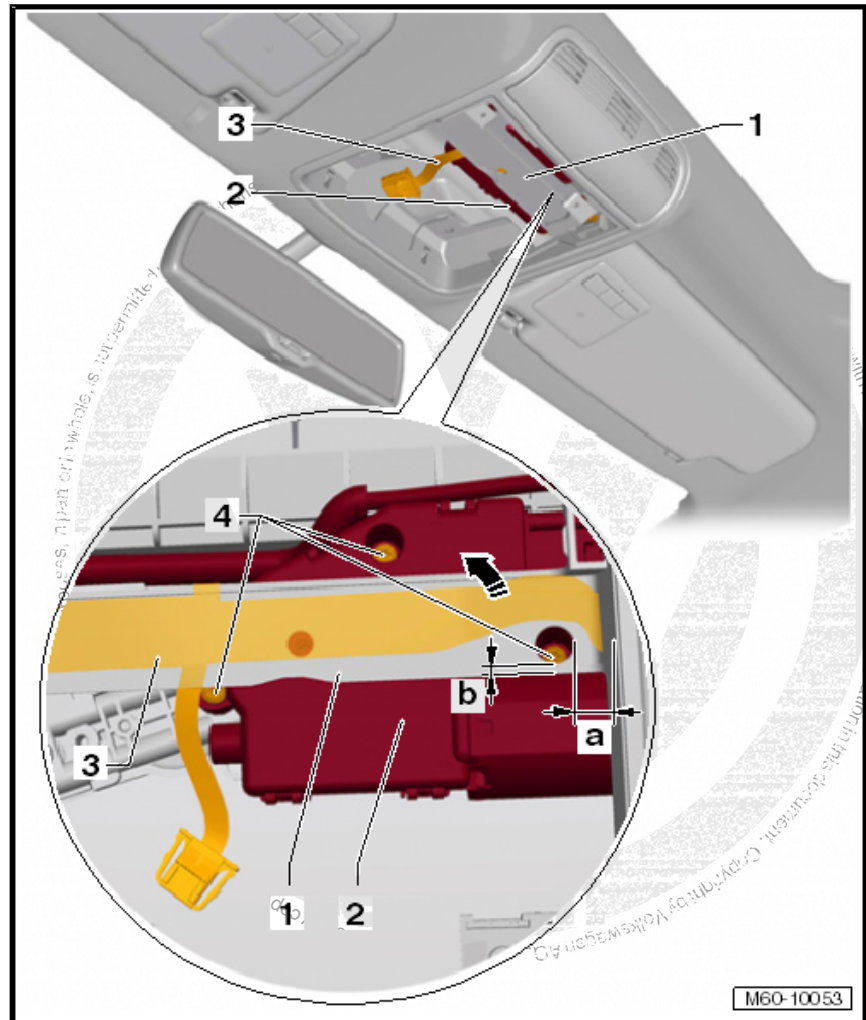
2.14.1 Removing

- Removing lights and front operating unit ⇒ Electrical system;
Rep. Gr. 96 ; Lights and switches in roof trim .



WARNING

On some models, a ribbon cable is bonded to the light cut-out web. Before removing sliding sunroof motor, carefully detach ribbon cable from web and push it to side. Ensure that ribbon cable is not damaged when doing this.



- Carefully detach ribbon cable -3- (if fitted) from web -1- and pull it to side -arrow-.

To access right bolt -4- of sliding sunroof motor -2- with tool, drill a 10 mm \varnothing hole in web -1-.

Dimension -a- = 10 mm

Dimension -b- = 2 mm



Caution

Ensure when drilling hole that sliding roof motor underneath is not damaged. If necessary, use a drill with depth-control stop and set drilling depth to 3 mm.

- Remove bolts -4-.
- Slightly lower sliding sunroof motor and tilt it out forwards.
- Separate connector.



2.14.2 Installing

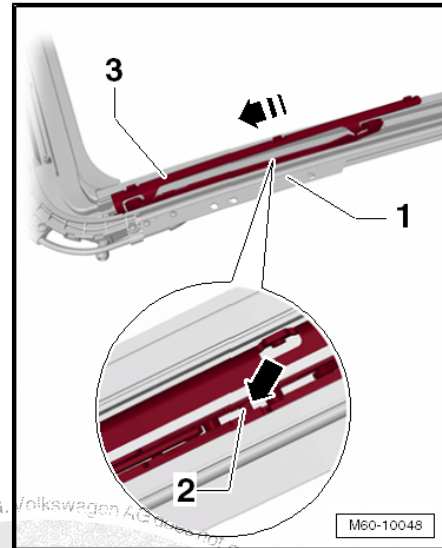
With front glass panel removed:

- Pull tilting mechanism fully forwards on both sides until it is completely lowered.
- Push tilting mechanism on -arrow- areas of slider -2- not on guide plate -3-.

Further installation is performed in reverse order of removal.

Specified torque for sliding sunroof motor bolts: 3.5 Nm

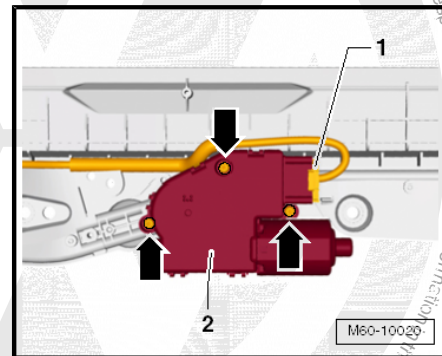
- On completion of work, establish reference points of sliding sunroof motor => [page 183](#) .



2.15 Removing and installing sun blind motor

2.15.1 Removing

- Remove moulded headliner => General body repairs, interior; Rep. Gr. 70 ; Roof trims .
- Disconnect connector -1- on sun blind motor -2-.
- Remove bolts -arrow- from sun blind motor -2-.
- Remove sun blind motor -2-.





2.15.2 Installing

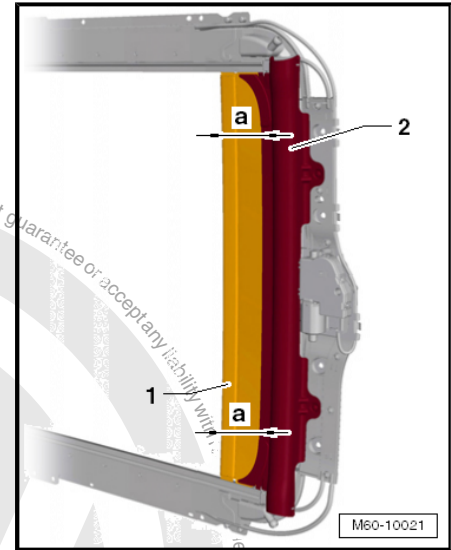
- Before installing motor, adjust sun blind by ensuring parallel distance -a- between sun blind cross strut -1- and sun blind housing -2-.

Further installation is performed in reverse order of removal.

Specified torque

Bolts 3.5 Nm

- On completion of work, establish reference points of sun blind motor => [page 183](#) .



2.16 Removing and installing sun blind

2.16.1 Removing

- Run sun blind to fully open position.

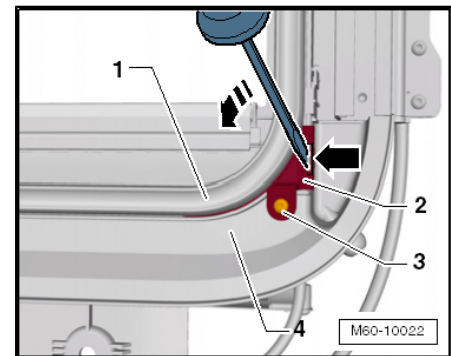


Note

In the event of power failure, sun blind can be moved by turning sun blind motor with a commercially available hexagon key to removal position (fully open). => [page 217](#)

- Remove rear glass panel => [page 187](#).
- Remove bolt -3- from cap -2-.
- Using a screwdriver, unclip fastener -arrow- of cover cap -2- from rear part -4- and tilt cover cap -2- upwards.

Inner seal -1- must not be removed for this.



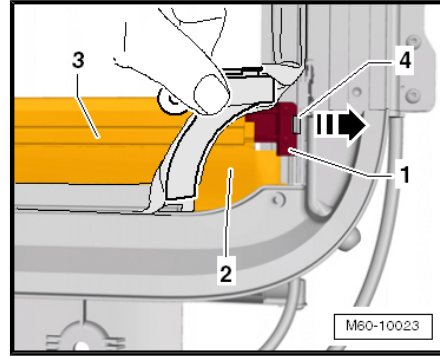


- Carefully lift sun blind cross strut -3- with sun blind slide -1-.

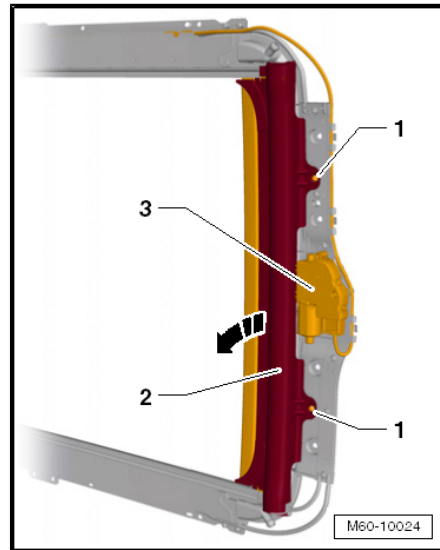
i Note

Ensure that sun blind fabric -2- is not damaged.

- Pull sun blind slide -1- in direction of -arrow- on side of sun blind cross strut -3-.
- Remove moulded headliner => General body repairs, interior; Rep. Gr. 70 ; Roof trims .



- Remove bolts -1- of sun blind housing -2-.
- Pull sun blind housing -2- in direction of -arrow- slightly downwards to get past sun blind motor -3-.

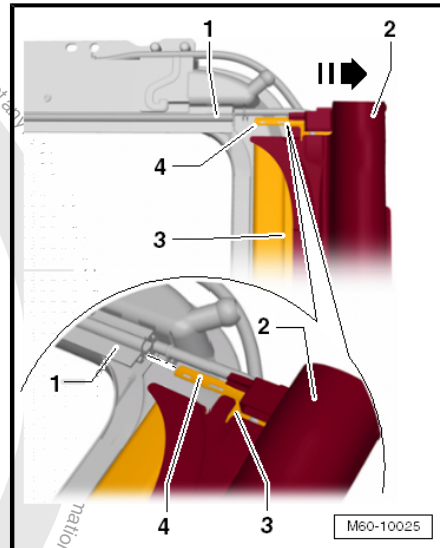


- Pull sun blind housing -2- with sun blind steel strap -4- in direction of -arrow- out of sun blind rail -1-.

i Note

Ensure that sun blind fabric -3- is not damaged.

Sun blind cross strut can be renewed when sun blind is removed.



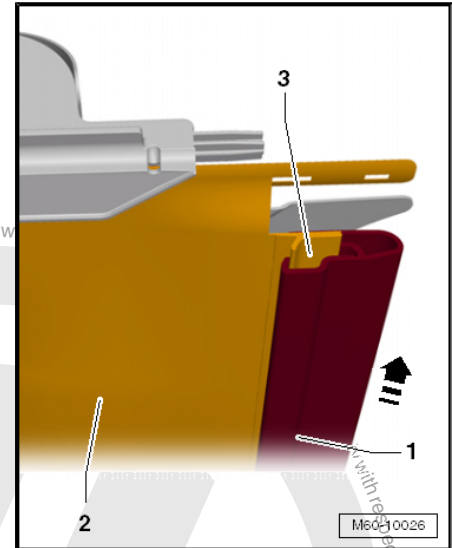


- Carefully pull sun blind cross strut -1- in direction of -arrow- out of beading -3- of sun blind fabric -2-.
- Carefully slide sun blind cross strut -1- on beading -3-.



Note

Ensure that sun blind fabric -2- is not damaged.



2.16.2 Installing



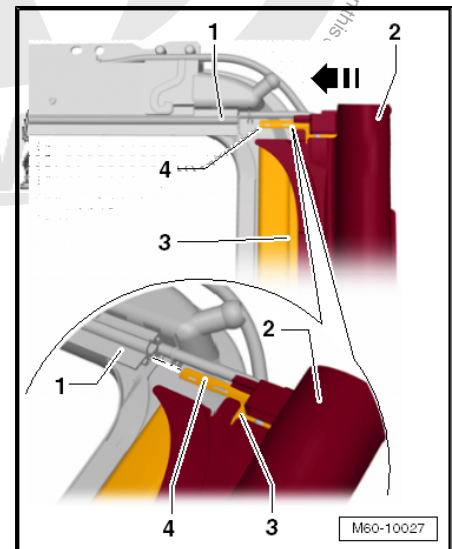
Note

- ◆ Sun blind cross strut must be fitted before installation of sun blind housing.
- ◆ Do not grease sun blind slide and sun blind cables.
- Push sun blind housing -2- with sun blind steel strap -4- in direction of -arrow- into sun blind rail -1-.



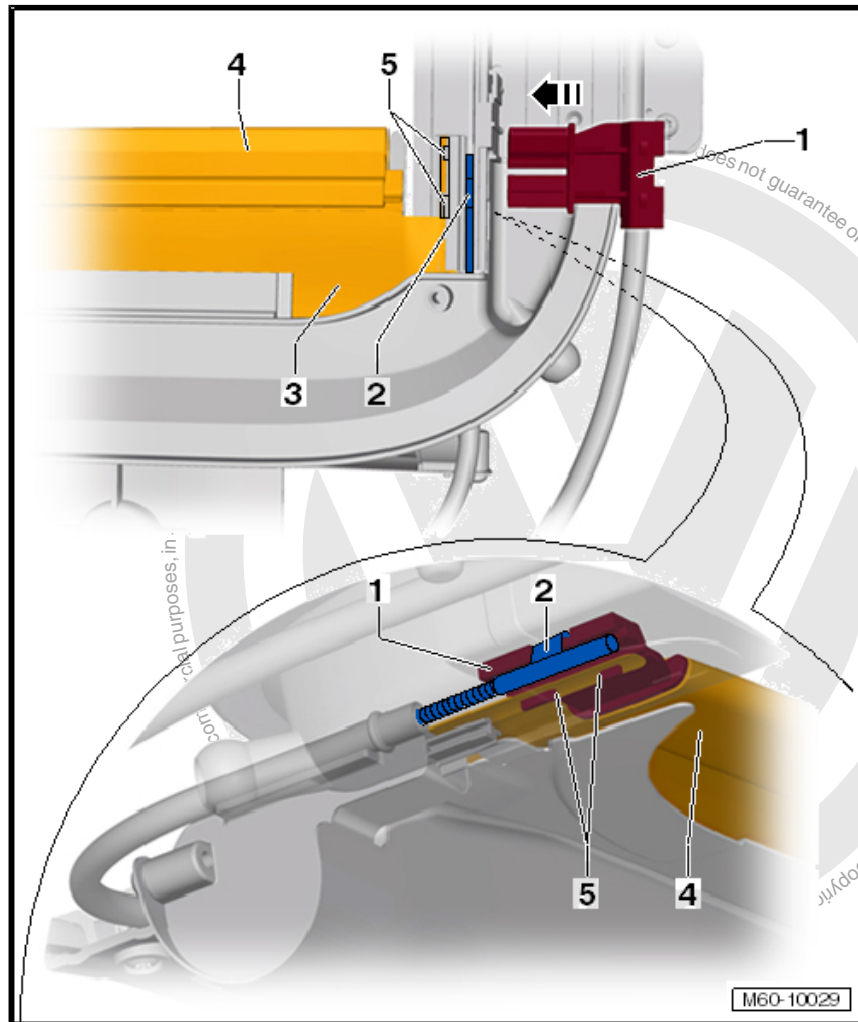
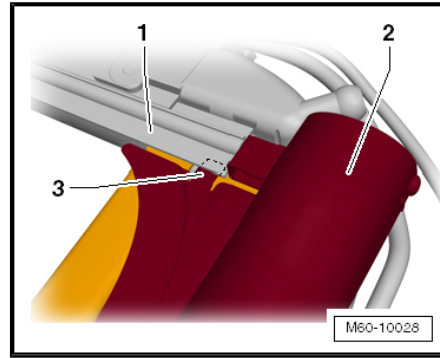
Note

Ensure that sun blind fabric -3- is not damaged.





Lug -3- of sun blind housing -2- must be inserted under sun blind rail -1-.



- Push sun blind slide -1- in direction of -arrow- into sun blind cross strut -4-.

i Note

Ensure that sun blind slide -1- engages into cut-out of sun blind steel strip -5- and into follower of sun blind cable -2-.

Further installation is performed in reverse order of removal.



Specified torques

Sun blind housing bolt 3.5 Nm

Cover cap bolt 2 Nm



Note

After installation, sun blind synchronism and ease of operation should be checked. To do this, move by hand sun blind drive on motor using a commercially available hexagon key and avoid wrinkling and deformation of sun blind fabric.

- Install moulded headliner => General body repairs, interior; Rep. Gr. 70 ; Roof trims .
- Install rear glass panel => [page 187](#) .
- On completion of work, establish reference points of sun blind motor => [page 183](#) .

2.17 Assembly overview - assembly frame

1 - Sun blind rail

- Cannot be renewed individually

2 - Guide rail

- Cannot be renewed individually
- Attached to front part

3 - Bolt

- 2 Nm

4 - Rear part

- Removing and installing => [page 209](#)

5 - Rear motor plate

- Removing and installing => [page 204](#)

6 - Front motor plate

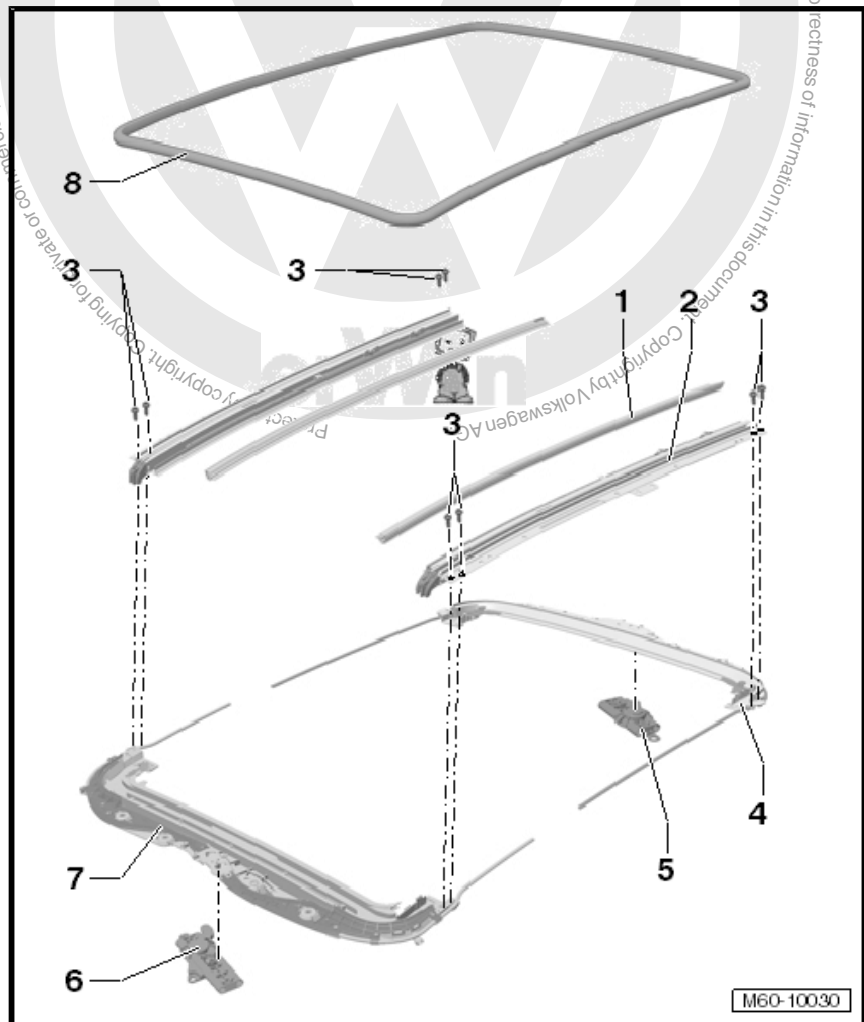
- Removing and installing => [page 215](#)

7 - Front part

- Cannot be renewed individually
- Attached to guide rail

8 - Inner seal

- Renewing => [page 193](#)



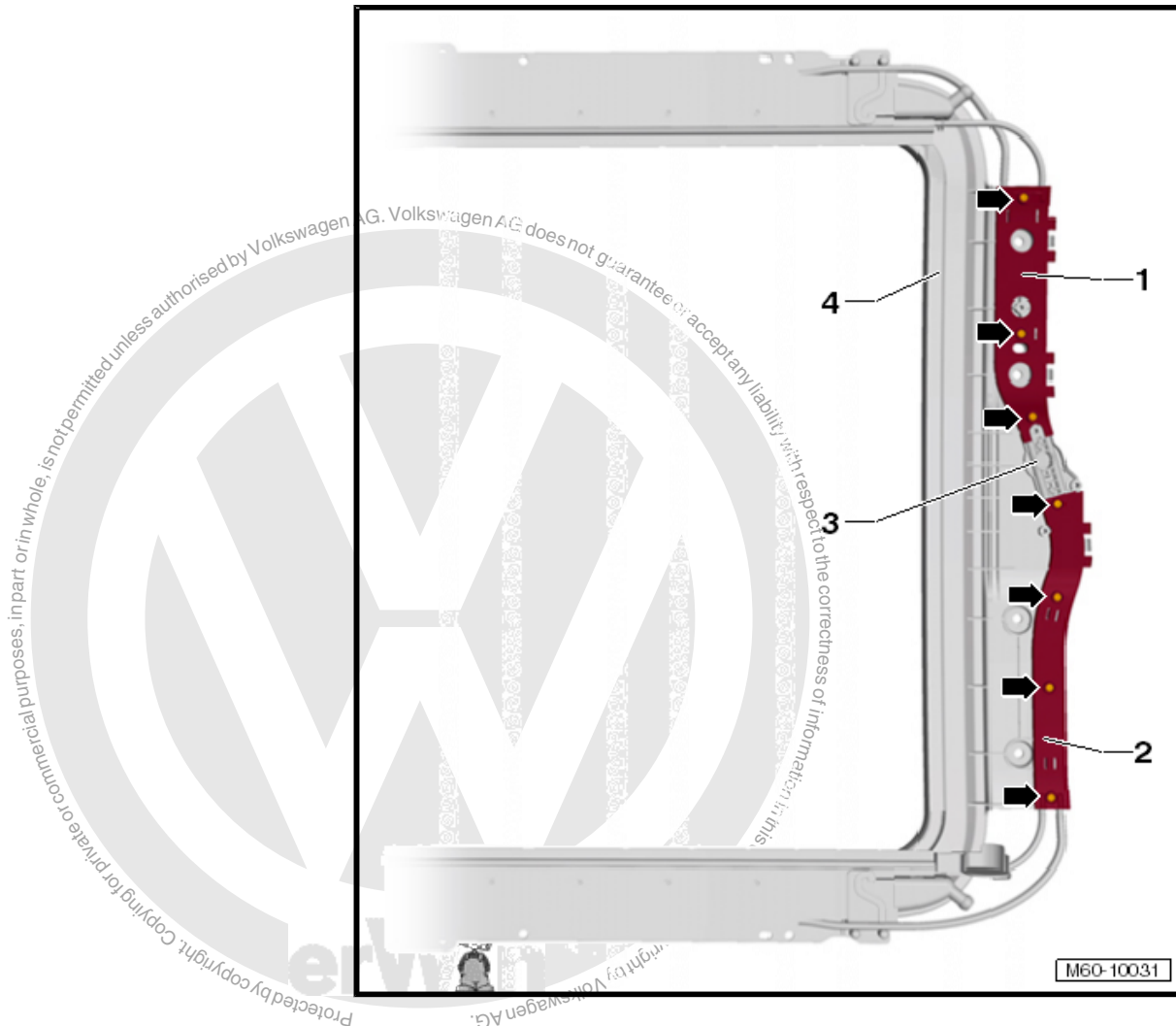
M60-10030



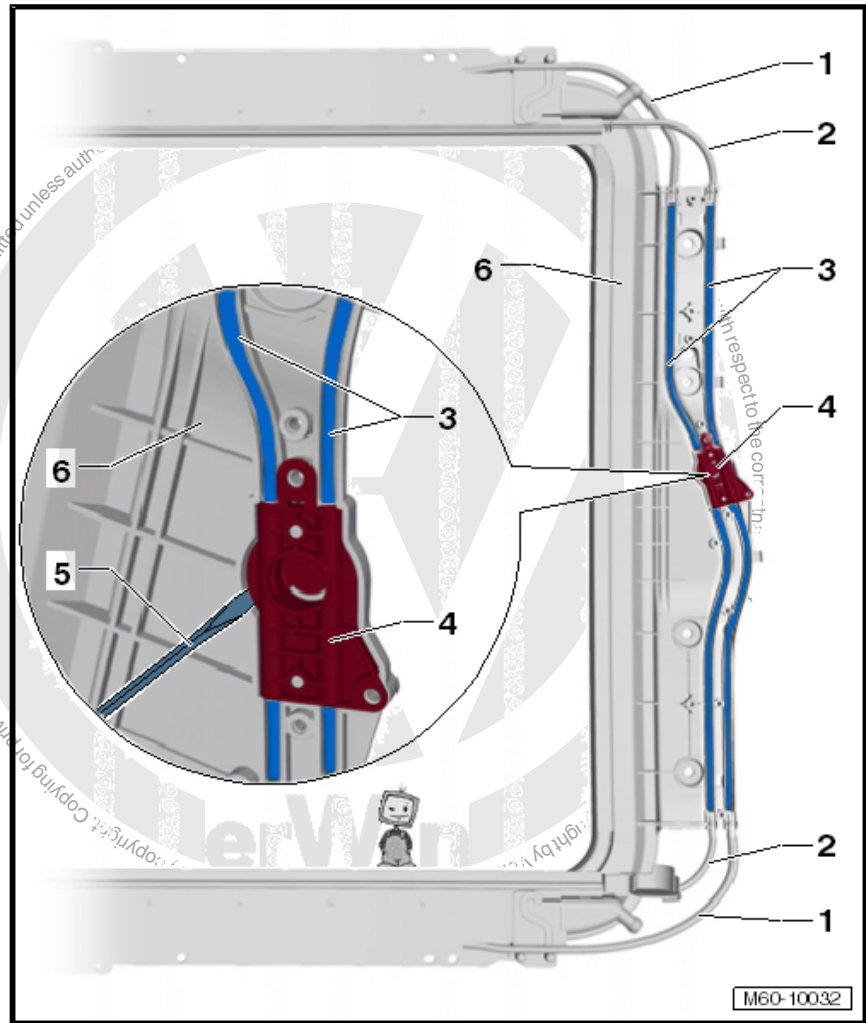
2.18 Installing and removing motor plate and sun blind cable

2.18.1 Removing

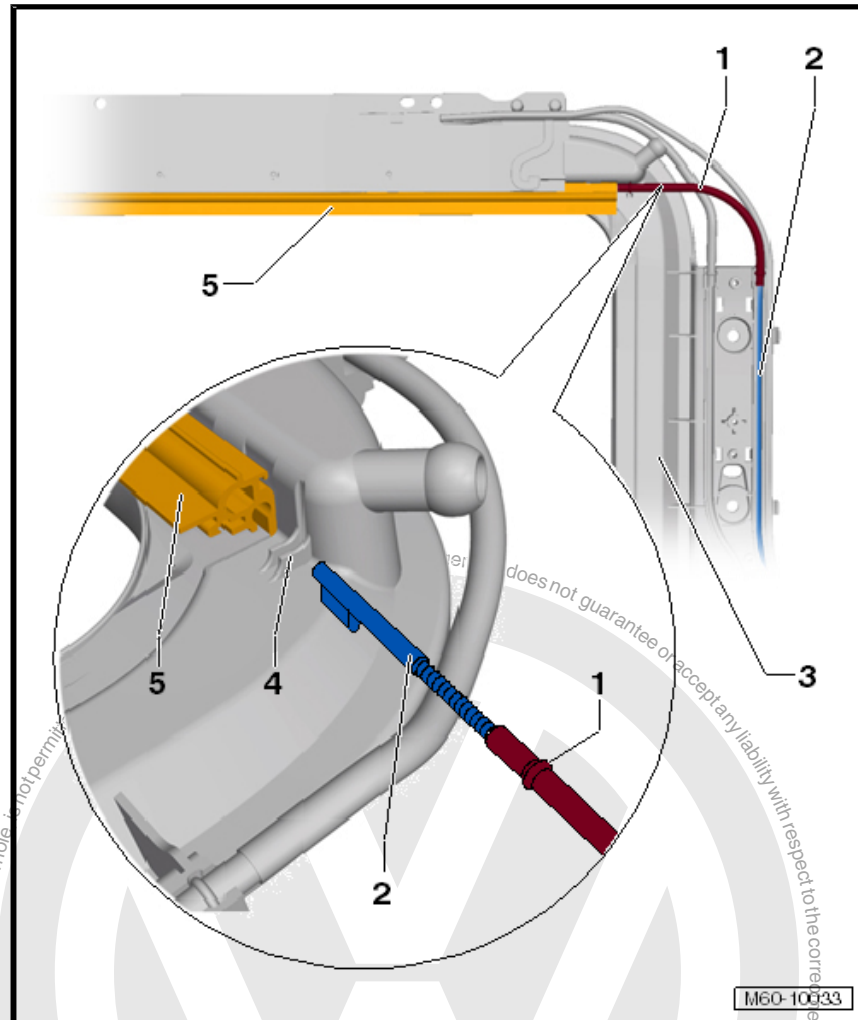
- Remove moulded headliner ⇒ General body repairs, interior; Rep. Gr. 70 ; Roof trims .
- Remove sun blind motor ⇒ [page 198](#) .
- Remove sun blind ⇒ [page 199](#) .



- Remove bolts -arrows- of cable covers -1- and -2-.
 - Remove cable covers -1- and -2-.
- Motor plate -3- remains on rear part -4-.



- Pull sun blind cables -3- out of discharge tubes -1- and motor plate -4-.
- Using an appropriate screwdriver -5-, lever motor plate -5- out of rear part -6-.



- Lever guide tube -1- out of cable support bracket -4- of rear part -3-.
- Remove cable -2- from sun blind rail -5-.

2.18.2 Installing

Install in reverse order of removal.

Specified torques

Bolt for cable cover: 2 Nm



Note

Do not grease motor plate and sun blind cables.

- Install sun blind ⇒ [page 201](#) .
- Install sun blind motor ⇒ [page 199](#) .
- Install moulded headliner ⇒ General body repairs, interior; Rep. Gr. 70 ; Roof trims .
- On completion of work, establish reference points of all drives for panorama sliding roof ⇒ [page 183](#) .



2.19 Removing and installing assembly frame

2.19.1 Removing



Note

A second mechanic is required for removing and installing assembly frame.

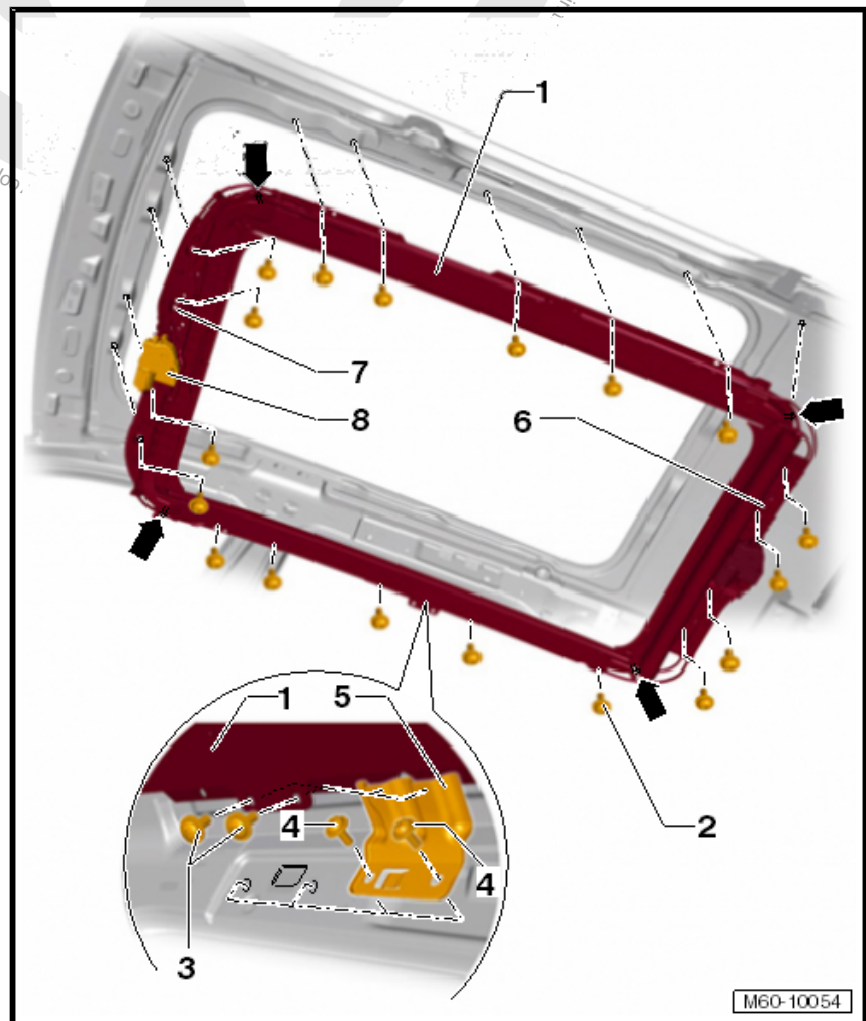
- Remove moulded headliner ⇒ General body repairs, interior; Rep. Gr. 70 ; Roof trims .

Vehicles with net partition:

- Remove net partition mounting ⇒ General body repairs, interior; Rep. Gr. 68 ; Net partition .

All vehicles:

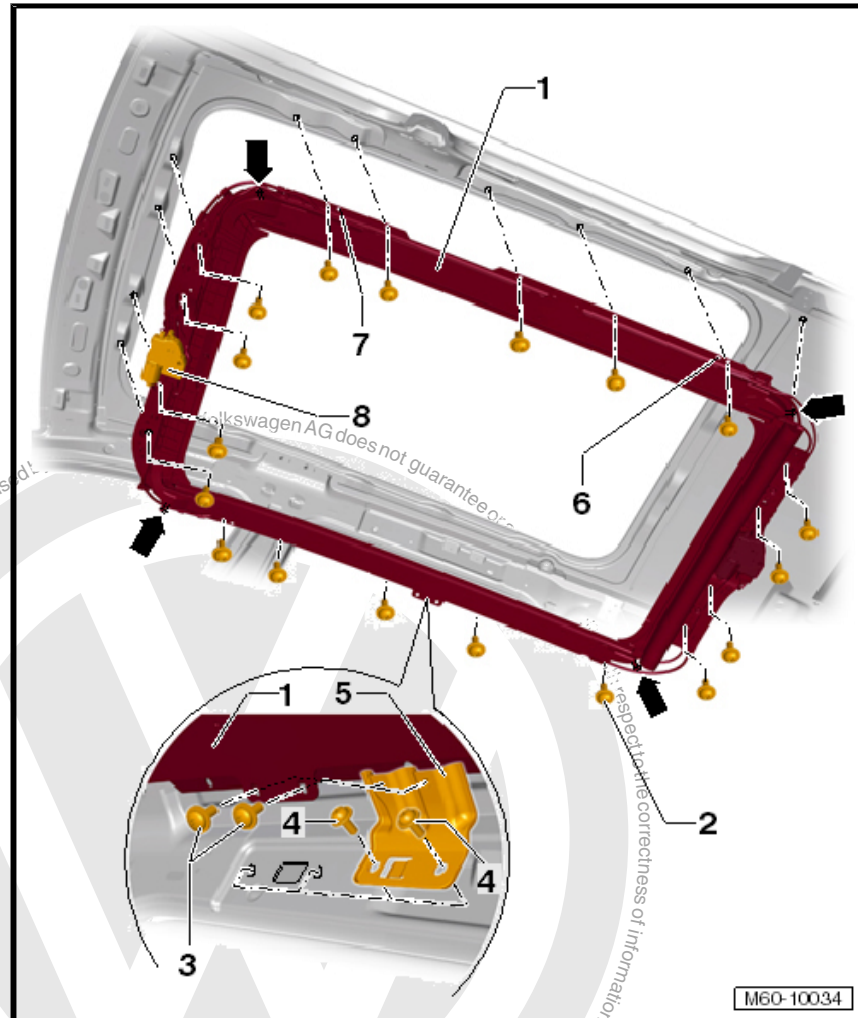
- Remove grab handle mounting (roof) ⇒ General body repairs, interior; Rep. Gr. 68 ; Grab handles .



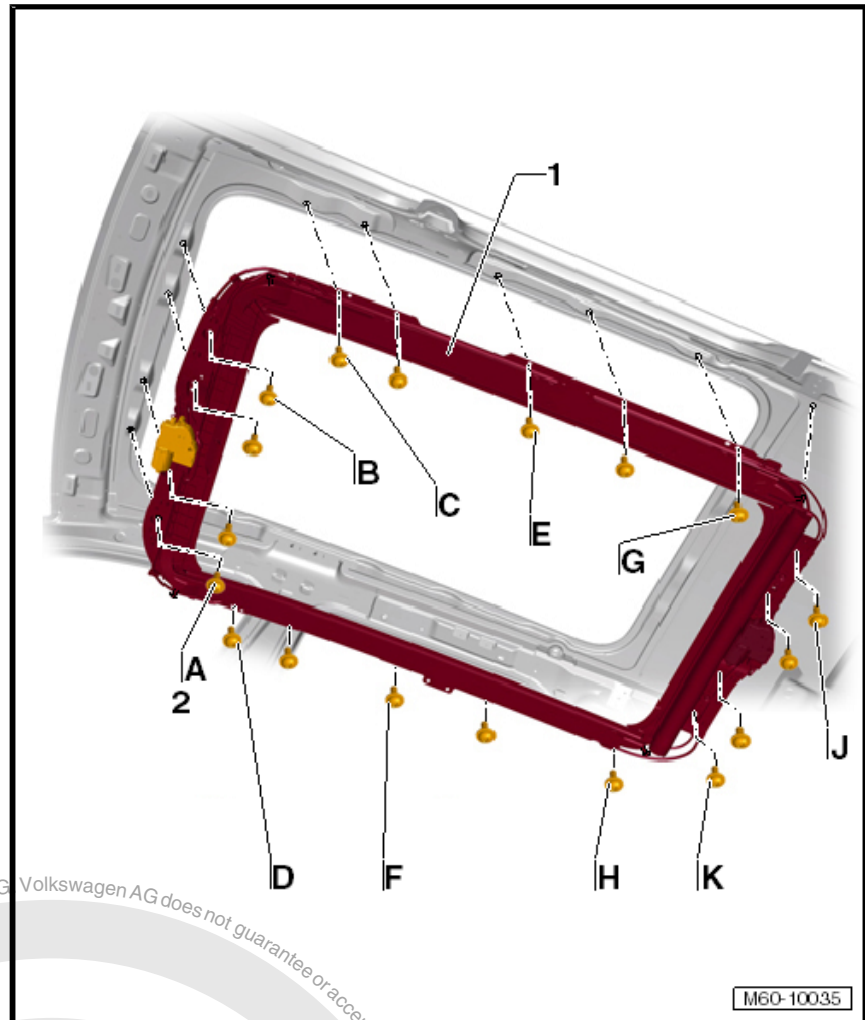


- Pull off water drain hoses from connections -arrows- of assembly frame -1-.
- Disconnect connector to wiring harness of sliding sunroof motor -8-.
- Unscrew bolts -3- and -4- of on console -5- and remove left and right consoles.
- Unscrew bolts -2- on assembly frame -1- and remove assembly frame from vehicle with the help of at least one mechanic.

2.19.2 Installing



- Lift assembly frame -1- into vehicle with the help of at least a second mechanic.
- When screwing, align assembly frame using 2 cylindrical pins (shank end of drill \varnothing 10mm) in elongated holes -6- and -7-.
- Screw bolts -2- in, but do not tighten.
- Tighten bolts -3-, specified torque: 8 Nm.
- Tighten bolts -4-, specified torque: 4.5 Nm.



- First tighten letter marked bolts -2- in alphabetic order to 8 Nm.
- Tighten then remaining bolts -2- of assembly frame -1- to 8 Nm.

Further installation is performed in reverse order of removal.

Vehicles with net partition:

- Install net partition mounting ⇒ General body repairs, interior; Rep. Gr. 68 ; Net partition .

All vehicles:

- Install grab handle mounting (roof) ⇒ General body repairs, interior; Rep. Gr. 68 ; Grab handles .
- Install moulded headliner ⇒ General body repairs, interior; Rep. Gr. 70 ; Roof trims .

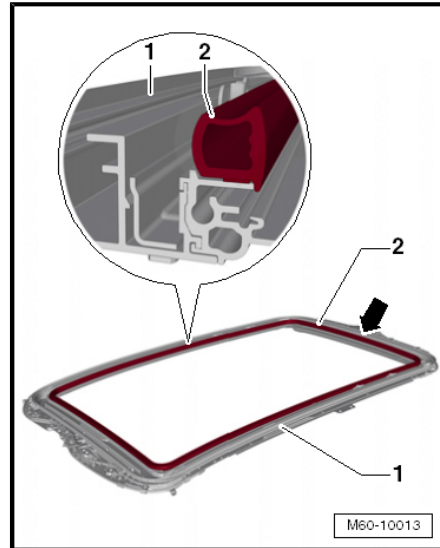
2.20 Removing and installing rear part

2.20.1 Removing

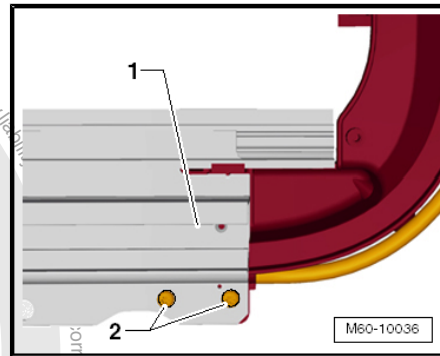
- Remove assembly frame from vehicle ⇒ [page.207](#) .



- Pull inner seal -2- off assembly frame -1-.
- Remove sun blind ⇒ [page 199](#) .
- Loosen wiring harness from rear part.

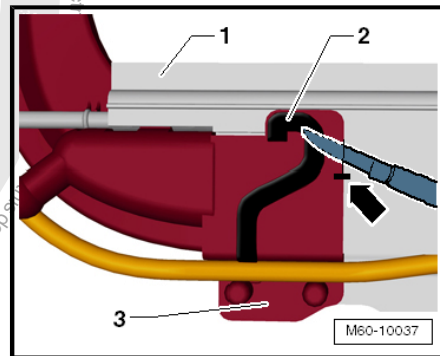


- Remove bolts -2- from guide rail -1-.

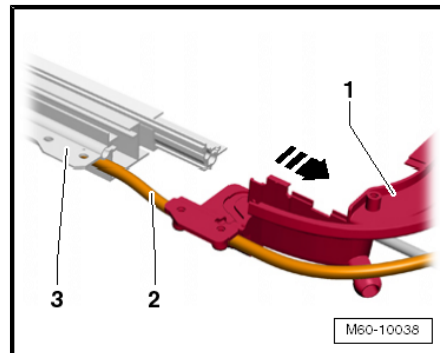


Mark position -arrow- of rear part -3- for further assembly.

Separate adhesive bonding -2- between guide rail -1- and rear part -3- using a knife.



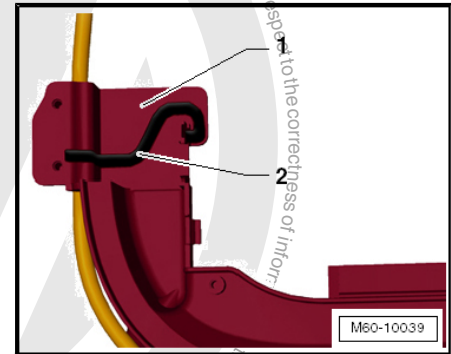
- Pull entire rear part -1- with discharge tubes -2- in direction of -arrow- out of guide rail -3-.



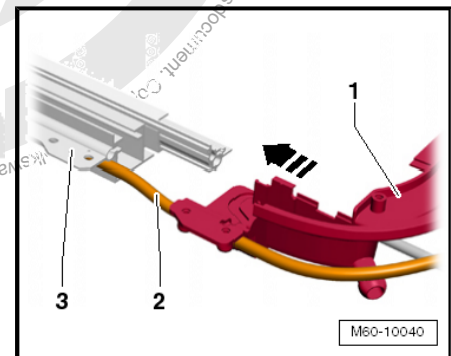


2.20.2 Installing

- Remove existing adhesive residue using adhesive strip remover -VAS 6349- .
- Clean bonding surfaces on rear part and guide rails with cleaner -D 009 401 04-.
- Press a \varnothing 3.5 mm butyl sealing cord -AKD 497 010 04 R10-2- as shown in illustration into adhesive canal on rear part -1-.



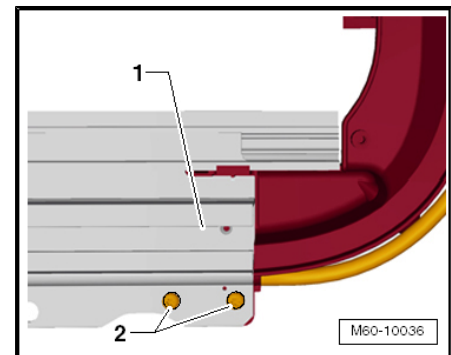
- Push entire rear part -1- with discharge tubes -2- in direction of -arrow- onto guide rail -3-.



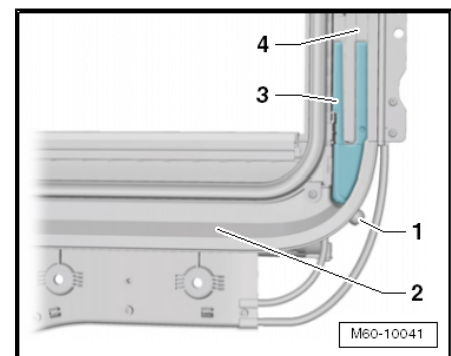
- Tighten bolts -2- on guide rail -1- to 2 Nm.

Note

Before installation, it is recommended to check leak tightness of assembly frame.



- Seal water drain hoses -1-.
- Fill marked area -3- between rear part -2- and guide rail -4- with water.
- Wait for at least 5 minutes before checking leak tightness.
- Seal any leaks with butyl sealing cord -AKD 497 010 04 R10- .
- Install sun blind [⇒ page 199](#) .
- Install sun blind motor [⇒ page 198](#) .
- Install a new inner seal [⇒ page 193](#) .
- Install assembly frame [⇒ page 208](#) .
- On completion of work, establish reference points of all drives for panorama sliding roof [⇒ page 183](#) .

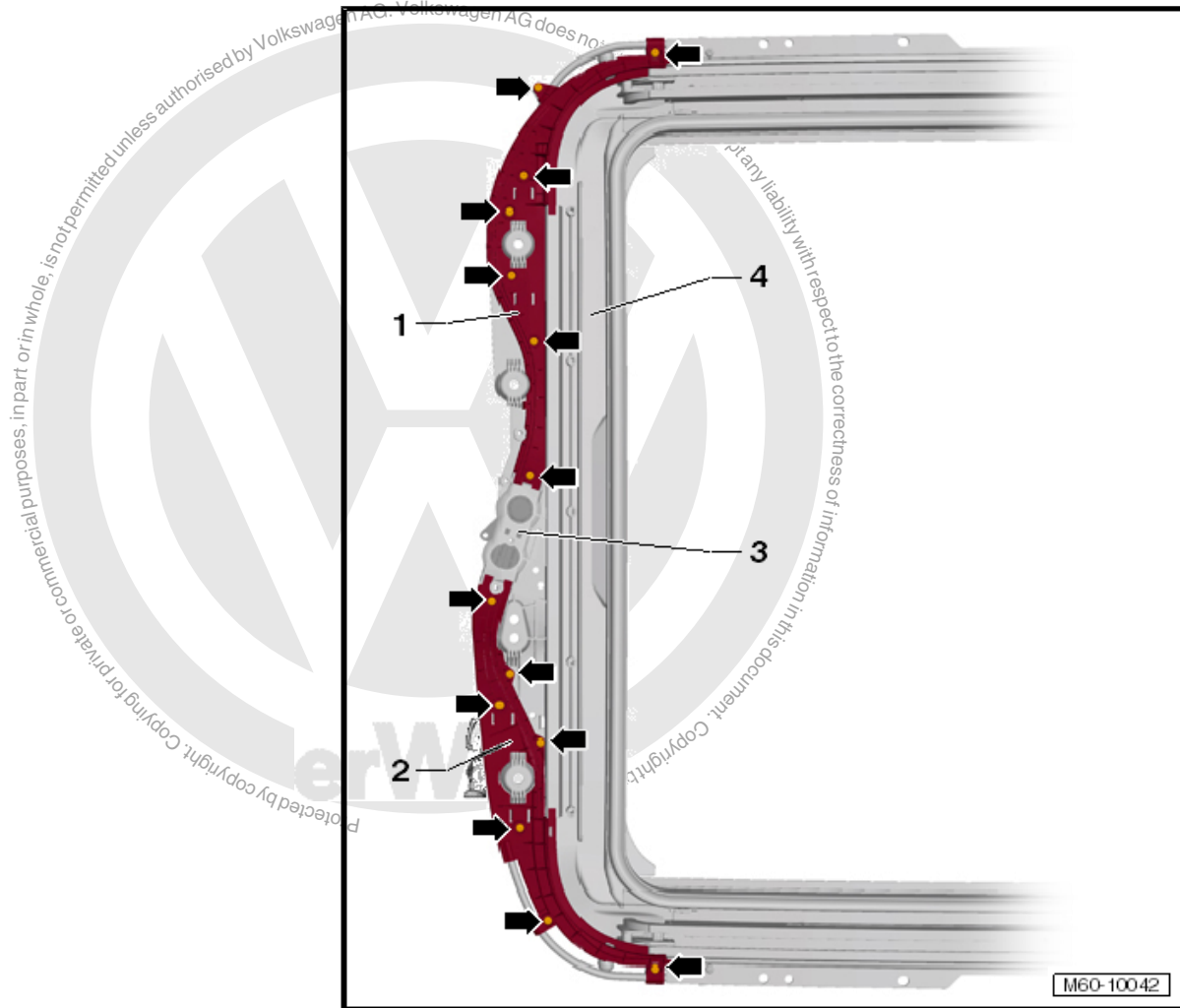




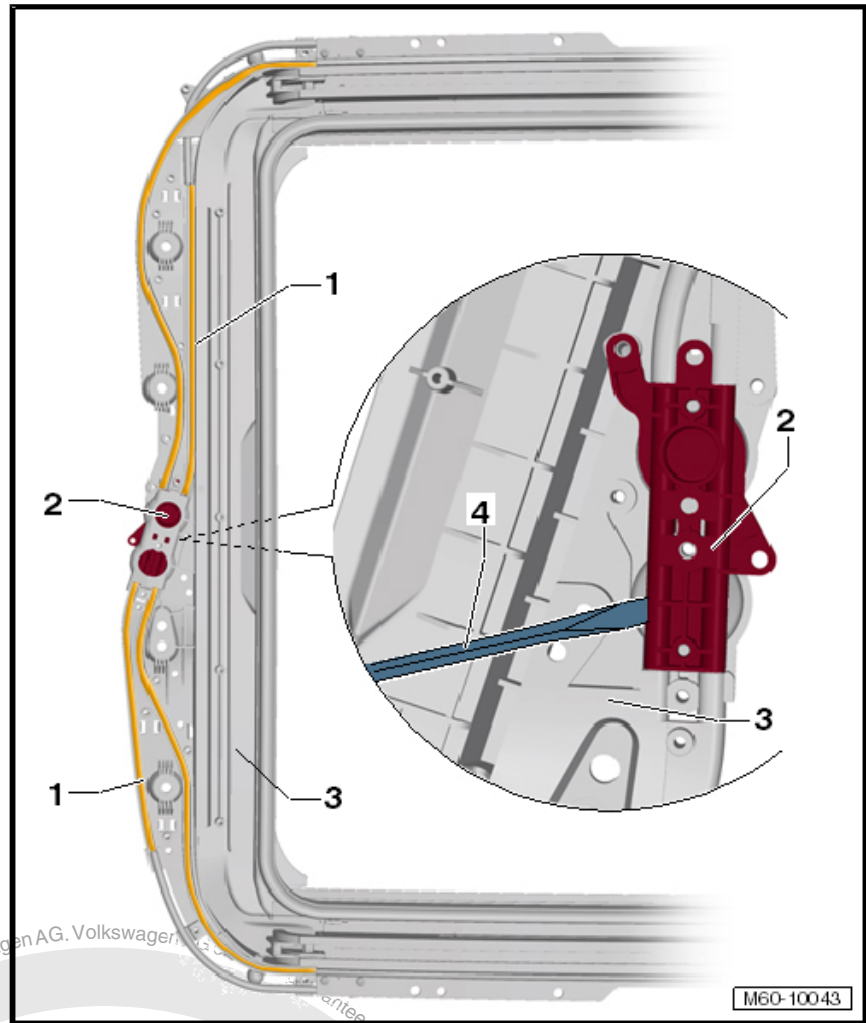
2.21 Removing and installing front motor plate

2.21.1 Removing

- Remove assembly frame from vehicle ⇒ [page 207](#) .
- Remove sliding sunroof motor ⇒ [page 196](#) .



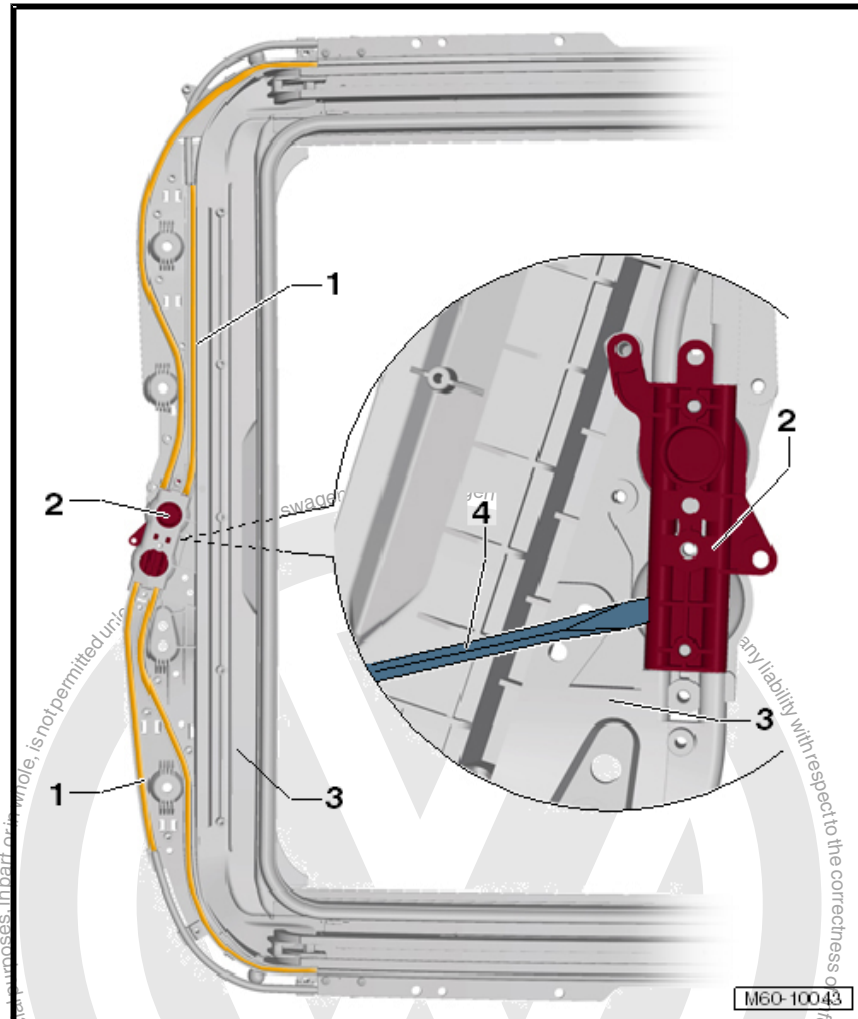
- Remove bolts -arrows-.
 - Remove cable covers -1 and 2-.
- Front motor plate -3- remains on front part -4-.



- Pull ends of cable -1- out of motor plate -2-.
- Using appropriate screwdriver -4-, lever motor plate -2- out of front part -3-.



2.21.2 Installing



Note

- ◆ Insert motor plate -2- into front part -3-
- ◆ Do not grease motor plate and cables -1-

Further installation is performed in reverse order of removal.

Specified torques

Bolt for cable cover: 2 Nm

- Install sliding sunroof motor ⇒ [page 196](#) .
- Install assembly frame ⇒ [page 208](#) .
- On completion of work, establish reference points of sun blind motor ⇒ [page 183](#) .




2.22 Removing and installing tilting mechanism and front glass panel cable

2.22.1 Removing

- Remove front glass panel ⇒ [page 185](#) .
- Remove rear glass panel ⇒ [page 187](#) .
- Remove assembly frame from vehicle ⇒ [page 207](#) .
- Remove sliding sunroof motor ⇒ [page 196](#) .
- Remove rear part of assembly frame ⇒ [page 209](#) .

After removal of rear part, tilting mechanism can be slid out backwards.

To do this, proceed as follows:

 **Caution**

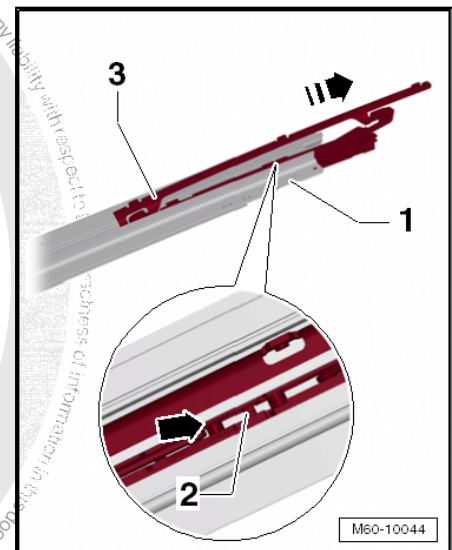
Observe position of cables before removal to avoid any error when installing.

Do not pull or push tilting mechanism guide plate.

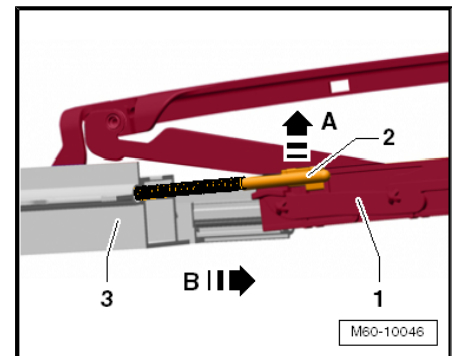
- Push glass panel tilting mechanism only on areas -arrow- of slider -2-, not on guide plate -3-.

Tilting mechanism tilts when moving.

- Using appropriate screwdriver, push tilting mechanism backwards to end of guide rail -1-.



- Unhook cable -2- out of slider -1- -arrow A-.
- Pull slider -1- out of guide rail -3- -arrow B-.
- Pull cable -2- out of guide rail -3-.



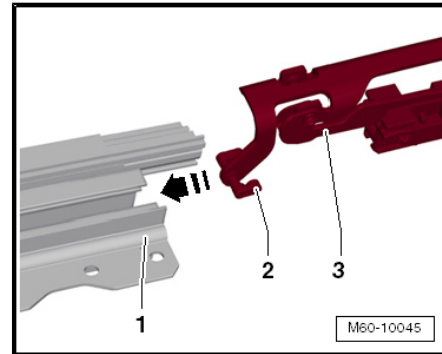


2.22.2 Installing

Note

- ◆ *Guide rails must only be cleaned if heavily soiled.*
- ◆ *To do this, use cleaner -D 009 401 04- .*
- ◆ *Then grease guide rail in guide areas with lithium grease -G 052 147 A2- ⇒ [page 217](#) .*
- ◆ *Do not grease cables.*

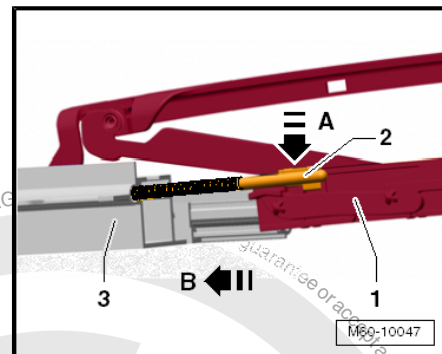
- Slide tilting mechanism -3- into guide rail -1-.
- Ensure that slides -2- face towards rear when slid into guide rail -1-.



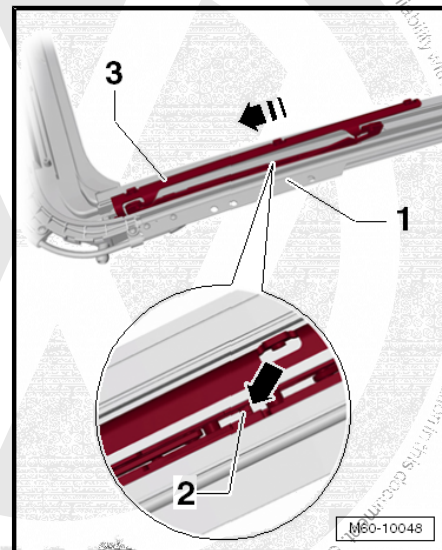
- Push cable -2- into guide rail -3- -arrow B-.
- Hook cable -2- into slider -1- -arrow A-.

Note

Do not pull or push tilting mechanism guide plate.



- Push tilting mechanism on -arrow- areas of slider -2- not on guide plate -3-.
- Pull tilting mechanism fully forwards on both sides until it is completely lowered.
- Install rear part on assembly frame ⇒ [page 211](#) .
- Install sliding sunroof motor ⇒ [page 198](#) .
- Install assembly frame into vehicle ⇒ [page 208](#) .
- Install rear glass panel ⇒ [page 187](#) .
- Install front glass panel ⇒ [page 185](#) .
- On completion of work, establish reference points of all drives for panorama sliding roof ⇒ [page 183](#) .





2.23 Maintenance and care

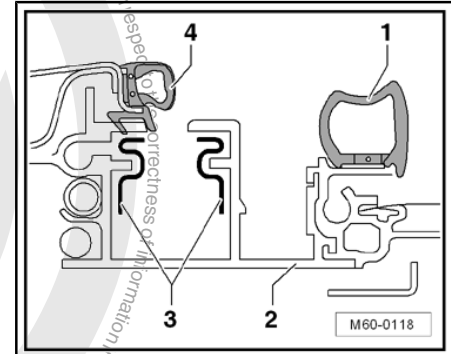
No regular maintenance is usually required for the panorama sliding roof.

If cleaning is necessary because it is heavily soiled, use cleaner -D 009 401 04- .

Guide areas -3- of guide rail -2- must then be greased again with lithium grease -G 052 147 A2- .

Inner seal -1- and outer seal -4- have a solid film lubricant coating and must not be greased.

Do not grease cables and motor plate.



2.24 Operating without current

2.24.1 Glass panel



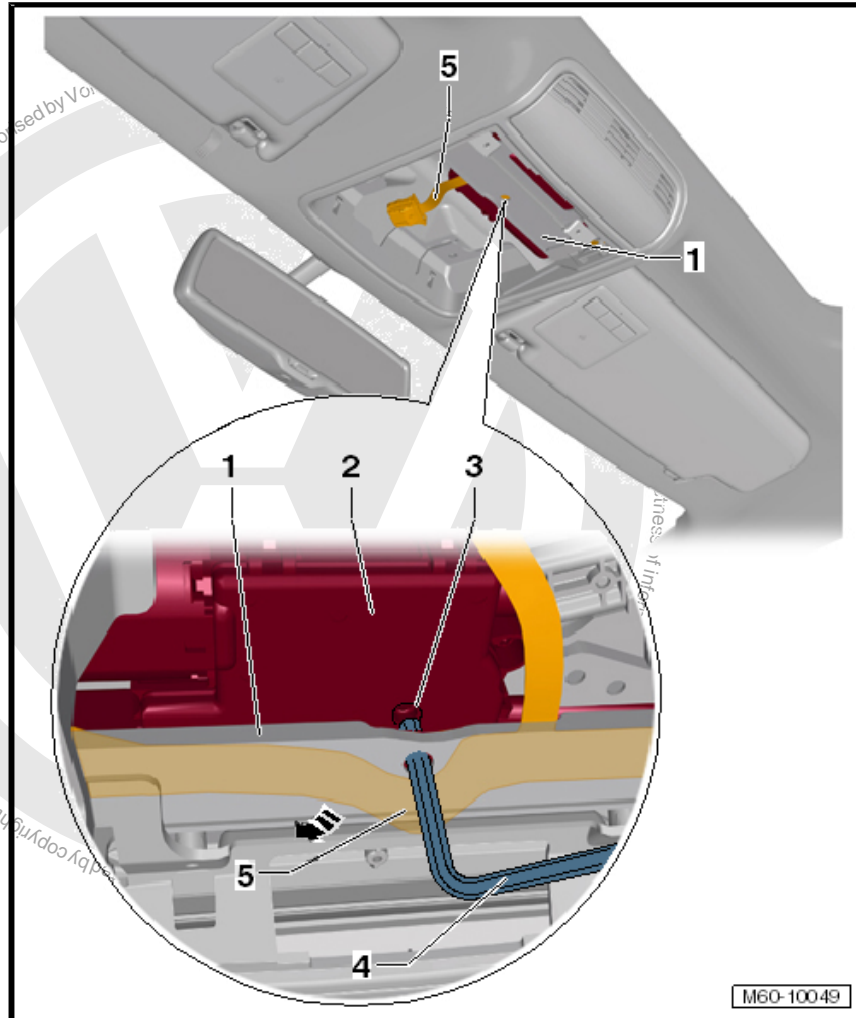
Note

- ◆ *In the event of power failure, front glass panel near to sliding sunroof motor can be moved by hand using a commercially available hexagon key.*
 - ◆ *Front glass panel must only be moved until its front edge is flush with front edge of rear glass panel. If glass panel is moved further backwards, mechanism cables may hook off.*
- Removing lights and front operating unit → Electrical system;
Rep. Gr. 96 ; Lights and switches in roof trim .



WARNING

On some models, a ribbon cable is bonded to the light cut-out web. For the emergency key, carefully detach ribbon cable from web and push it to side. Ensure that ribbon cable is not damaged when doing this.



- Carefully detach ribbon cable -5- (if fitted) from web -1-.
- Pull ribbon cable to side -arrow- using a commercially available hexagon key -4- until access is made possible through hole in web -1-.
- Guide hexagon key -4- through hole in web -1- into bolt -3- of sliding sunroof motor -2-.

When turning by hand, greater force is necessary since motor is not uncoupled from drive.

2.24.2 Sun blind



Note

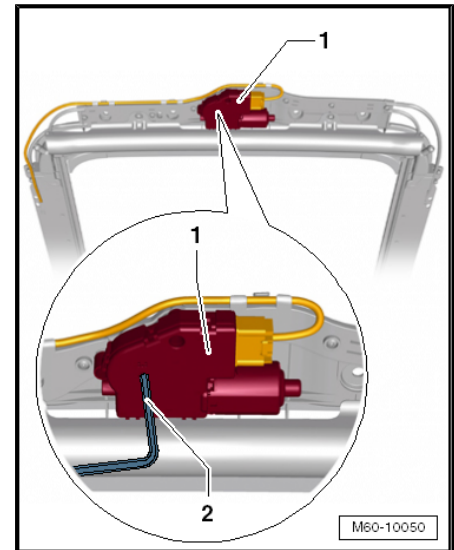
In the event of power failure, sun blind can be moved by hand on sun blind motor using a commercially available hexagon key.

- Remove moulded headliner ⇒ General body repairs, interior; Rep. Gr. 70 ; Roof trims .



- Insert hexagon key -2- into bolt of sun blind motor -1-.

When turning by hand, greater force is necessary since motor is not uncoupled from drive.



2.25 Cleaning water drain hoses



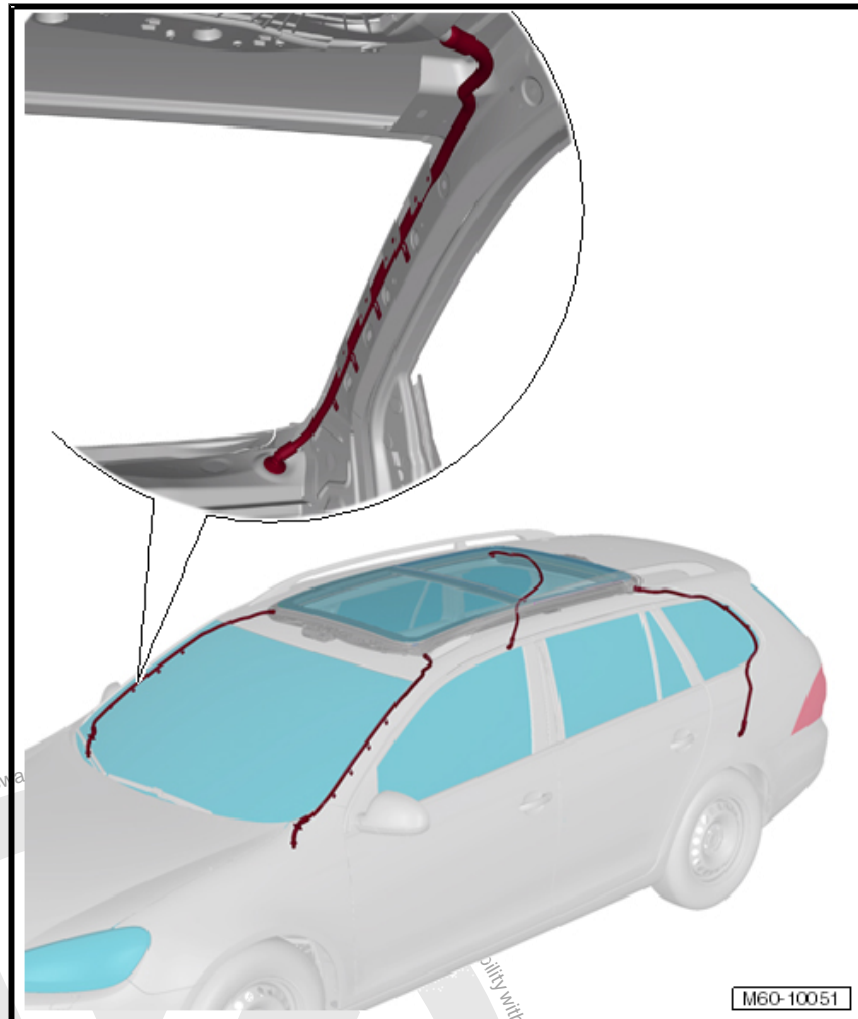
Note

For cleaning, a locally manufactured tool made from a speedometer inner cable, approx. 2300 mm long is recommended.





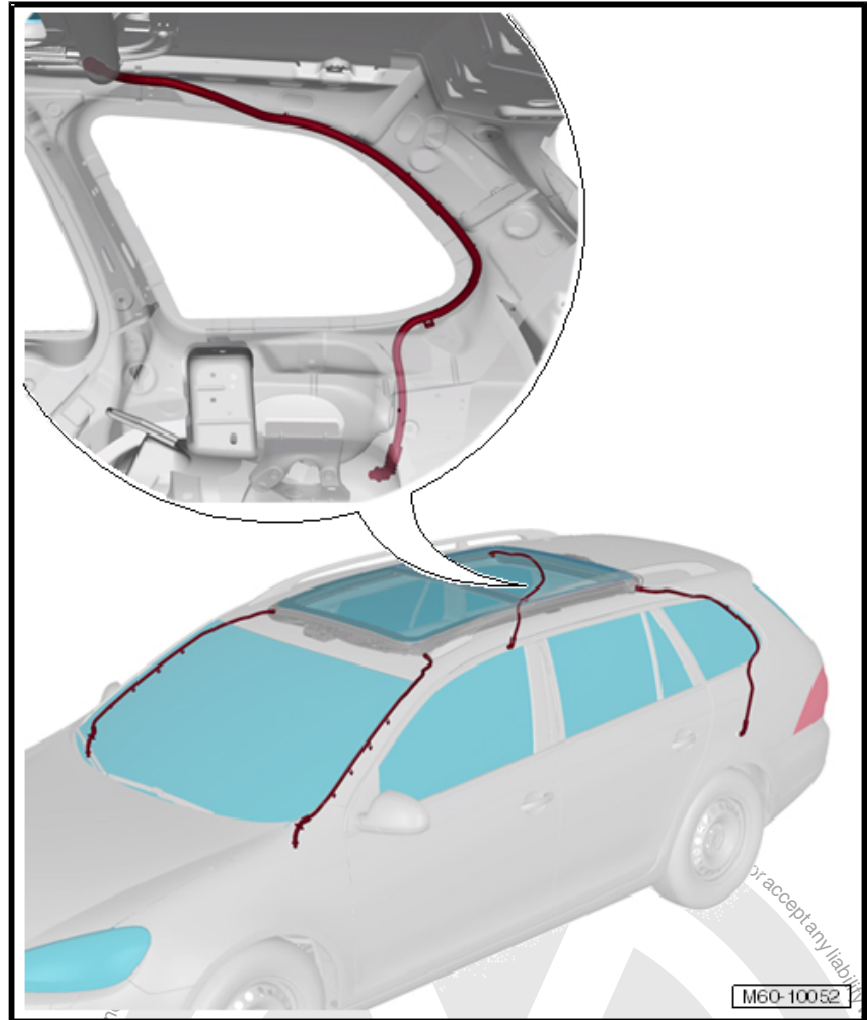
2.25.1 Front water drain hoses



The front water drain hoses run through the A-pillars and end at the bulkhead cross member. Cleaning is done from panorama sliding roof cut-out.



2.25.2 Rear water drain hoses



The rear water drain hoses run through the D-pillars and end in the rear wheel housings. Cleaning is done from the wheel housing. The wheel housing liner must be removed.



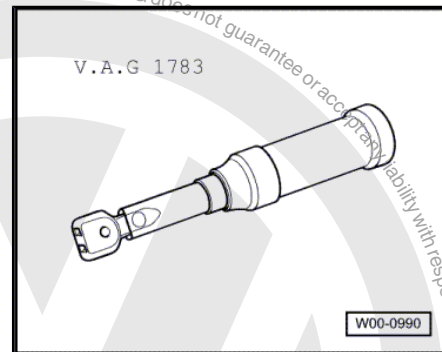
63 – Bumpers

1 Front bumper

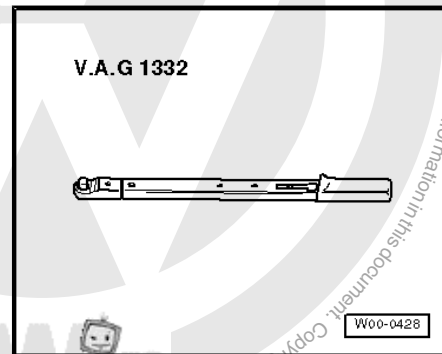
1.1 Tools

Special tools and workshop equipment required

- ◆ Torque wrench -V.A.G 1783-



- ◆ Torque wrench -V.A.G 1332-



1.2 Repairing bumper cover



Note

If bumper cover is damaged, determine whether plastic can be repaired before renewing bumper.

Description under: ⇒ General Information; Body Repairs, General Body Repairs ; Plastic repair procedures



1.3 Assembly overview - bumper cover

1 - Bolt

- 2 Nm

2 - Bolt

- 3.5 Nm

3 - Cover

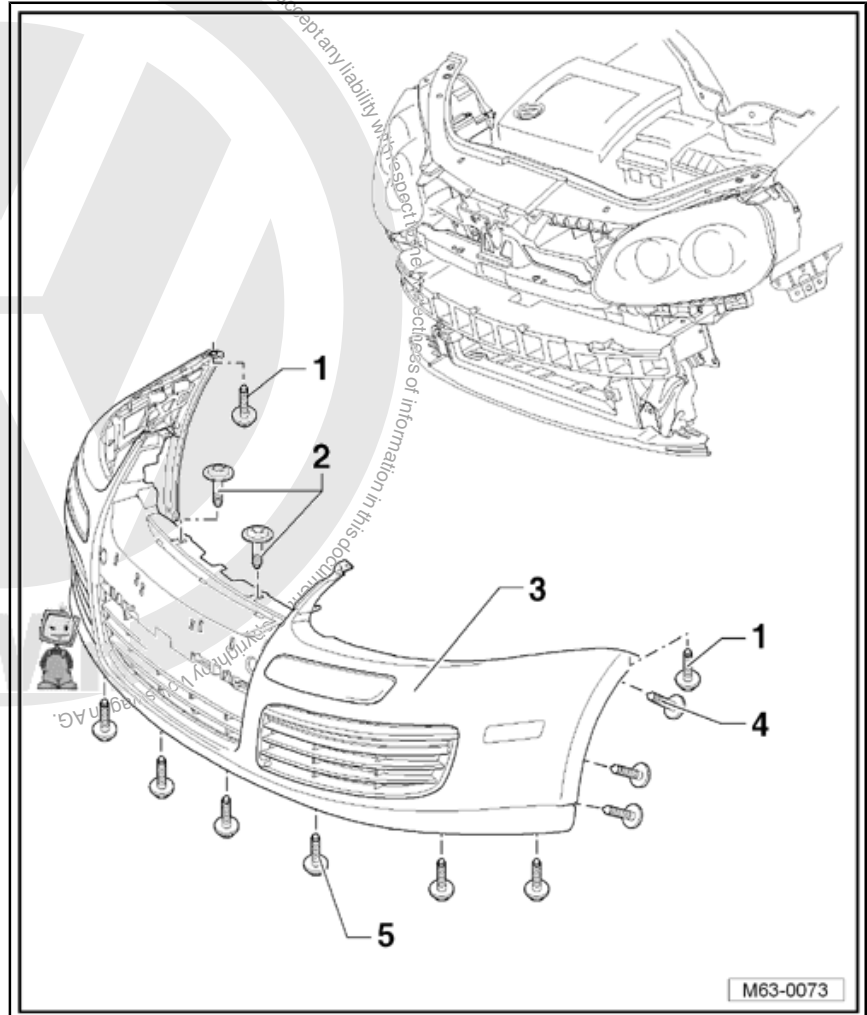
- Material PP/EPDM
- Removing and installing
⇒ [page 223](#)

4 - Bolt

- Qty. 3 on each side
- 2 Nm

5 - Bolt

- Qty. 8
- 2 Nm



1.4 Removing and installing front bumper cover



Note

The removal and installation procedures may have to be modified slightly depending on variations in equipment.

1.4.1 Removing

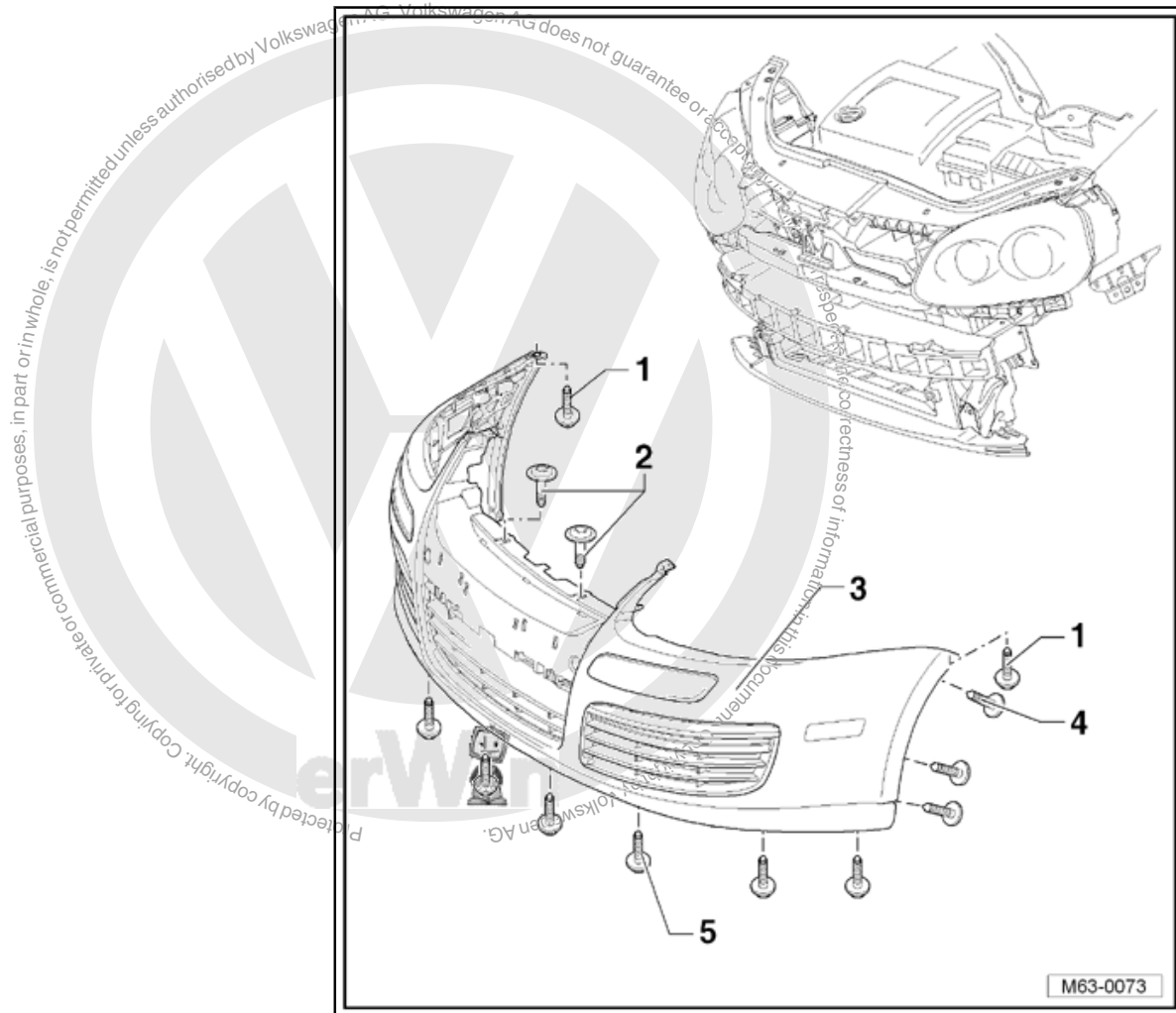
- Remove radiator grille ⇒ [page 337](#) .
- Vehicles with headlight washer system, pull washer jet with cover cap up out of bumper cover onto stop and unclip cover cap.
- Remove bolts -2-.
- Remove bolts -5- from below.



- Remove bolts -4- and -1- (point upwards) on left and right in area of wheel housing liner.

Further dismantling requires the assistance of a second mechanic.

- Pull bumper cover -3- parallel out of guide profiles with help of a second mechanic.
- Disconnect all electrical connections from electrical components and separate hoses.



1.4.2 Installing

Install in reverse order of removal.

Ensure parallelism and gap dimensions are maintained ⇒ Body Repairs; Rep. Gr. 00 ; Body dimensions .



1.5 Front bumper cover add-on parts

1 - Bumper cover

- Material PP/EPDM
- Removing and installing
 ⇒ [page 223](#)

2 - Left bumper strip

- Material PP/EPDM
- Different versions for vehicles with headlight washer system.
- Engaged in bumper cover
- Can be levered out of latches carefully from outside using a plastic wedge and removed

3 - Left air intake grille

- Different versions for vehicles with fog lights.
- Removing and installing
 ⇒ [page 226](#)

4 - Bolt

- 1.5 Nm

5 - Spoiler

- Material PC/ABS
- Engages in cover.
- Only remove when bumper cover is removed

6 - Centre air intake grille

- Pull forward out of fastenings in direction of arrow-.

7 - Bolt

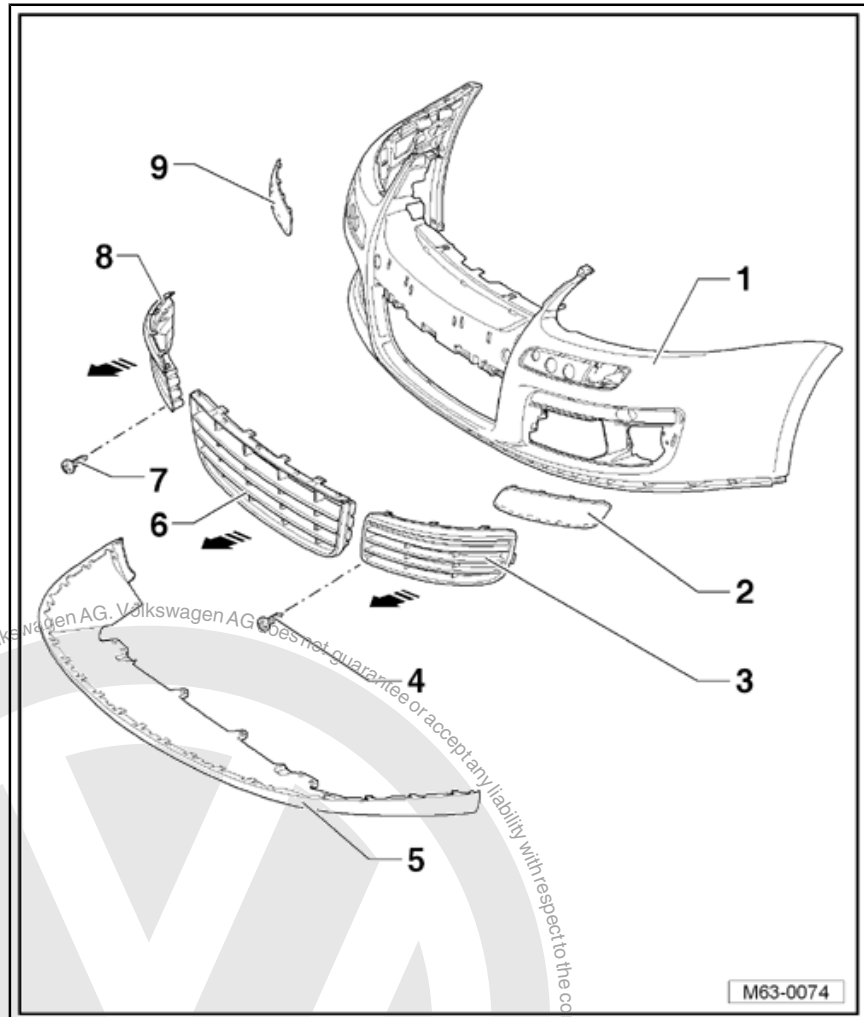
- 1.5 Nm

8 - Right air intake grille

- Different versions for vehicles with fog lights.
- Removing and installing ⇒ [page 226](#)

9 - Right bumper strip

- Material PP/EPDM
- Different versions for vehicles with headlight washer system.
- Engaged in bumper cover
- Can be levered out of latches carefully from outside using a plastic wedge and removed.





1.5.1 Removing and installing air intake grille

Removing



Note

*The removal and installation sequence is only for the left side.
Removal and installation of the right side is similar.*

- Remove bolt -1-.
- Carefully swing air intake grille in direction of -arrow- so that the outer side lug -2- does not break off.

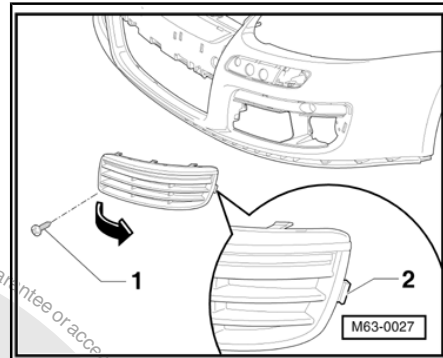


Note

Grasp inner side of air intake grille and pull grille out of bumper then swing air intake grille outwards and out of bumper.

Installing

Install in reverse order of removal.





1.6 Front bumper cover substructure parts

1 - Right guide

- Bolted to bumper carrier
- To remove, unbolt bolts
⇒ [Item 9 \(page 227\)](#) .

2 - Expanding nut

- Qty. 3 on each side

3 - Bolt

- Qty. 3 on each side
- 2 Nm

4 - Guide bracket

- Left and right
- To remove, unbolt bolts
⇒ [Item 3 \(page 227\)](#) .

5 - Bolt

- Qty. 2
- 2 Nm

6 - Left guide

- Bolted to bumper carrier
- To remove, unbolt bolts
⇒ [Item 5 \(page 227\)](#) .

7 - Left air duct

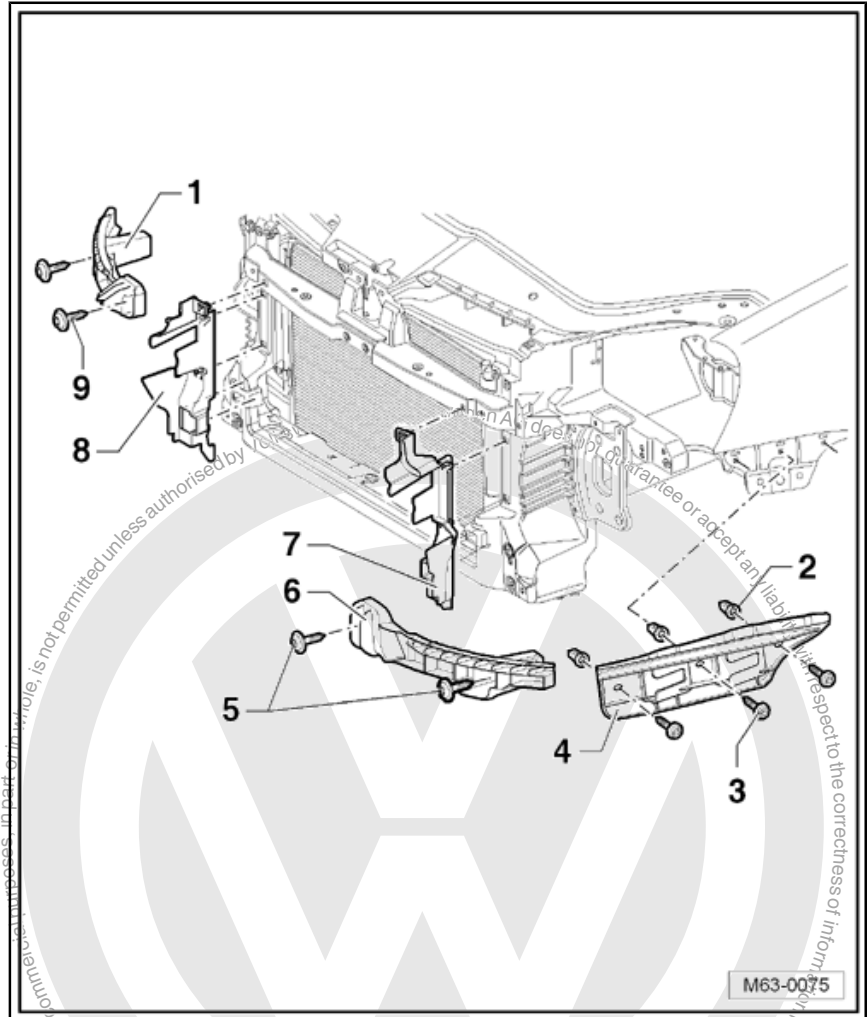
- Fastened to lock carrier.

8 - Right air duct

- Fastened to lock carrier.

9 - Bolt

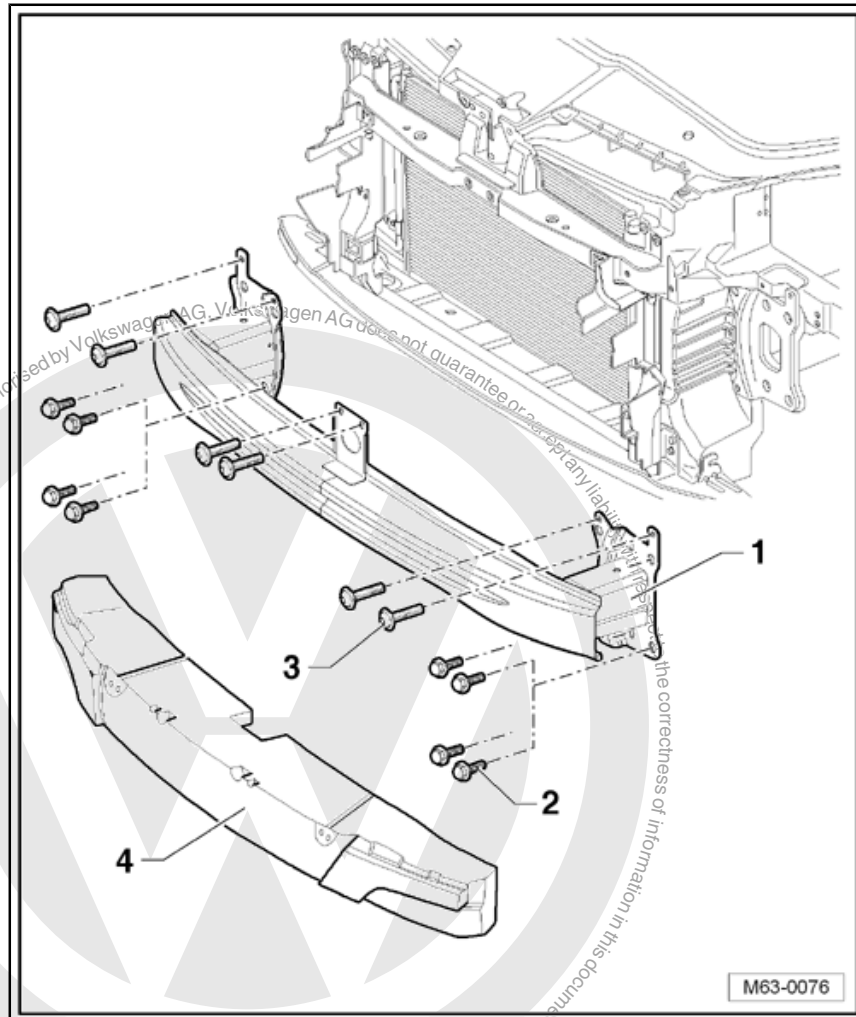
- Qty. 2
- 2 Nm





1.7 Assembly overview - bumper carrier

- 1 - Bumper carrier
- 2 - Bolt
 - Qty. 4 on each side
 - 60 Nm
- 3 - Bolt
 - Qty. 6
 - 8 Nm
- 4 - Foam element
 - Self-adhesive



1.8 Installing small registration plate carrier

- Mark the four points -5- on the grille which require drilling:



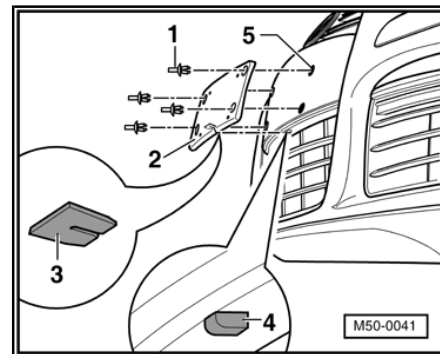
Note

The correct position of the registration plate carrier -2- is established by inserting the registration plate carrier guide -3- into the recess -4- on the grille.

- Drill out the four points -5-.

Diameter of hole: 7.7 +0.2 mm

- Install registration plate carrier using the four plastic spreader rivets -1-.





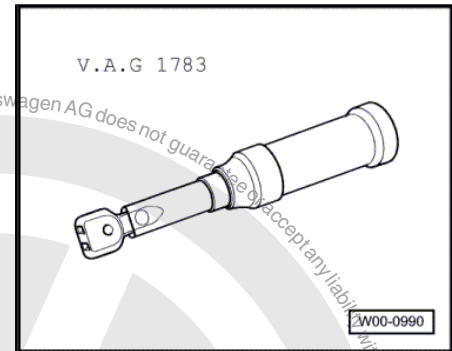
2 Front bumper, Cup Edition

2.1 Front bumper cover

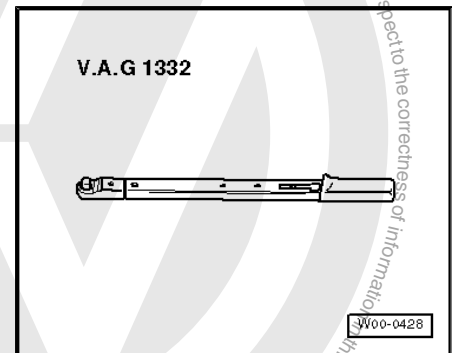
2.1.1 Tools

Special tools and workshop equipment required

- ◆ Torque wrench -V.A.G 1783-



- ◆ Torque wrench -V.A.G 1332-



2.1.2 Repairing front bumper cover



Note

If bumper cover is damaged, determine whether plastic can be repaired before renewing bumper.

Description under: => General Information; Body Repairs, General Body Repairs ; Plastic repair procedures



2.1.3 Assembly overview - front bumper cover

1 - Front bumper cover

- Material PUR/MF 17
- Removing ⇒ [page 231](#)
- Installing ⇒ [page 232](#)

2 - Bolt

- Left and right
- Points upwards
- Specified torque: 2 Nm

3 - Bolt

- Qty. 4 on each side
- Specified torque: 2 Nm

4 - Bolt

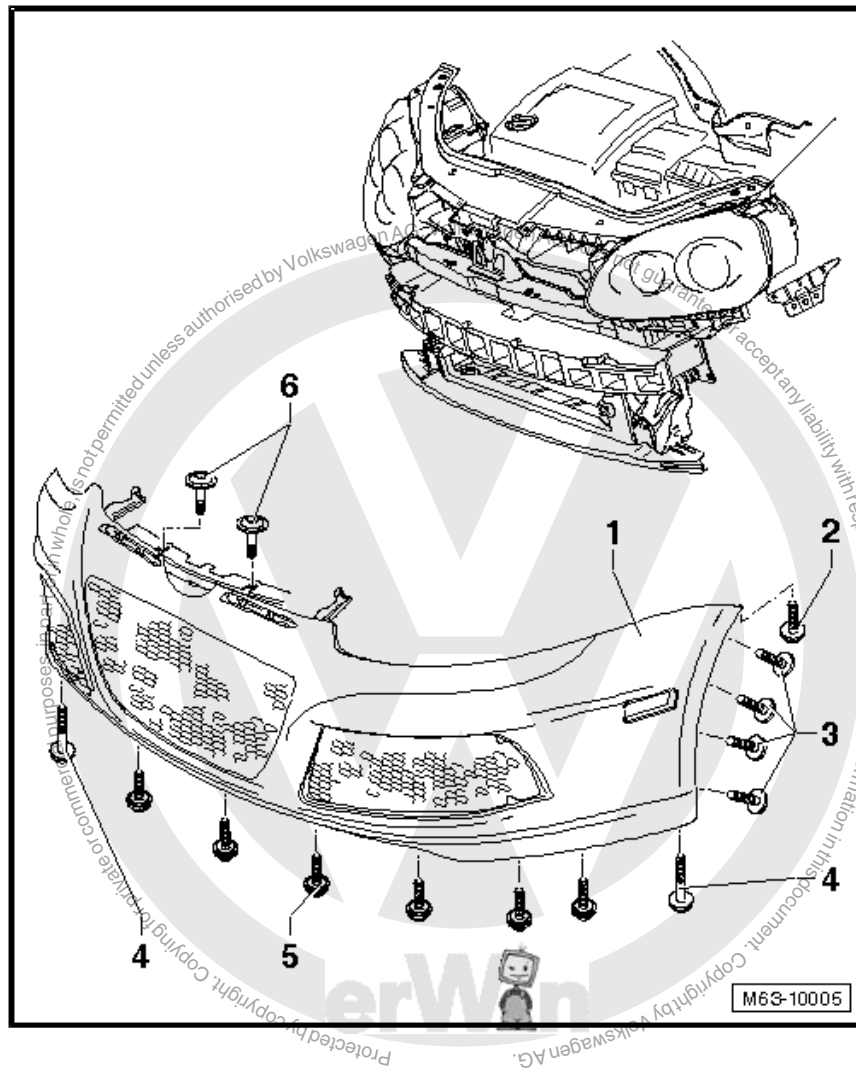
- Left and right
- Specified torque: 3.5 Nm

5 - Bolt

- Qty. 6.
- Specified torque: 2 Nm

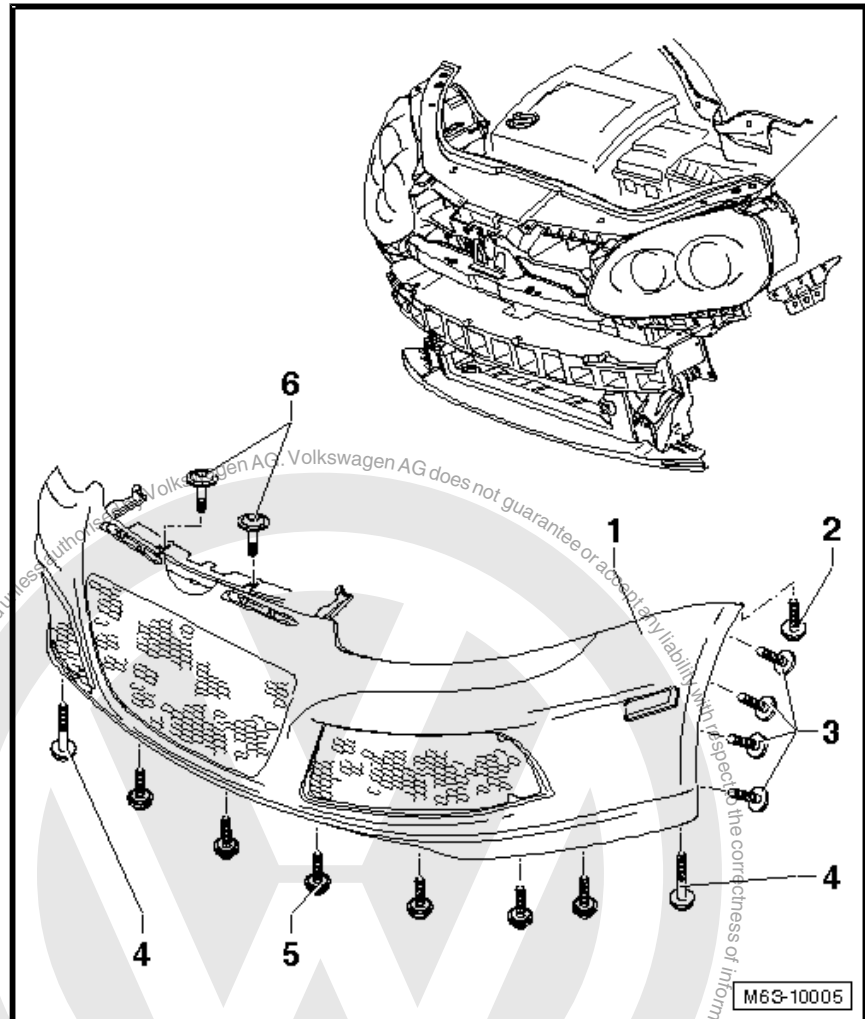
6 - Bolt

- Qty. 2.
- Specified torque: 3.5 Nm





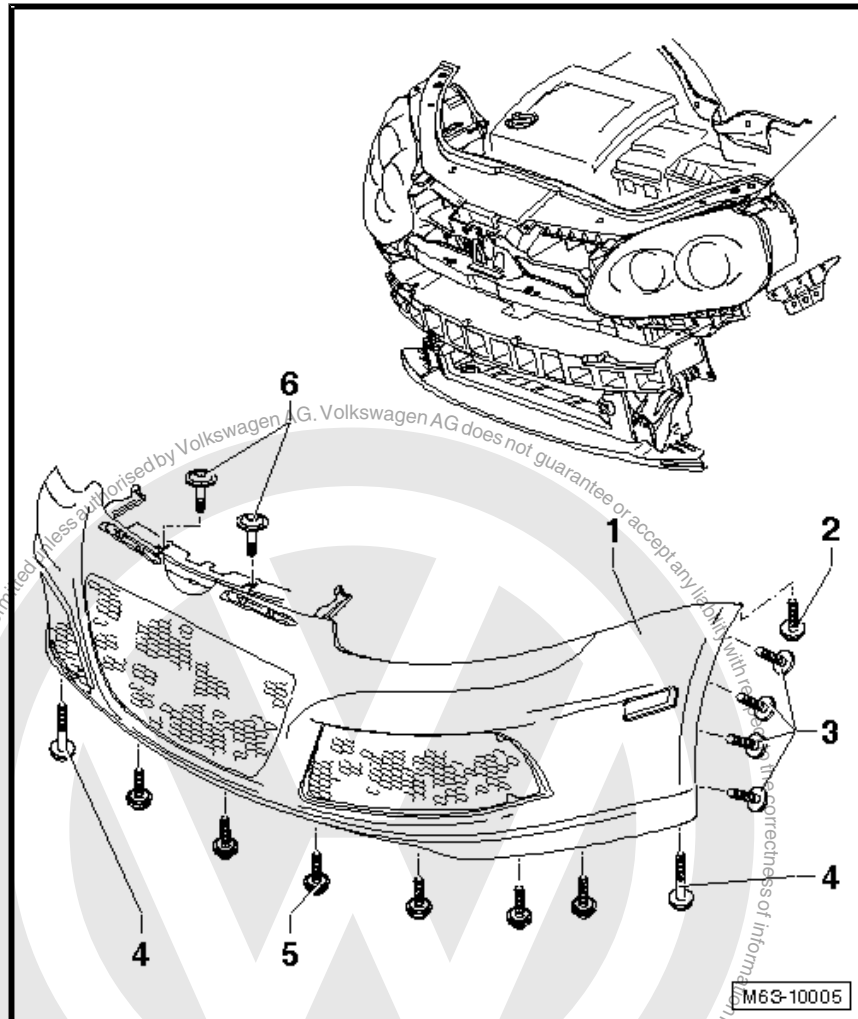
2.1.4 Removing



- Remove left and right side marker lights -5- ⇒ Electrical system; Rep. Gr. 92 ; Removing and installing side marker lights in from bumper .
 - Remove radiator grille ⇒ [page 341](#) .
 - Remove bolts -6- from above.
 - Remove bolts -2- (pointing upwards) on left and right of wheel housing.
 - Unscrew bolts -3- from left and right wheel housing.
 - Unscrew bolts -4- and -5- from underneath.
- Further dismantling requires the help of a second mechanic.
- With help of a second mechanic pull front bumper cover -1- parallel off vehicle.
 - Disconnect electrical connectors from all electrical components (if fitted).



2.1.5 Installing



- With help of a second mechanic, install front bumper cover -1- on lock carrier ensuring it remains parallel with vehicle

Note

When positioning front bumper cover -1-, ensure it is parallel to wing.

- Ensure joints are parallel and shut lines are equal ⇒ Body Repairs; Rep. Gr. 00; Karosseriespaltmaße; Karosserie vorn
- Start bolts -2, 3, 4, 5 and 6- and tighten these to the relevant torque settings ⇒ [page 230](#)

Further installation is performed in reverse order of removal.



2.1.6 Front bumper cover add-on parts

1 - Front bumper cover

- Material PUR/MF 17
- Removing ⇒ [page 231](#)
- Installing ⇒ [page 232](#)

2 - End plate

- Left
- Clipped on the inside with 4 panel clips.
- Only remove when bumper cover -1- is removed

3 - Air intake grille

- Left
- Secured with four bolts from the outside.
- Specified torque: 2 Nm

4 - Centre air intake grille

- Clipped on the inside with 19 panel clips.
- Only remove when bumper cover -1- is removed

5 - Spoiler attachment

- Only remove when bumper cover -1- is removed

6 - Air intake grille

- Right
- Secured with four bolts from the outside.
- Specified torque: 2 Nm

7 - Towing eye cap

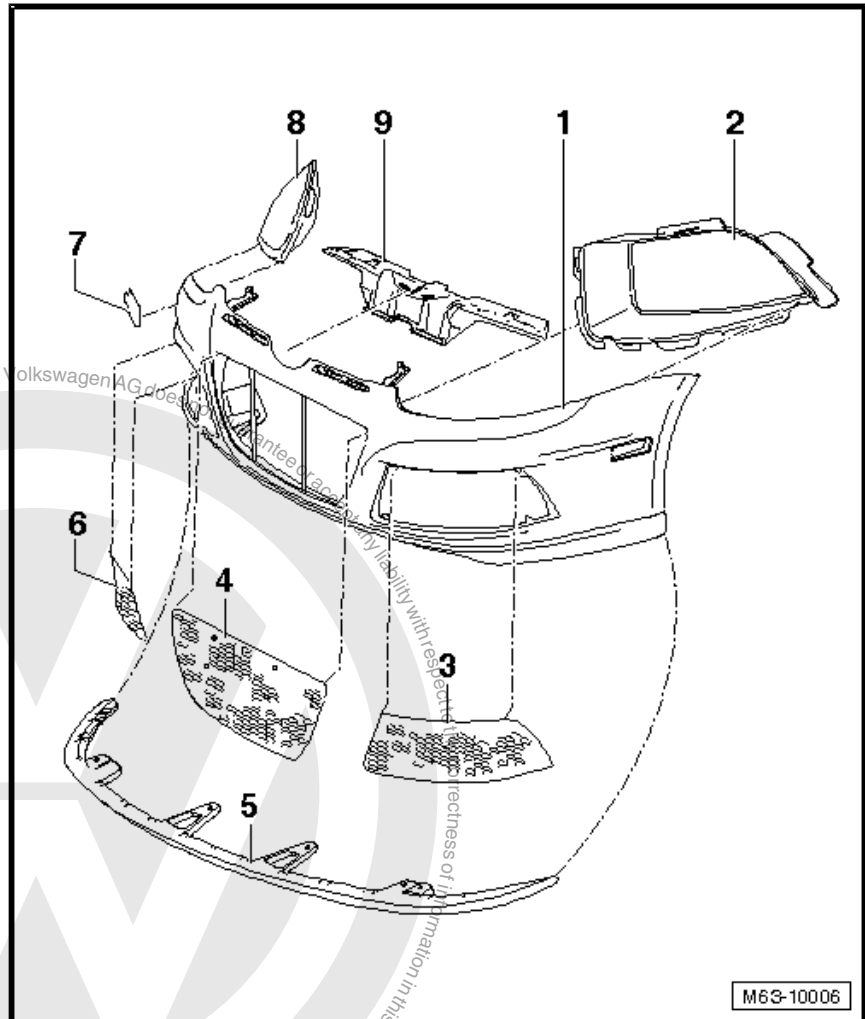
- Engaged in front bumper cover -1-

8 - End plate

- Right
- Clipped on the inside with 4 panel clips.
- Only remove when bumper cover -1- is removed

9 - Adapter

- Secured to the middle of the front bumper -1- with four bolts from above and four blind rivets from below.
- Specified torque for the 4 bolts (2 Nm).





2.1.7 Front bumper cover substructure parts

1 - Right guide

- Bolted to bumper carrier
- To remove, unbolt bolts
⇒ [Item 9 \(page 234\)](#) .

2 - Expanding nut

- Qty. 3 on each side

3 - Bolt

- Qty. 3 on each side
- Specified torque: 2 Nm

4 - Guide bracket

- Left and right
- To remove, unbolt bolts
⇒ [Item 3 \(page 234\)](#)

5 - Bolt

- Qty. 2.
- Specified torque: 2 Nm

6 - Left guide

- Bolted to bumper carrier
- To remove, unbolt bolts
⇒ [Item 5 \(page 234\)](#) .

7 - Left air duct

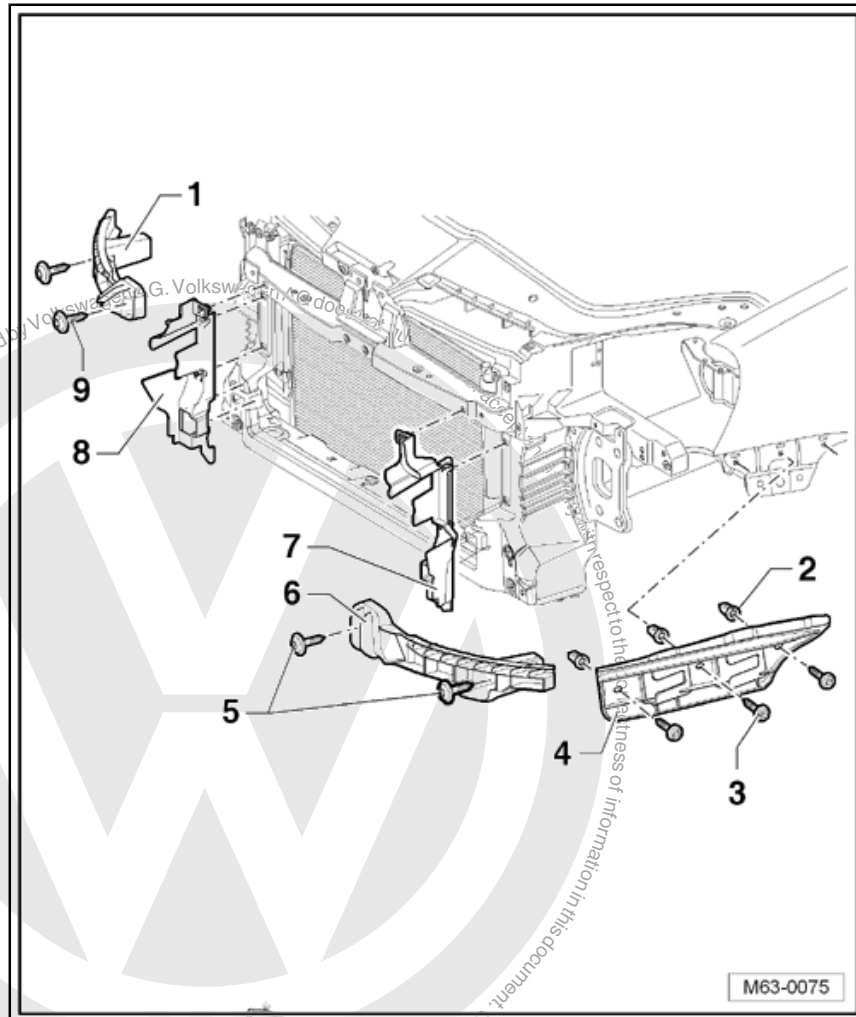
- Fastened to lock carrier.

8 - Right air duct

- Fastened to lock carrier.

9 - Bolt

- Qty. 2.
- Specified torque: 2 Nm





2.1.8 Assembly overview - front bumper carrier

1 - Front bumper carrier

2 - Bolt

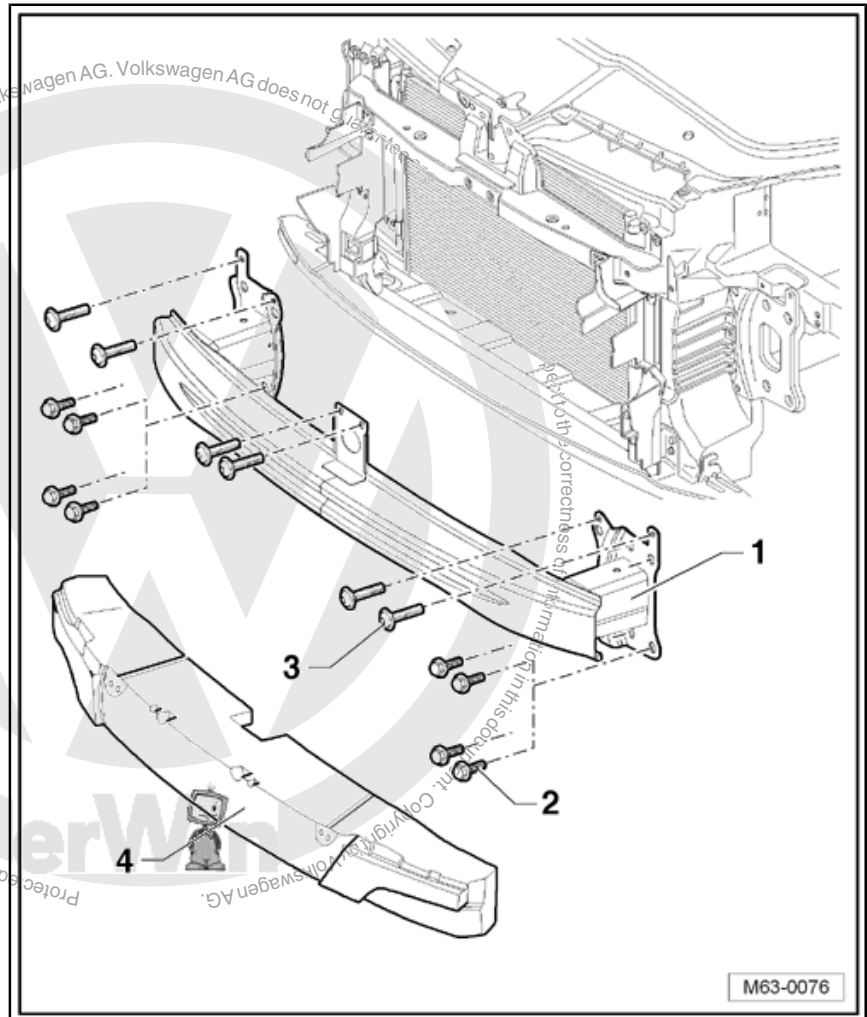
- Qty. 4 on each side
- Specified torque: 60 Nm

3 - Bolt

- Qty. 6.
- Specified torque: 8 Nm

4 - Foam element

- Self-adhesive



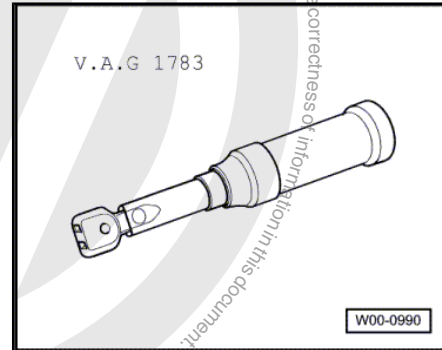


3 Rear bumper (saloon)

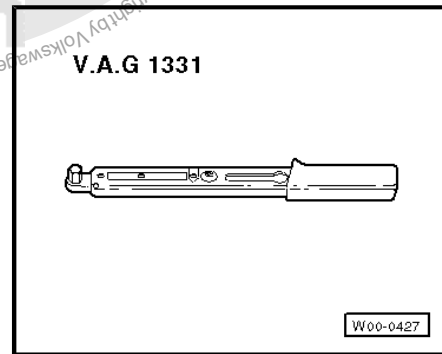
3.1 Tools

Special tools and workshop equipment required

- ◆ Torque wrench -V.A.G 1783-



- ◆ Torque wrench -V.A.G 1331-



3.2 Repairing bumper cover



Note

If bumper cover is damaged, determine whether plastic can be repaired before renewing bumper.

Description under: ⇒ General Information; Body Repairs, General Body Repairs ; Plastic repair procedures



3.3 Assembly overview - bumper cover

1 - Bolt

- Qty. 1 on each side
- Bolted from luggage compartment (to remove, remove luggage compartment side covers ⇒ General body repairs, interior; Rep. Gr. 70 ; Luggage and load compartment trim)
- 8 Nm

2 - Bolt

- 5 Nm

3 - Spreader rivet

- Qty. 1 on each side

4 - Bolt

- Qty. 3
- Only on right side
- 2 Nm

5 - Bolt

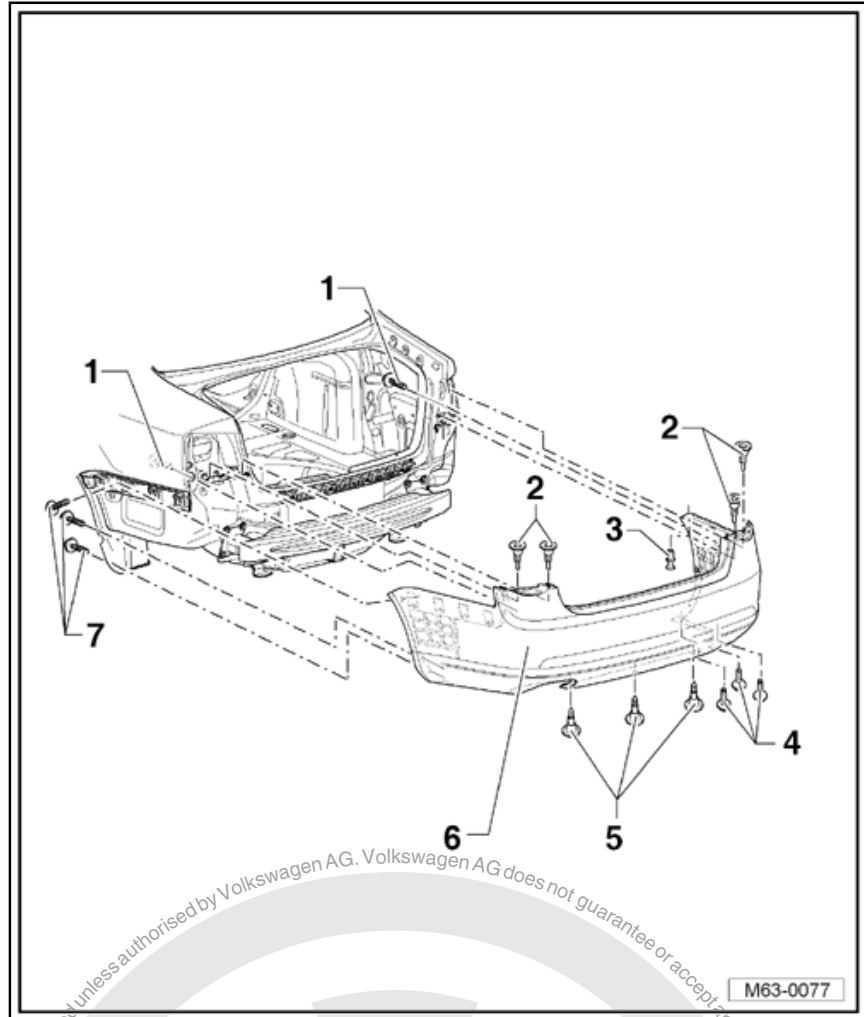
- Qty. 3
- 5 Nm

6 - Bumper cover

- Material PP/EPDM
- Removing and installing ⇒ [page 237](#)

7 - Bolt

- Qty. 3 on each side
- 2 Nm



3.4 Removing and installing bumper cover



Note

The removal and installation procedures may have to be modified slightly depending on variations in equipment.

3.4.1 Removing

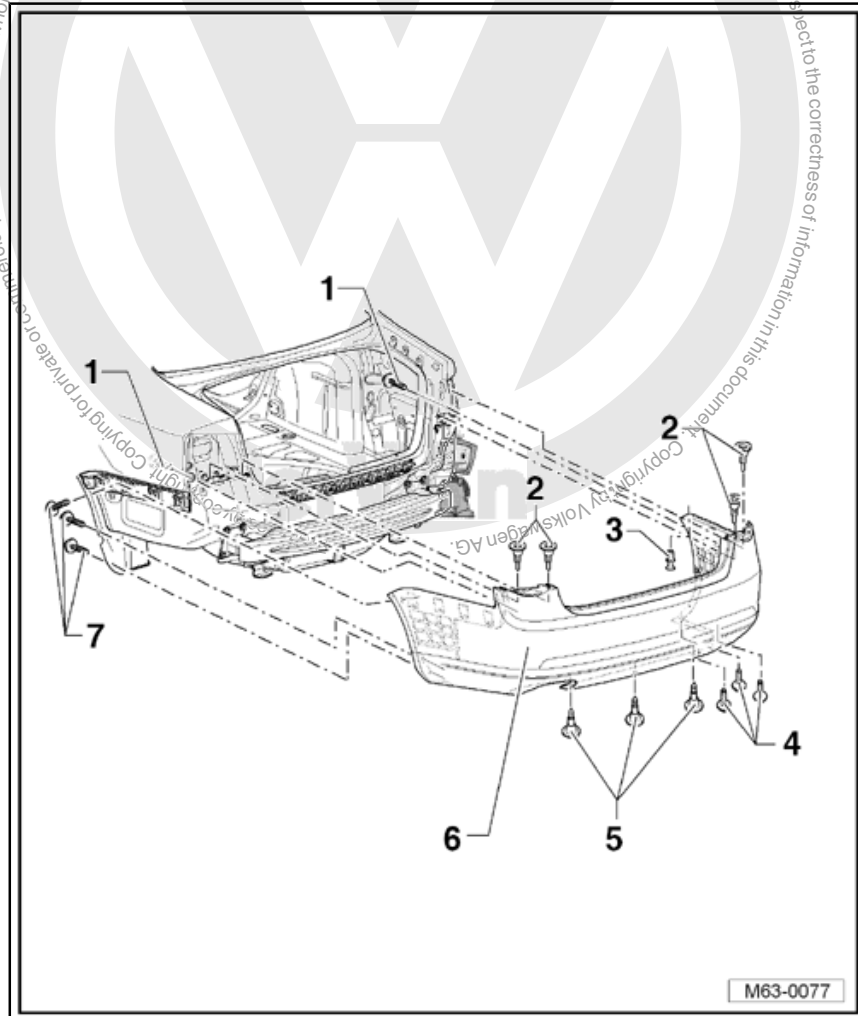
- Remove tail lights in left and right side panels ⇒ Electrical system; Rep. Gr. 94 ; Tail lights .
- Remove bolts -7- on left and right in area of wheel housing liner.
- Lever out spreader rivet -3- on left and right using a screwdriver.
- From below, remove bolts -4- and -5-
- Remove bolts -2- from above.



- From luggage compartment, remove bolt -1- on left and right (remove luggage compartment side covers => General body repairs, interior; Rep. Gr. 70 ; Luggage and load compartment trim .

Further dismantling requires the assistance of a second mechanic.

- Pull bumper cover -6- parallel out of guide profiles with help of a second mechanic.
- Disconnect connectors from all electrical components.



3.4.2 Installing

Install in reverse order of removal.

Ensure parallelism and gap dimensions are maintained => Body Repairs; Rep. Gr. 00 ; Body dimensions .



3.5 Rear bumper cover with add-on parts

1 - Bumper cover

- Material PP/EPDM
- Removing and installing
⇒ [page 237](#)

2 - Spoiler

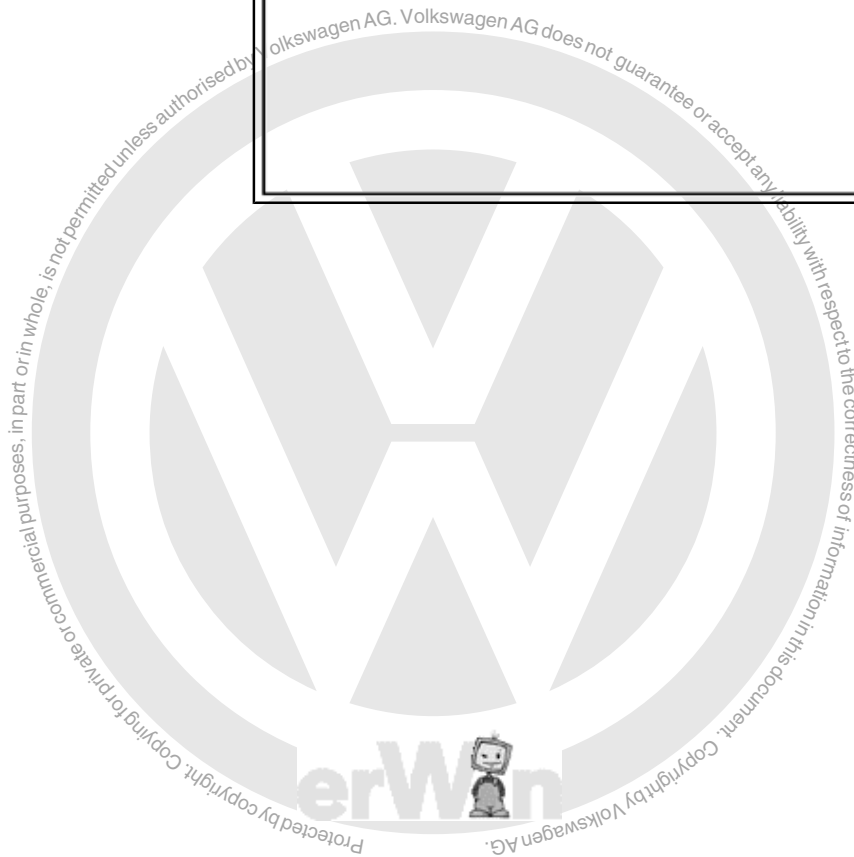
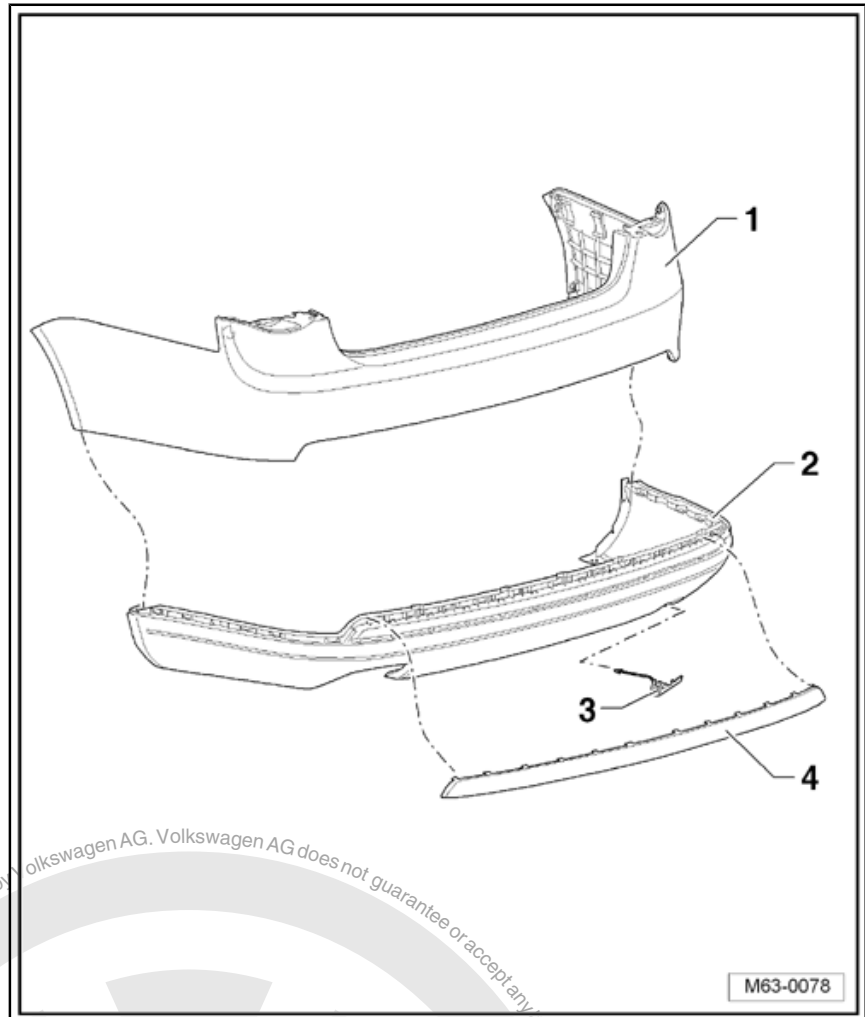
- Material PC/ABS
- Engaged in bumper cover
- Can only be removed when bumper cover is removed

3 - Towing eye cap

- Engaged in bumper cover

4 - Bumper strip

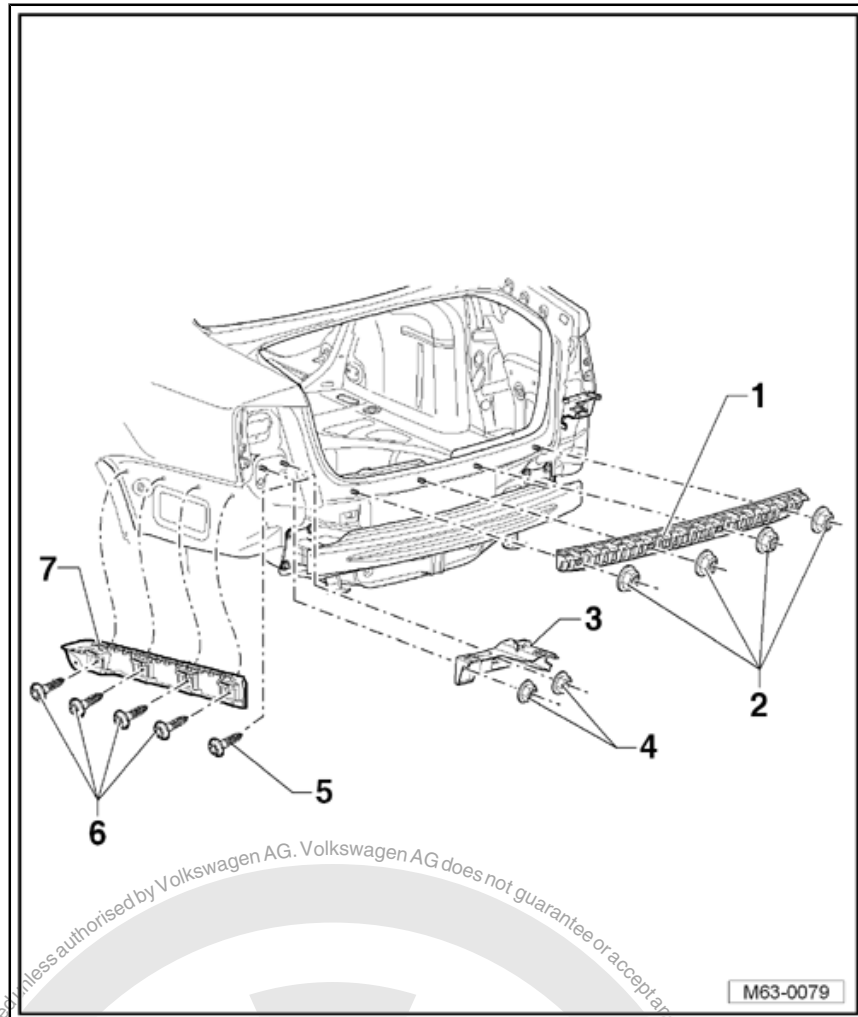
- Engaged in spoiler
- Can only be removed when spoiler is removed





3.6 Rear bumper cover substructure parts

- 1 - Securing strip
 - Qty. 4
 - 2 Nm
- 2 - Hexagon nut
 - Qty. 4
 - 2 Nm
- 3 - Guide
 - Left and right
- 4 - Hexagon nut
 - Qty. 2 on each side
 - 2 Nm
- 5 - Bolt
 - Qty. 1 on each side
 - 2 Nm
- 6 - Bolt
 - Qty. 4 on each side
 - 2 Nm
- 7 - Guide bracket
 - Left and right





3.7 Assembly overview - bumper carrier

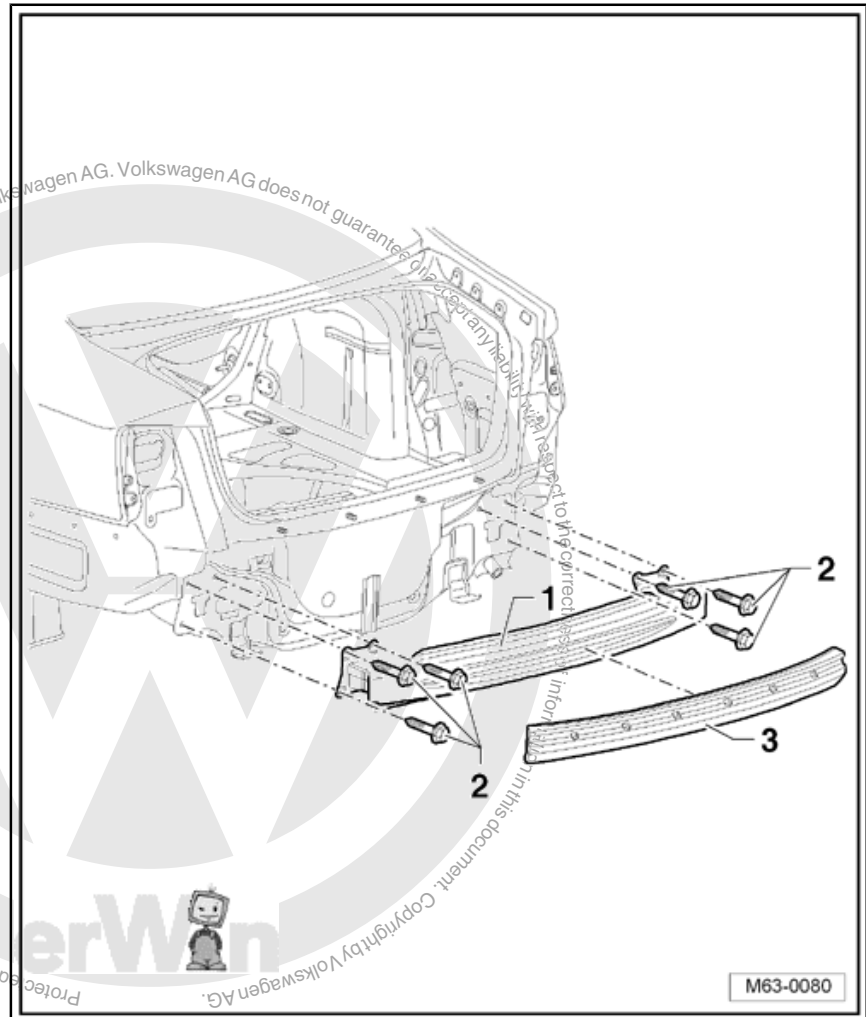
1 - Bumper carrier

2 - Bolt

- Qty. 3 on each side
- 20 Nm

3 - Foam element

- Self-adhesive





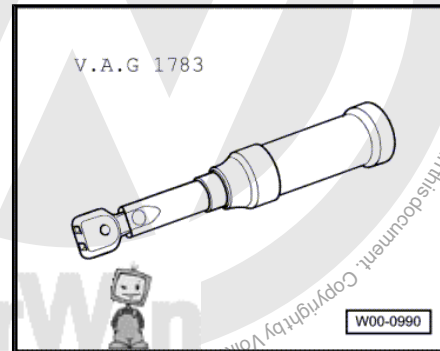
4 Rear bumper, saloon, Cup Edition

4.1 Rear bumper cover, saloon

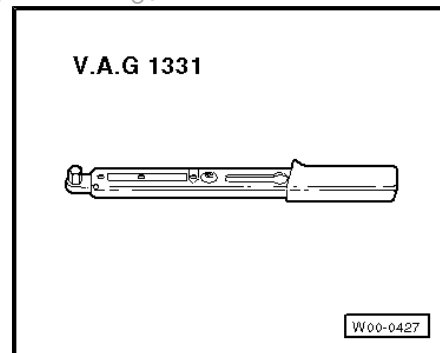
4.1.1 Tools

Special tools and workshop equipment required

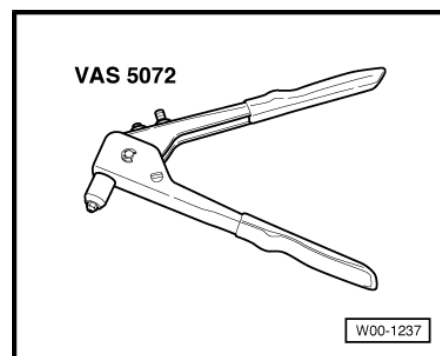
- ◆ Torque wrench -V.A.G 1783-



- ◆ Torque wrench -V.A.G 1331-



- ◆ Pop rivet pliers -VAS 5072-



4.1.2 Repairing rear bumper cover



Note

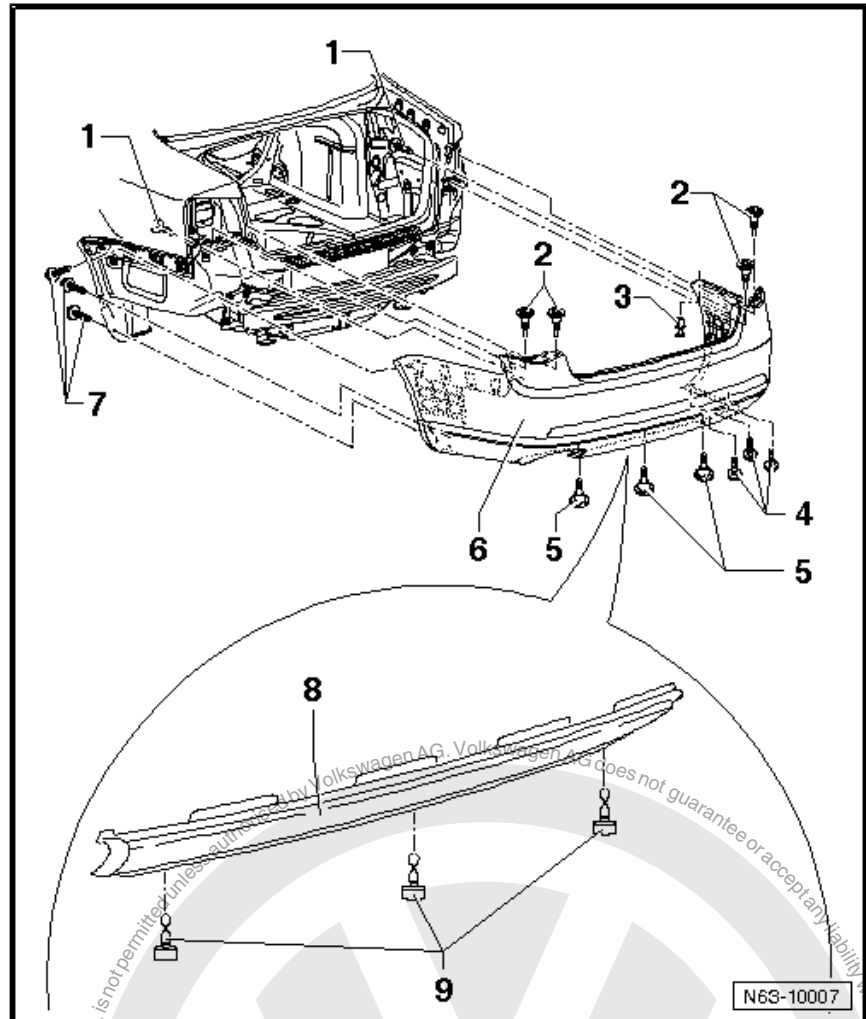
If bumper cover is damaged, determine whether plastic can be repaired before renewing bumper.

Description under: ⇒ General Information; Body Repairs, General Body Repairs ; Plastic repair procedures



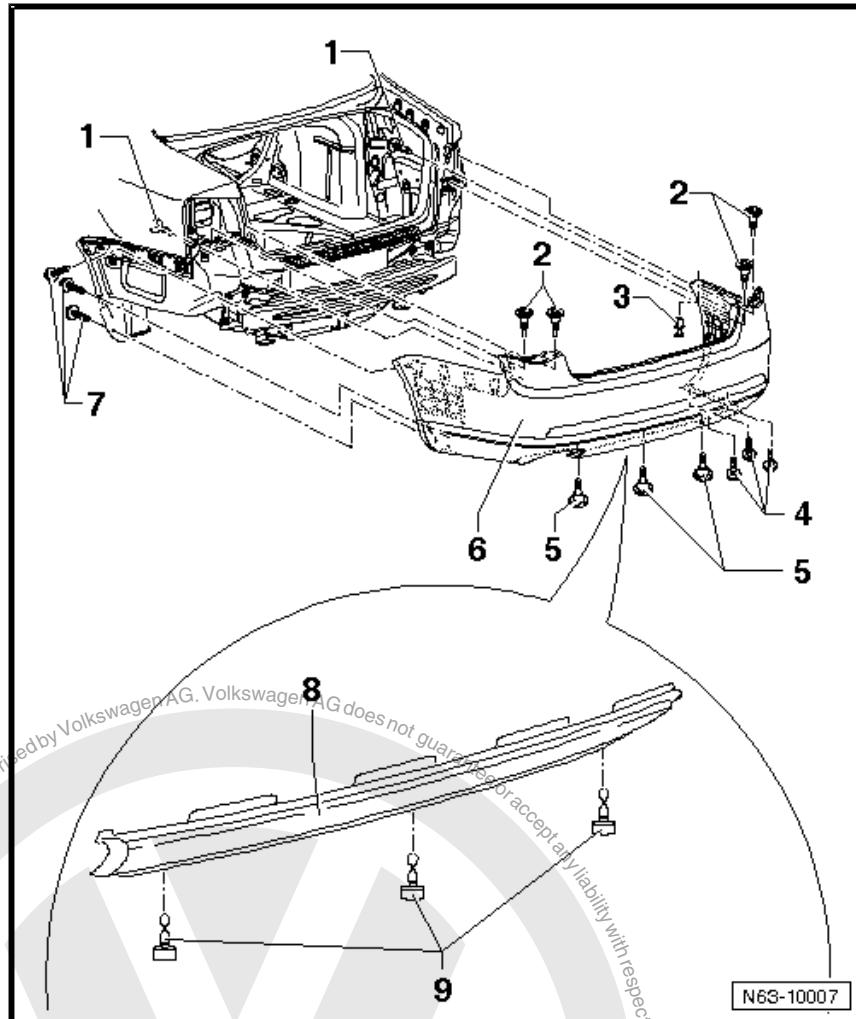
4.1.3 Assembly overview - rear bumper cover

- 1 - Bolt
 - Left and right
 - Specified torque: 8 Nm
- 2 - Bolt
 - Specified torque: 5 Nm
- 3 - Spreader rivet
 - Left and right
- 4 - Bolt
 - Qty. 3.
 - Only on right side
 - Specified torque: 2 Nm
- 5 - Bolt
 - Qty. 3.
 - Specified torque: 5 Nm
- 6 - Rear bumper cover
 - Material PP/EPDM
 - Removing => [page 244](#)
 - Installing => [page 245](#)
- 7 - Bolt
 - Qty. 3 on each side
 - Specified torque: 2 Nm
- 8 - Diffuser
- 9 - Quick-release screw
 - Qty. 3.





4.1.4 Removing



- Remove luggage compartment side trim => General body repairs, interior; Rep. Gr. 70 ; Trims; Luggage and load compartment .
- Remove tail lights in left and right side panels => Electrical system; Rep. Gr. 94 ; Tail lights .
- Release quick-release screw -9- and remove diffuser -8- from spoiler.
- Remove bolts -7- on left and right in area of wheel housing liner.
- Lever out spreader rivet -3- on left and right using a screwdriver.
- From below, remove bolts -4- and -5-.
- Remove bolts -2- on left and right from above.
- Remove bolt -1- on left and right in luggage compartment.

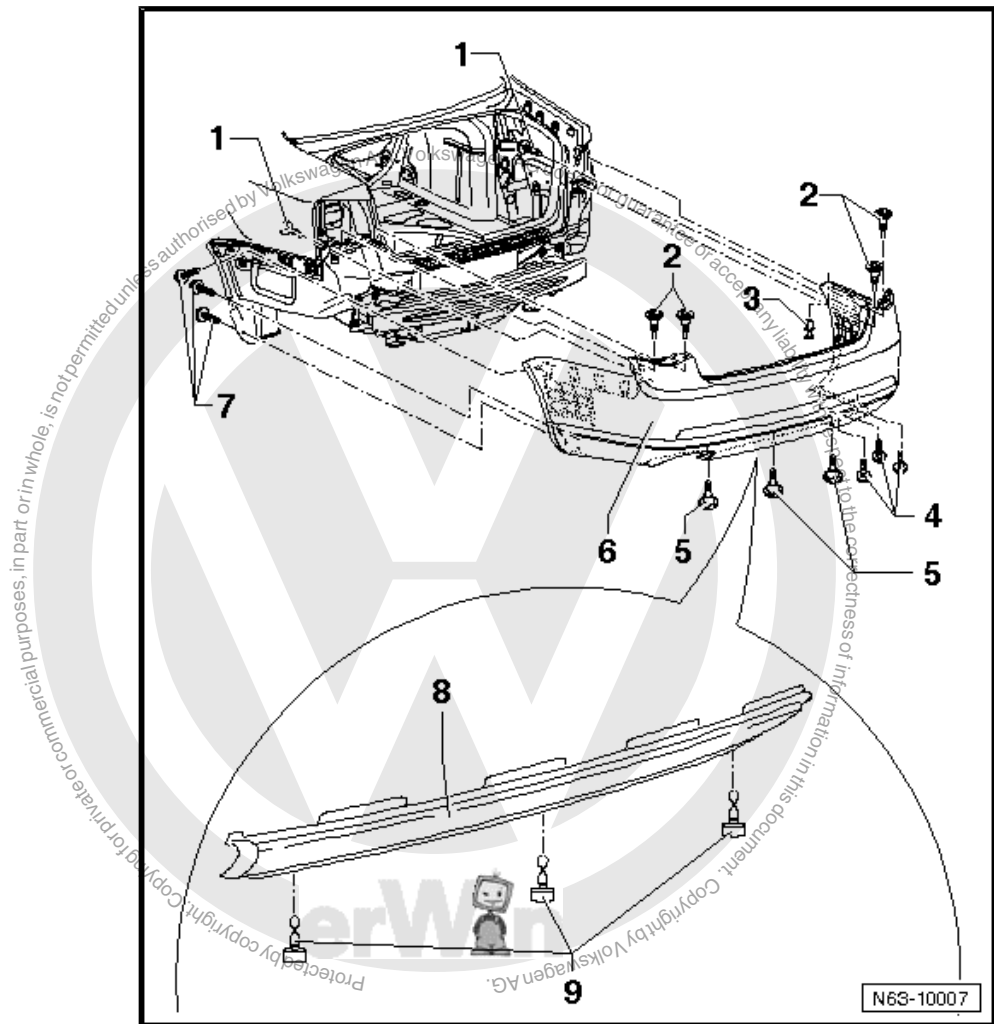
Further dismantling requires the assistance of a second person.

- With the help of a second mechanic, pull rear bumper cover -6- parallel out of guide profiles.



- Disconnect connectors from all electrical components.

4.1.5 Installing



- With the help of a second mechanic, guide rear bumper cover parallel into left and right guides.



Note

Ensure when fitting the rear bumper cover that it runs parallel along the left and right guide profiles.

- Install left and right spreader rivets -3-.

Ensure that joints are parallel and specified dimensions are maintained ⇒ Body Repairs; Rep. Gr. 00 ; Body panel gaps/shut lines; Body - rear

- Start bolts -1, 2, 4, 5 and 7- and tighten these to the relevant torque settings ⇒ [page 243](#)
- Install diffuser -8- and lock quick-release screws -9-.

Further installation is performed in reverse order of removal.



4.1.6 Rear bumper cover add-on parts

1 - Rear bumper cover

- Material PP/EPDM
- Removing ⇒ [page 244](#)
- Installing ⇒ [page 245](#)

2 - Spoiler

- Engaged in rear bumper cover -1-
- Can only be removed when rear bumper cover is removed

3 - Reflector

- Left and right
- Engaged in spoiler

4 - Diffuser

5 - Quick-release screw

- Qty. 4.

6 - Left diffuser

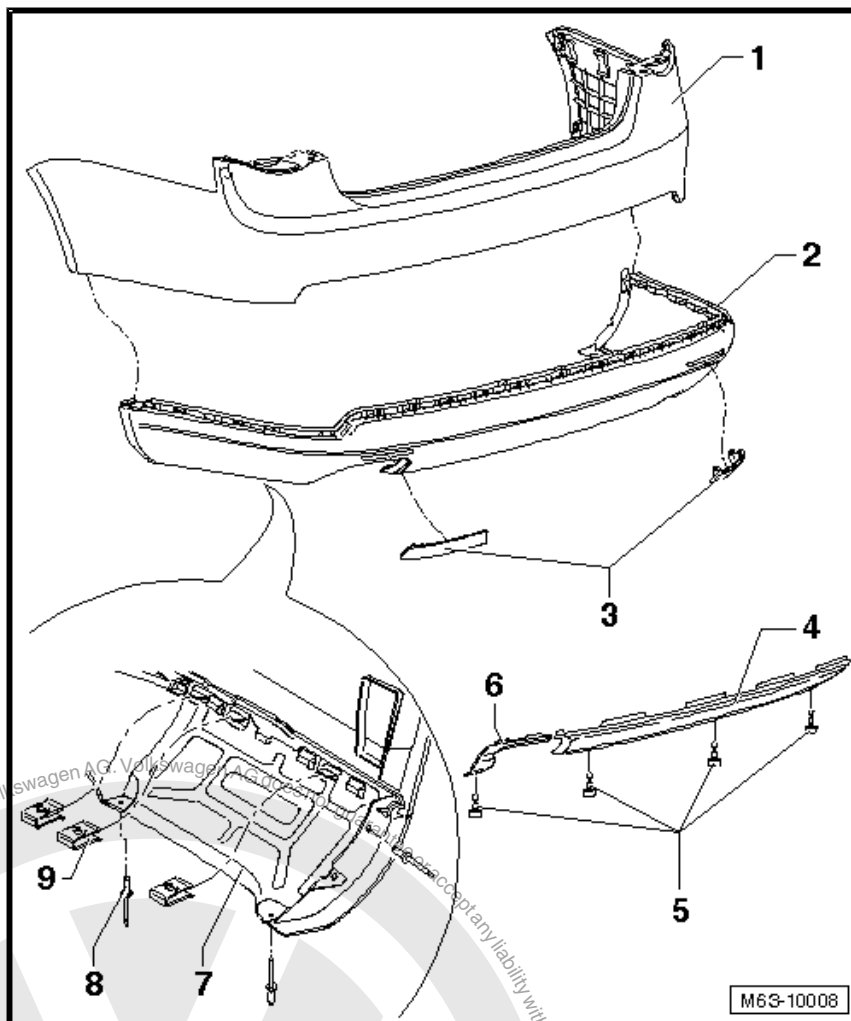
7 - Heat shield

8 - Pop rivet

- Qty. 3.
- Insert with pop rivet pliers -VAS 5072-

9 - Clip

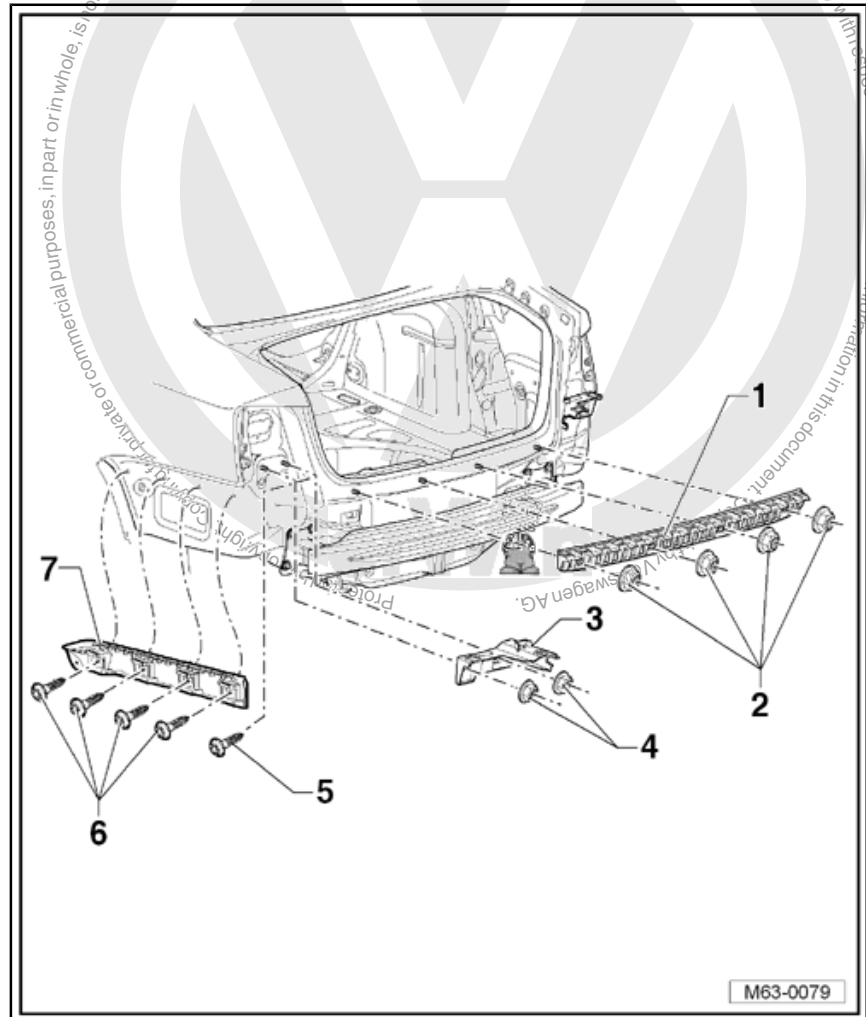
- Qty. 3.





4.1.7 Rear bumper cover substructure parts

- 1 - Securing strip
 - Qty. 4.
 - Specified torque: 2 Nm
- 2 - Hexagon nut
 - Qty. 4.
 - Specified torque: 2 Nm
- 3 - Guide
 - Left and right
- 4 - Hexagon nut
 - Qty. 2 on each side
 - Specified torque: 2 Nm
- 5 - Bolt
 - Qty. 1 on each side
 - Specified torque: 2 Nm
- 6 - Bolt
 - Qty. 4 on each side
 - Specified torque: 2 Nm
- 7 - Guide bracket
 - Left and right





4.1.8 Assembly overview - rear bumper carrier

1 - Rear bumper carrier

2 - Bolt

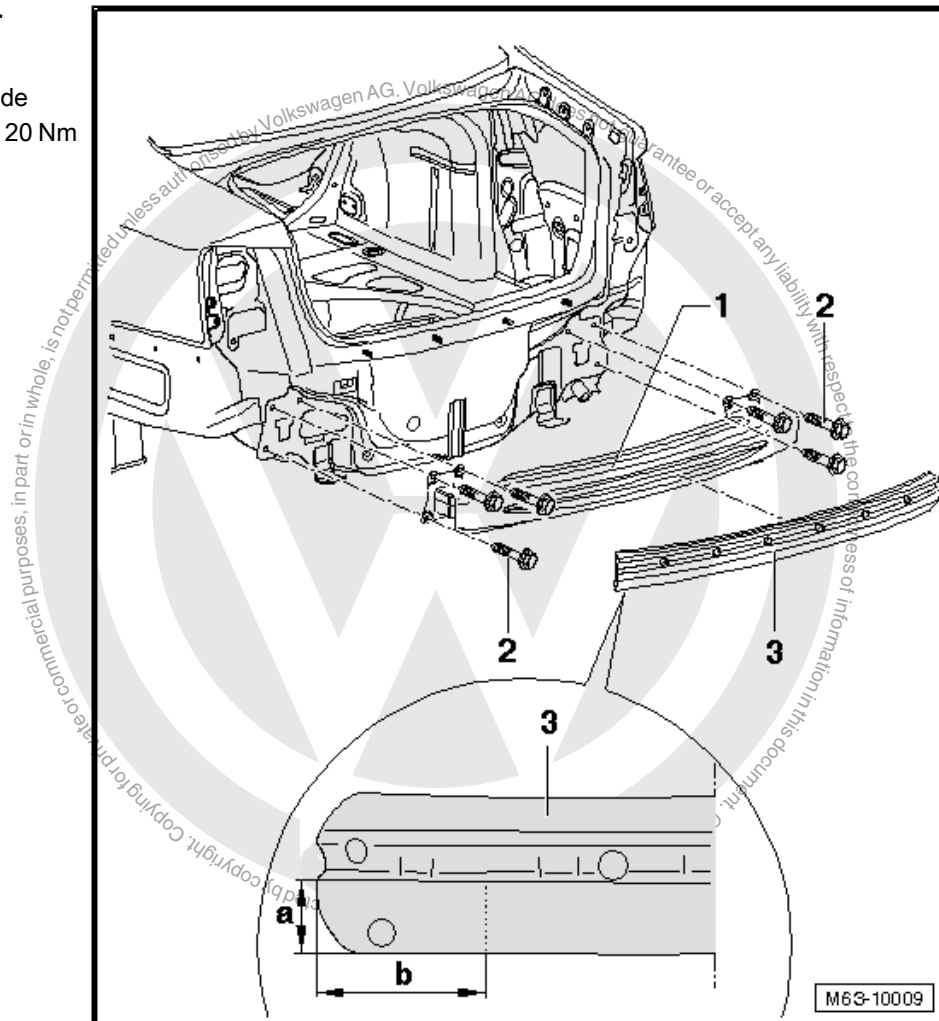
- Qty. 3 on each side
- Specified torque: 20 Nm

3 - Foam element

- Self-adhesive



Note



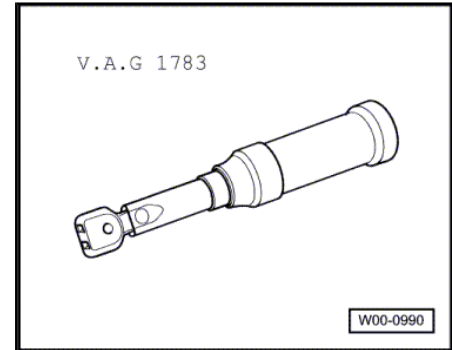


5 Rear bumper (Variant)

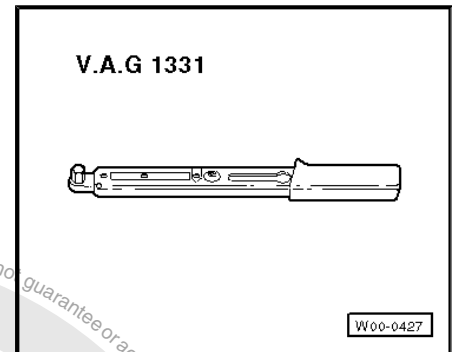
5.1 Tools

Special tools and workshop equipment required

- ◆ Torque wrench -V.A.G 1783-



- ◆ Torque wrench -V.A.G 1331-



5.2 Repairing bumper cover



Note

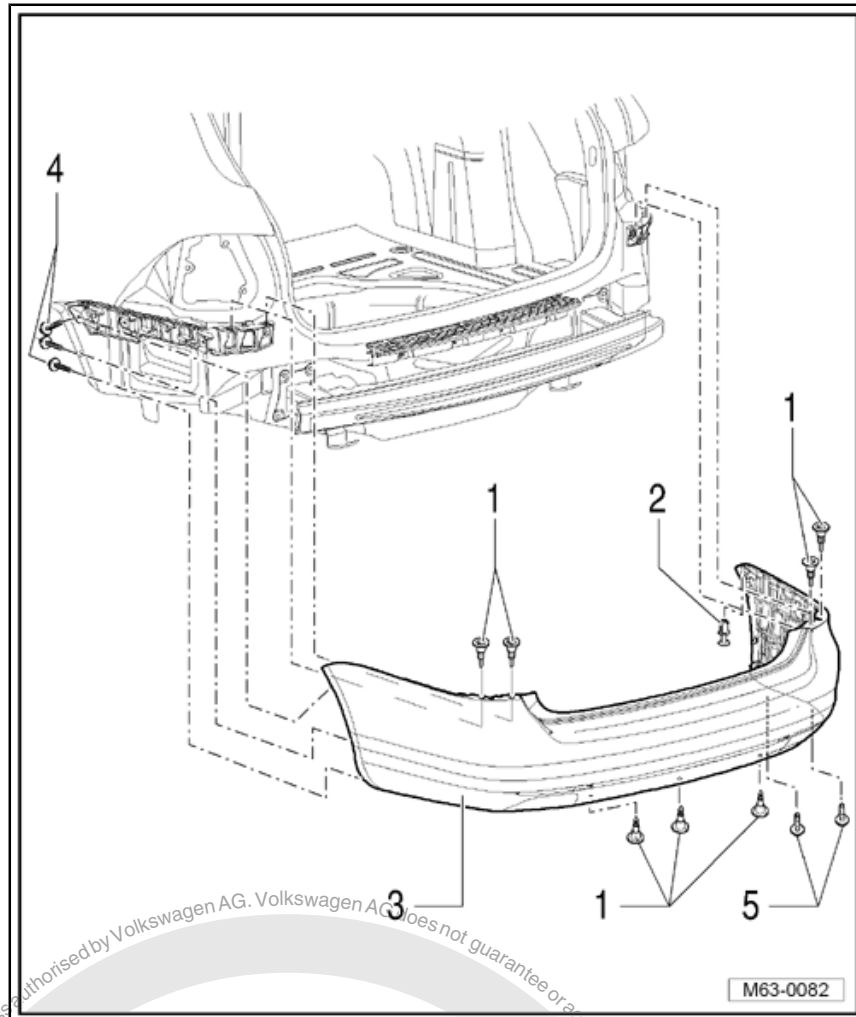
If bumper cover is damaged, determine whether plastic can be repaired before renewing bumper.

Description under: => General Information; Body Repairs, General Body Repairs ; Plastic repair procedures



5.3 Assembly overview - bumper cover

- 1 - Bolt
 - Qty. 7
 - 5 Nm
- 2 - Spreader rivet
 - Qty. 1 on each side
- 3 - Bumper cover
 - Material PP/EPDM
 - Removing and installing
⇒ [page 250](#)
- 4 - Bolt
 - Qty. 3 on each side
 - 2 Nm
- 5 - Bolt
 - Qty. 2
 - 2 Nm



5.4 Removing and installing bumper cover



Note

The removal and installation procedures may have to be modified slightly depending on variations in equipment.

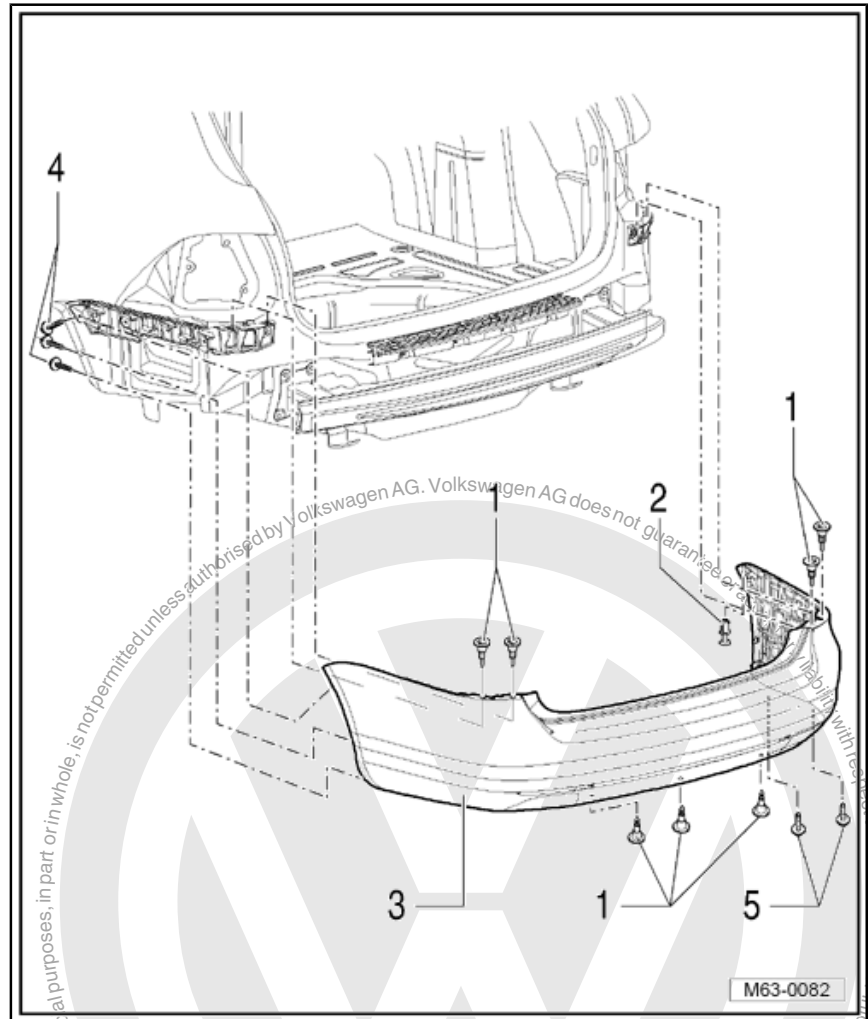
5.4.1 Removing

- Remove tail lights in left and right side panels ⇒ Electrical system; Rep. Gr. 94 ; Tail lights .
- Remove bolts -4- on left and right in area of wheel housing liner.
- Lever out spreader rivet -2- on left and right using a screwdriver.
- Remove bolts -1-.
- Remove bolts -5-.



Further dismantling requires the assistance of a second mechanic.

- Pull bumper cover -3- parallel out of guide profiles with help of a second mechanic.
- Disconnect connectors from all electrical components.



5.4.2 Installing

Install in reverse order of removal.

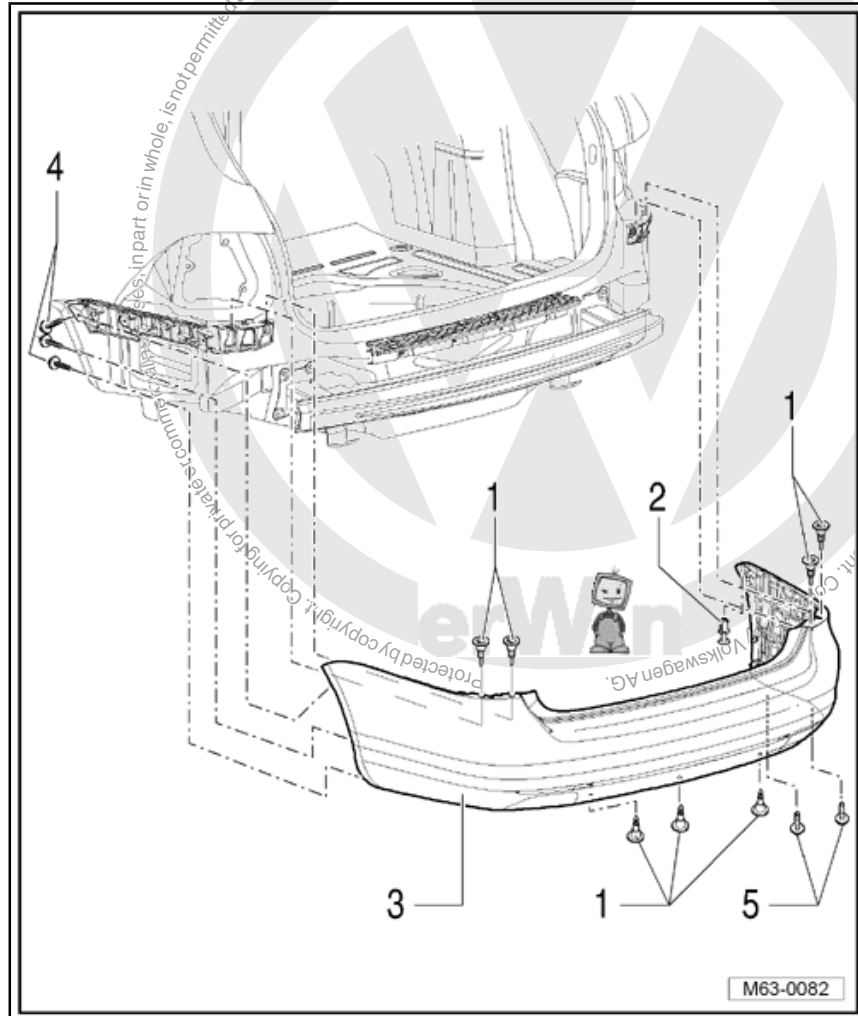
Ensure parallelism and gap dimensions are maintained ⇒ Body Repairs; Rep. Gr. 00 ; Body dimensions .

Tightening torques:

Bolt -1-: 5 Nm

Bolt -4-: 2 Nm

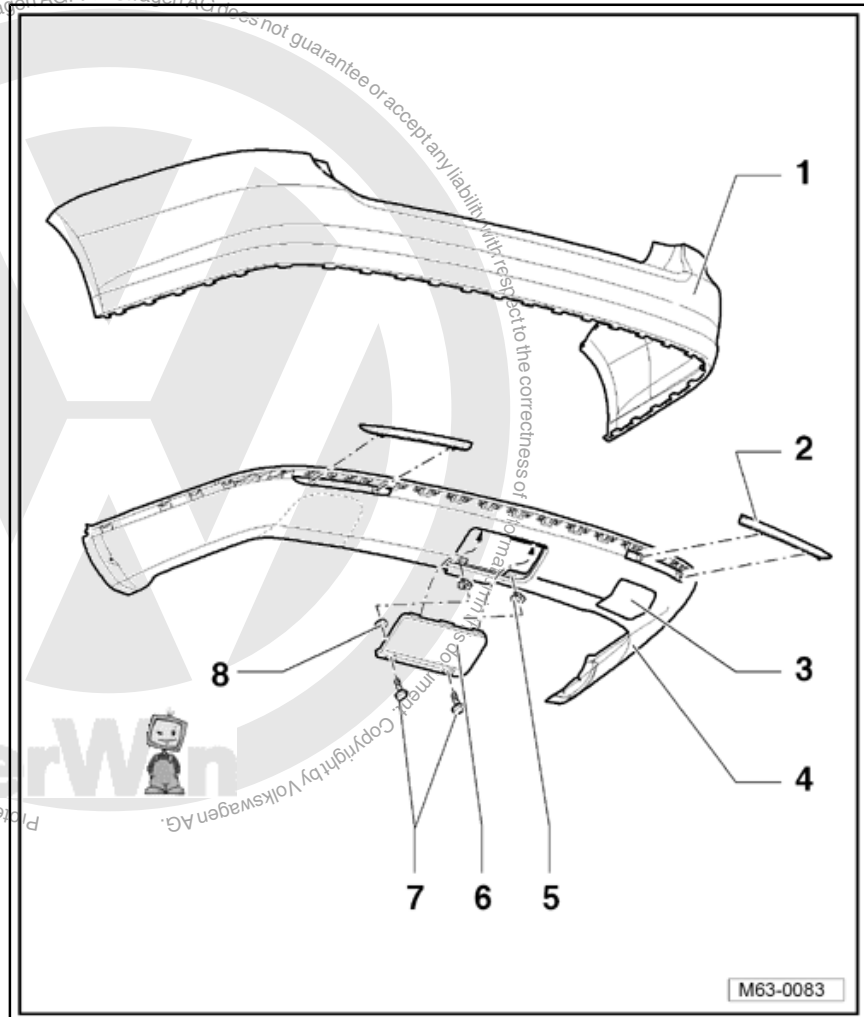
Bolt -5-: 2 Nm





5.5 Rear bumper cover with add-on parts

- 1 - Bumper cover
 - Material PP/EPDM
 - Removing and installing
⇒ [page 250](#)
- 2 - Reflector
 - Engaged in bumper cover
- 3 - Towing eye cap
 - Engaged in bumper cover
- 4 - Spoiler
 - Material PC/ABS
 - Engaged in bumper cover
 - Can only be removed when bumper cover is removed
- 5 - Spring clip
 - Qty. 2
 - Only with towing bracket
- 6 - Cover
 - Only with towing bracket
- 7 - Bolt
 - Qty. 2
 - Only with towing bracket
- 8 - Retaining disc
 - Qty. 2
 - Only with towing bracket





5.6 Rear bumper cover substructure parts

1 - Securing strip

2 - Nut

- Qty. 4
- 2 Nm

3 - Nut

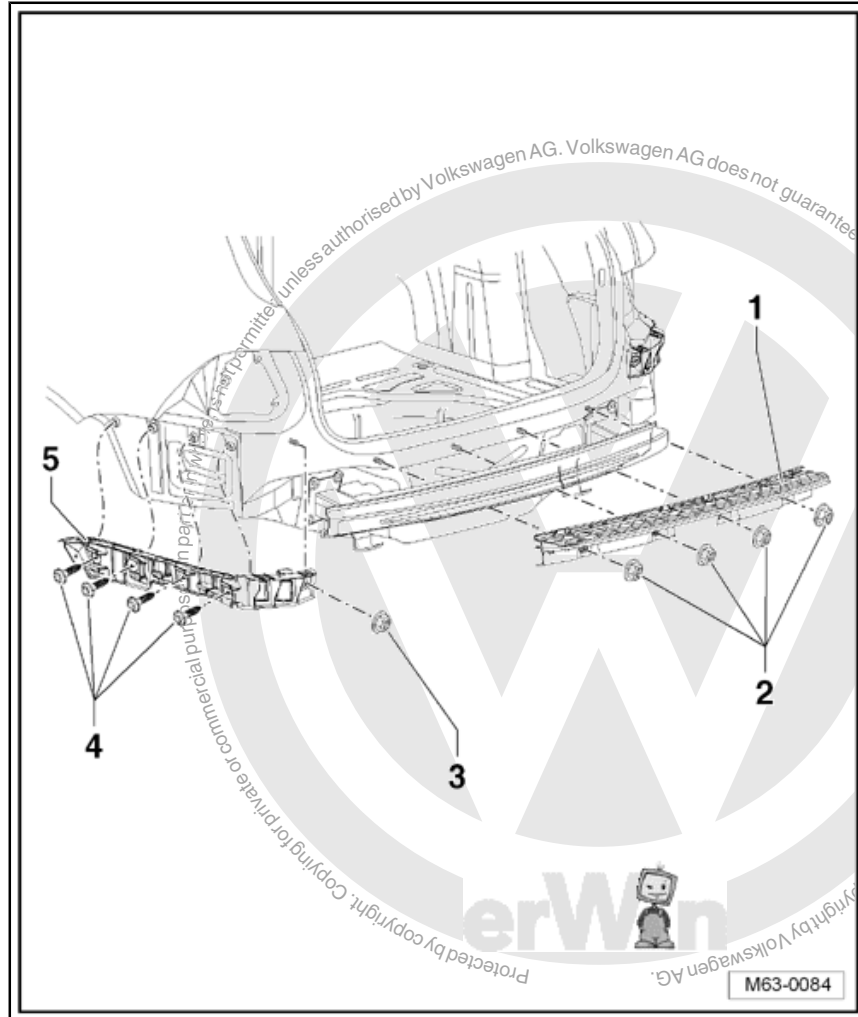
- Qty. 1 on each side
- 2 Nm

4 - Bolt

- Qty. 4 on each side
- 2 Nm

5 - Guide bracket

- Left and right





5.7 Assembly overview - bumper carrier

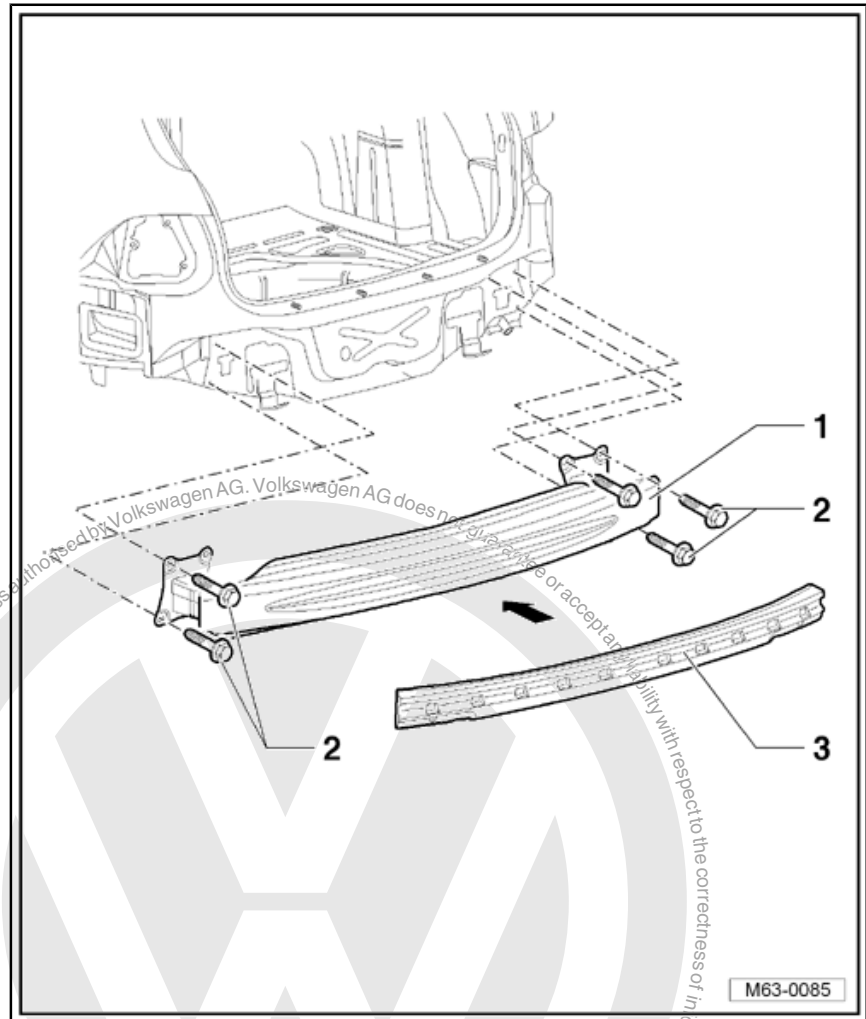
1 - Bumper carrier

2 - Bolt

- Qty. 5
- 20 Nm

3 - Foam element

- USA versions only





5.8 Assembly overview - towing bracket

1 - Bolt

- Sealing plugs
- Qty. 3
- Specified torque: 20 Nm



DANGER!

The bolts -1- function as plugs and seal the passenger compartment against exhaust fumes, and must without exception be installed.

2 - Towing bracket

- Illustration shows towing bracket with removable ball head -2-

3 - Ball coupling

- Removable ball hitch is housed in fold-out luggage compartment floor

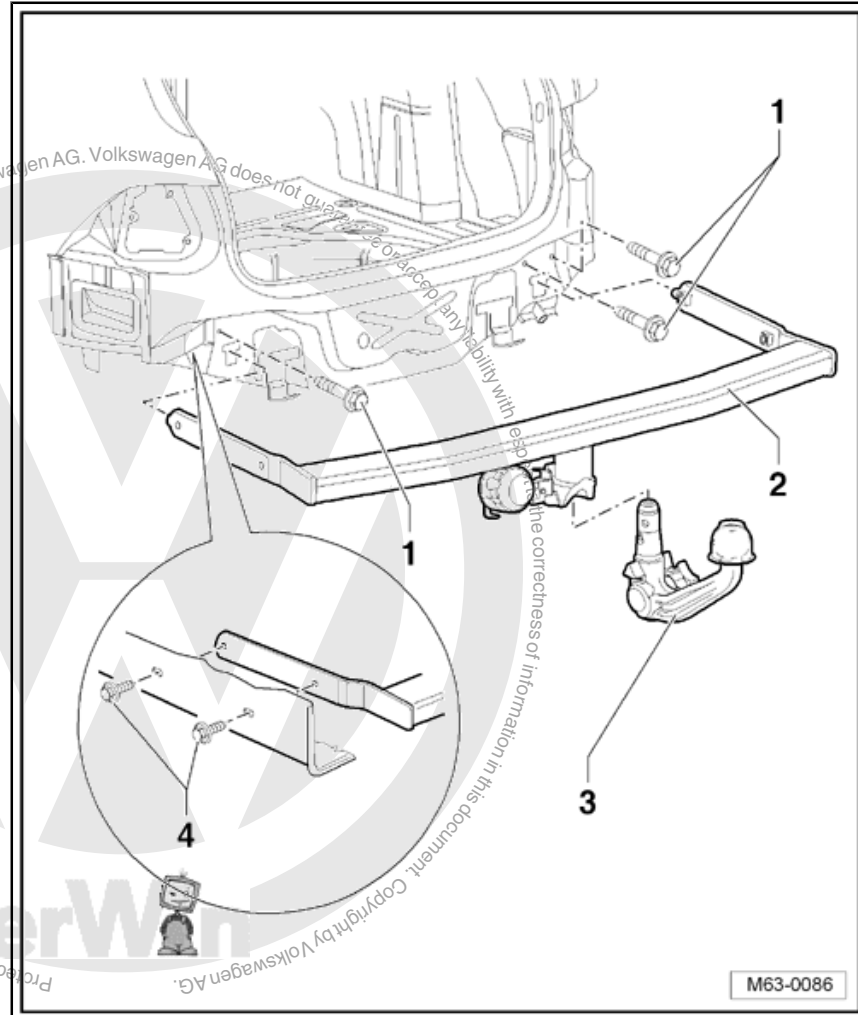
4 - Bolt

- Qty. 2 on each side
- Specified torque: 50 Nm + turn 90° + 30° further



WARNING

Bolts -4- must always be renewed after being removed.



M63-0086

5.9 Removing and installing towing bracket

5.9.1 Removing

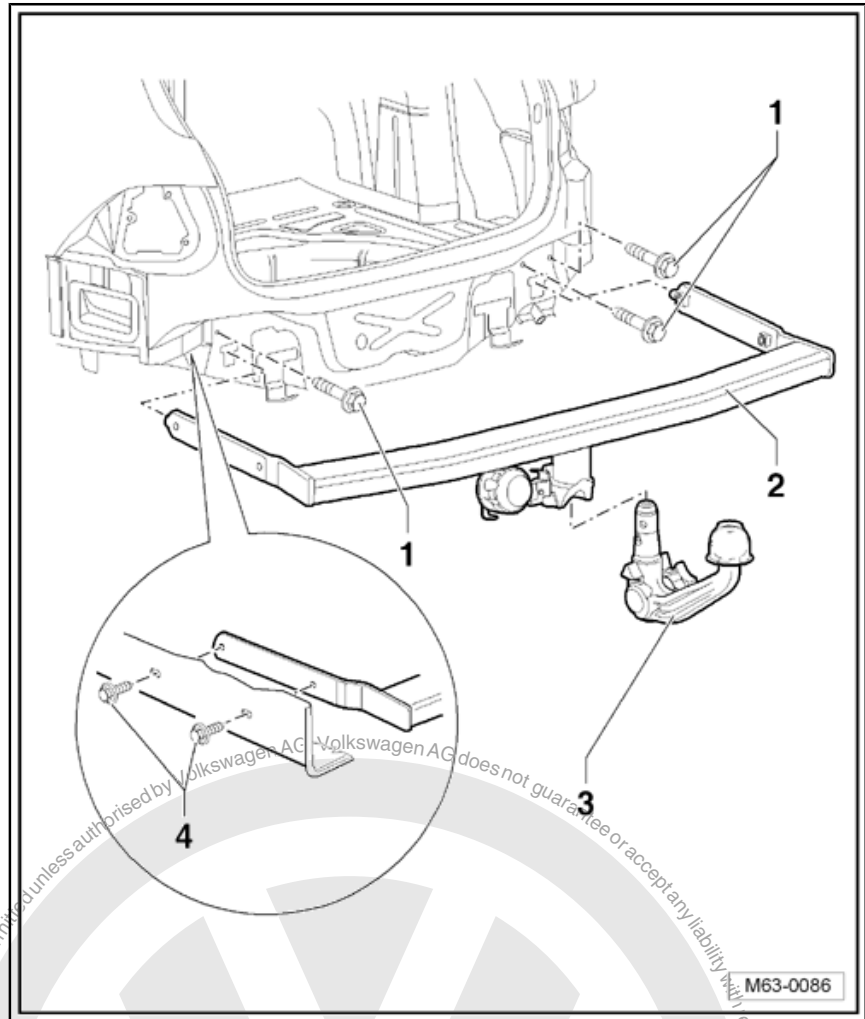


Note

- ◆ *The specified torques refer only to factory-installed towing brackets.*
- ◆ *Request torque specifications for other towing brackets from the manufacturers.*
- ◆ *Information on electrics can be found in ⇒ Electrical system; Rep. Gr. 94 .*
- Remove rear bumper cover ⇒ [page 250](#) .
- Remove rear silencer ⇒ Exhaust system; Rep. Gr. 26 ; Silencer with mountings .
- Remove heat shield.



- Remove bolts -4-



5.9.2 Installing

Install in reverse order of removal.



DANGER!

The bolts -1- function as plugs and seal the passenger compartment against exhaust fumes, and must without exception be installed.



WARNING

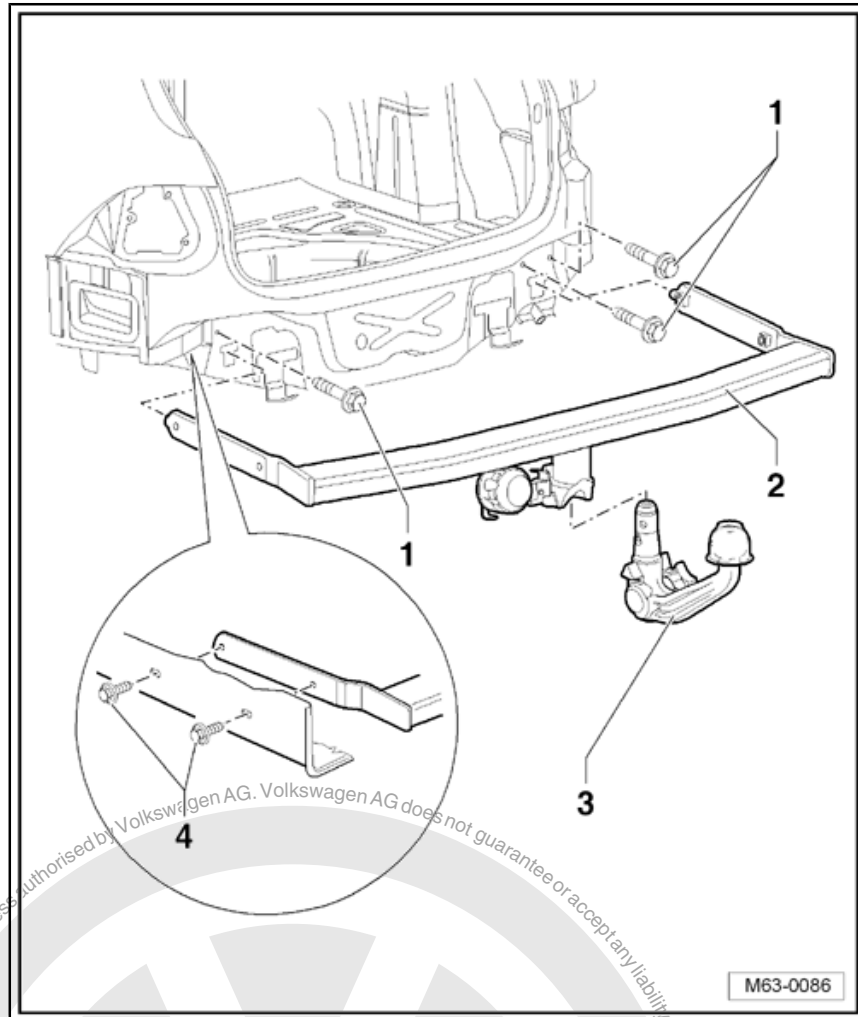
*Bolts -4- must always be renewed after being removed.
Contact surfaces between towing bracket and body must be free of grease and cavity sealant.*

Specified torques

Bolt -1-: 20 Nm



Bolt -4-: 50 Nm + turn 90° + 30° further





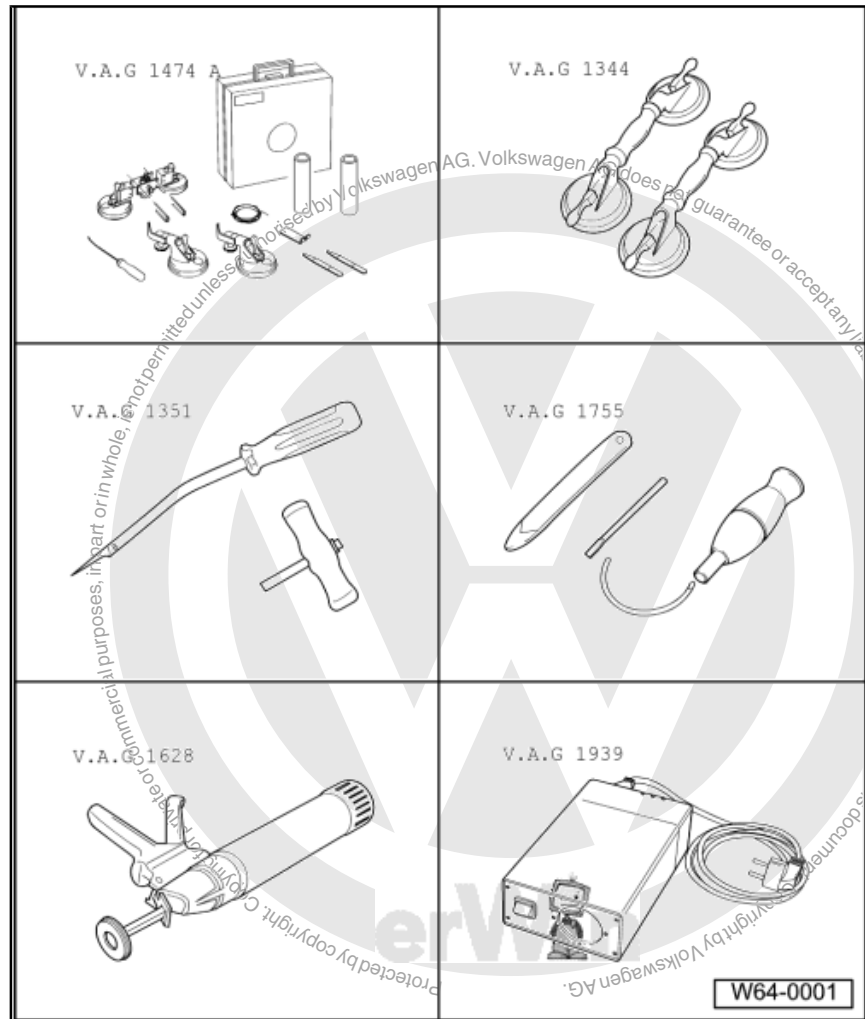
64 – Glazing

1 Flush bonded windows

1.1 Tools

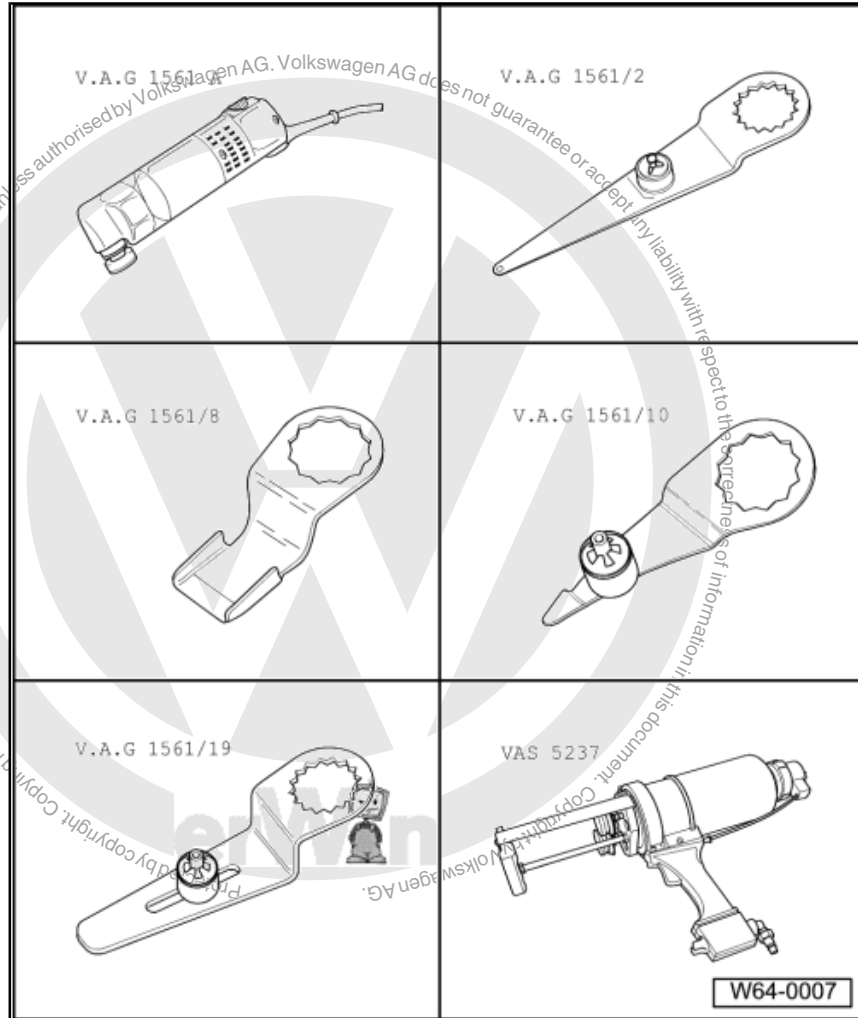
Special tools and workshop equipment required

- ◆ Removal kit for flush bonded windows - V.A.G 1474 A-
- ◆ Suction lifter -V.A.G 1344-
- ◆ Cutting tool -V.A.G 1351-
- ◆ Windscreen removal kit - V.A.G 1755-
- ◆ Cartridge gun -V.A.G 1628-
- ◆ Cartridge heater - V.A.G 1939 A-



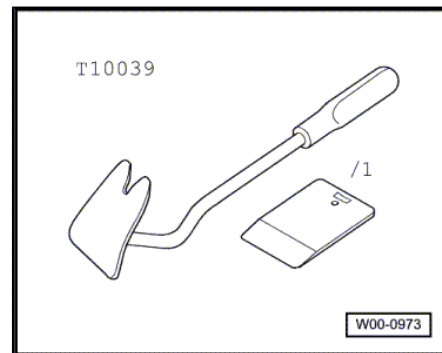


- ◆ Electric cutter - V.A.G 1561 A-
- ◆ Cutting blade - V.A.G 1561/2-
- ◆ Scraping blade - V.A.G 1561/8-
- ◆ Cutter (offset) - V.A.G 1561/10-
- ◆ Cutting blade - V.A.G 1561/19-
- ◆ Double cartridge gun - VAS 5237-



Special tools and workshop equipment required

- ◆ Removal wedge -T10039/1-



1.2 Materials

- ◆ 2K glass adhesive -DA 004 600 A2- ⁷⁾ ⁸⁾
- ◆ 1K glass adhesive -DH 009 100 03- ⁹⁾ ¹⁰⁾
- ◆ Activator -D 181 801 A1- ¹¹⁾
- ◆ Glass primer/paint primer -D 009 200 02- ¹¹⁾



- ◆ Cleaning solution -D 009 401 04-¹¹⁾
- ◆ Primer applicator -D 009 500 25-¹¹⁾
- ◆ Adhesive remover -D 002 000 10-¹¹⁾
- ◆ Cutting cord -357 853 999-

7) Observe curing period ⇒ [page 276](#)

8) Double cartridge gun -VAS 5237- must be used to apply these materials

9) Small cartridge, 110 ml, for sealing and/or when a 400 ml cartridge alone is not sufficient.

10) Heat according to manufacturer's instructions, using cartridge heater -V.A.G 1939 A- .

11) Materials are stored in box -D 004 700- .

1.3 Assembly overview - windscreen

1 - Windscreen

- ❑ Removing and installing ⇒ [page 264](#)

2 - Windscreen adjuster

- ❑ -443 845 631 A-

3 - Plenum chamber cover

- ❑ Only pull out of windscreen seal by hand
- ❑ Removing and installing ⇒ [page 262](#)

4 - Windscreen seal

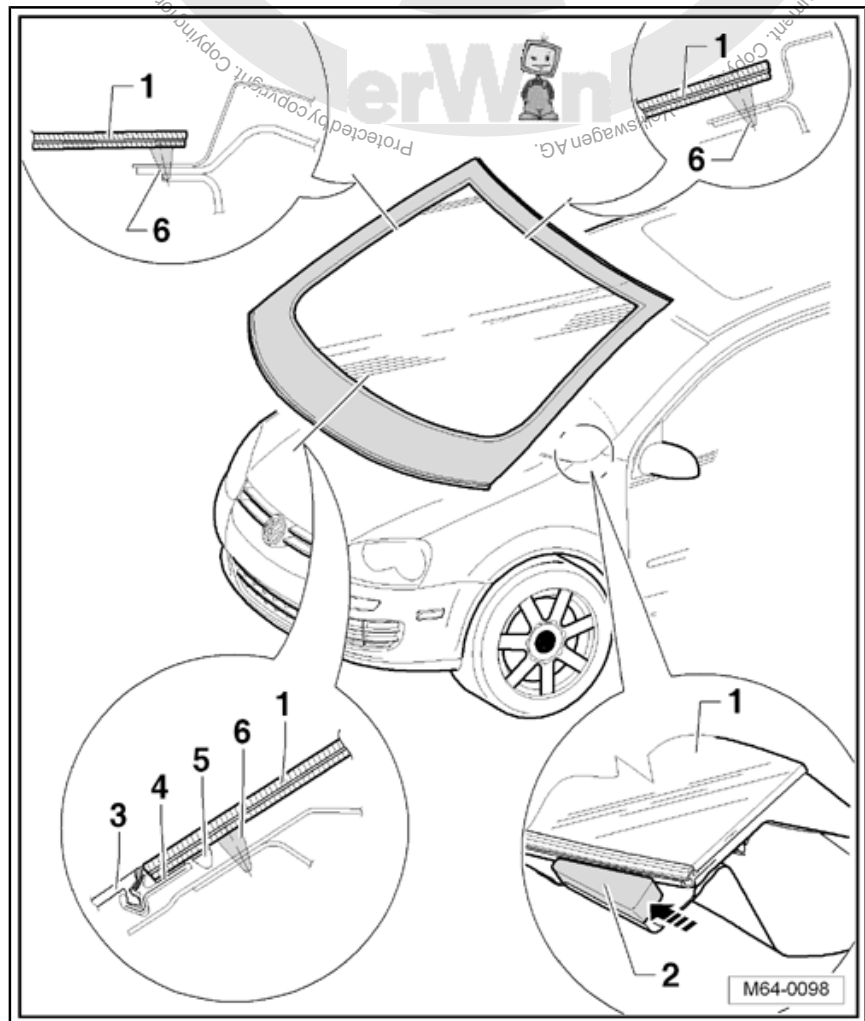
- ❑ Part of windscreen

5 - Spacing lip

- ❑ Part of windscreen

6 - PUR adhesive sealant

- ❑ Cross section of bead: width = 6.5 mm, height = 10 mm (including residual material on window glass and window flange)
- ❑ Minimum curing period ⇒ [page 276](#)





1.4 Assembly overview - plenum chamber cover

1 - Plenum chamber cover

- Only pull out of windscreen seal by hand
- Removing and installing
=> [page 262](#)

2 - Plenum chamber bulkhead

- Removing and installing
=> [page 15](#)

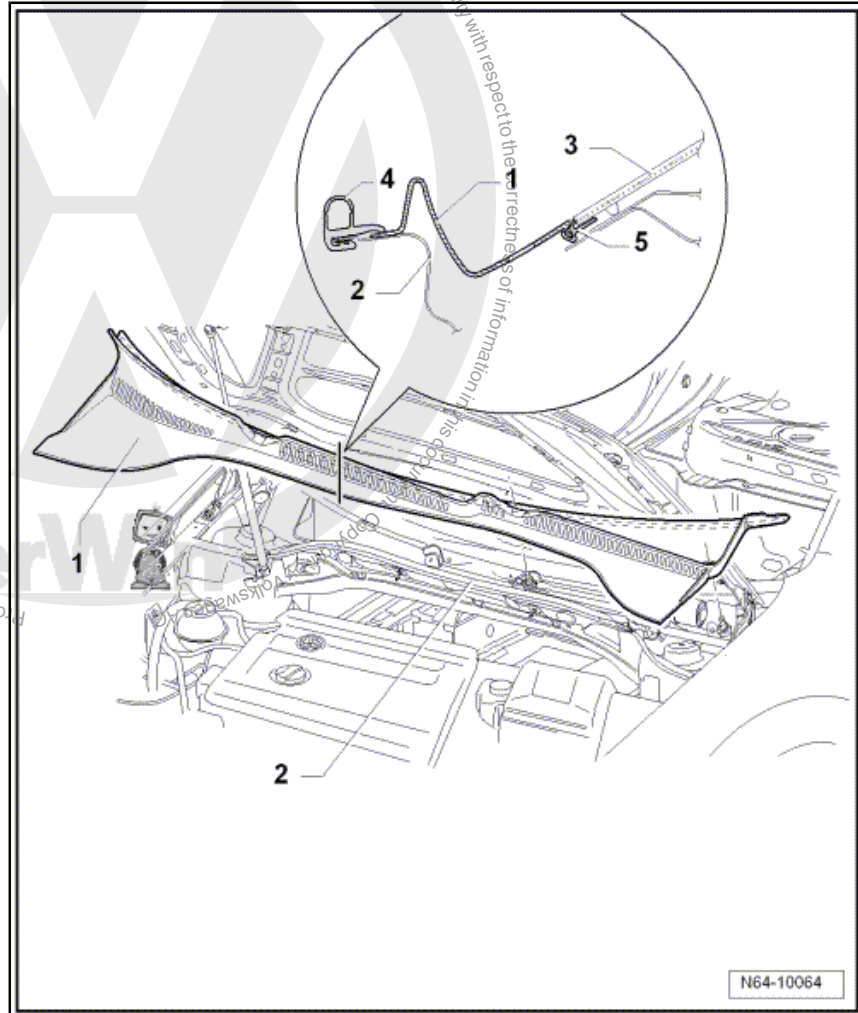
3 - Windscreen

- Removing and installing
=> [page 264](#)

4 - Plenum chamber seal

5 - Windscreen seal

- Part of windscreen



1.5 Removing and installing plenum chamber cover

1.5.1 Removing plenum chamber cover

- Unbolt wiper arms => Electrical system; Rep. Gr. 92 ; Wiper system .



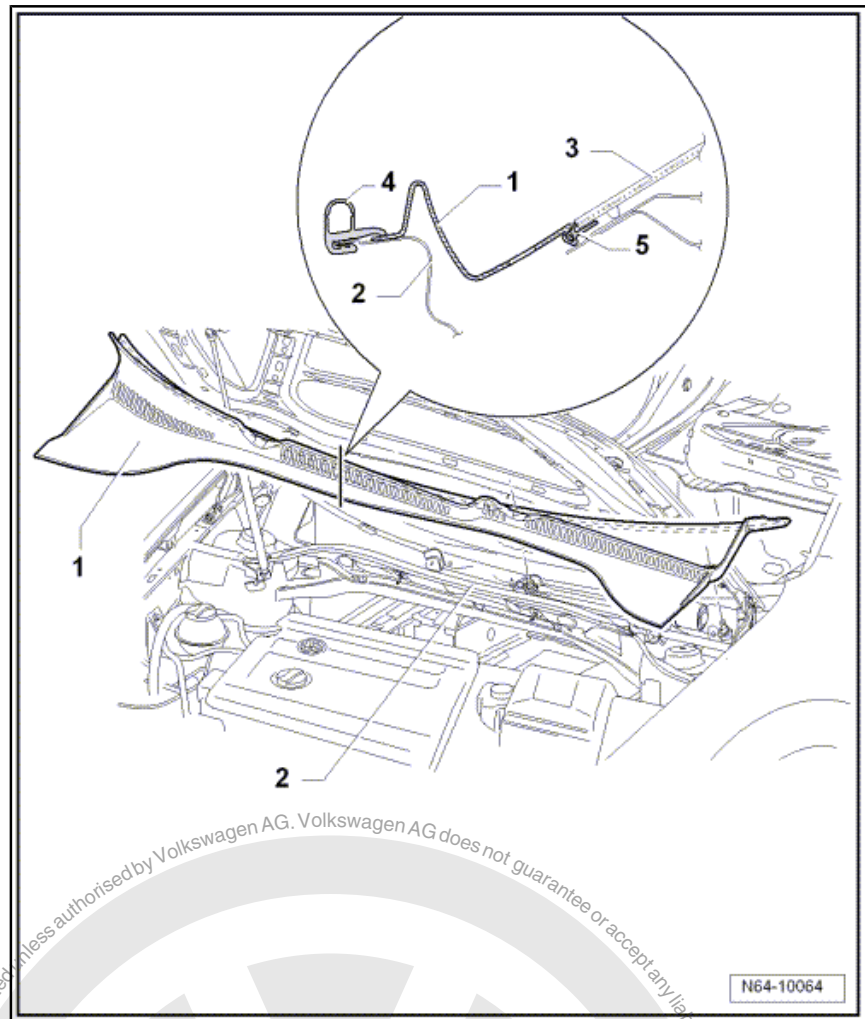
Caution

The plenum chamber cover must not be levered off with a tool (wedge). The windscreen will be damaged and may subsequently crack.

- Pull plenum chamber seal -4- off over entire length of plenum chamber bulkhead -2-.



- Beginning on right, carefully pull plenum chamber cover -1- upwards out of windscreen seal -5-.



1.5.2 Installing plenum chamber cover



Caution

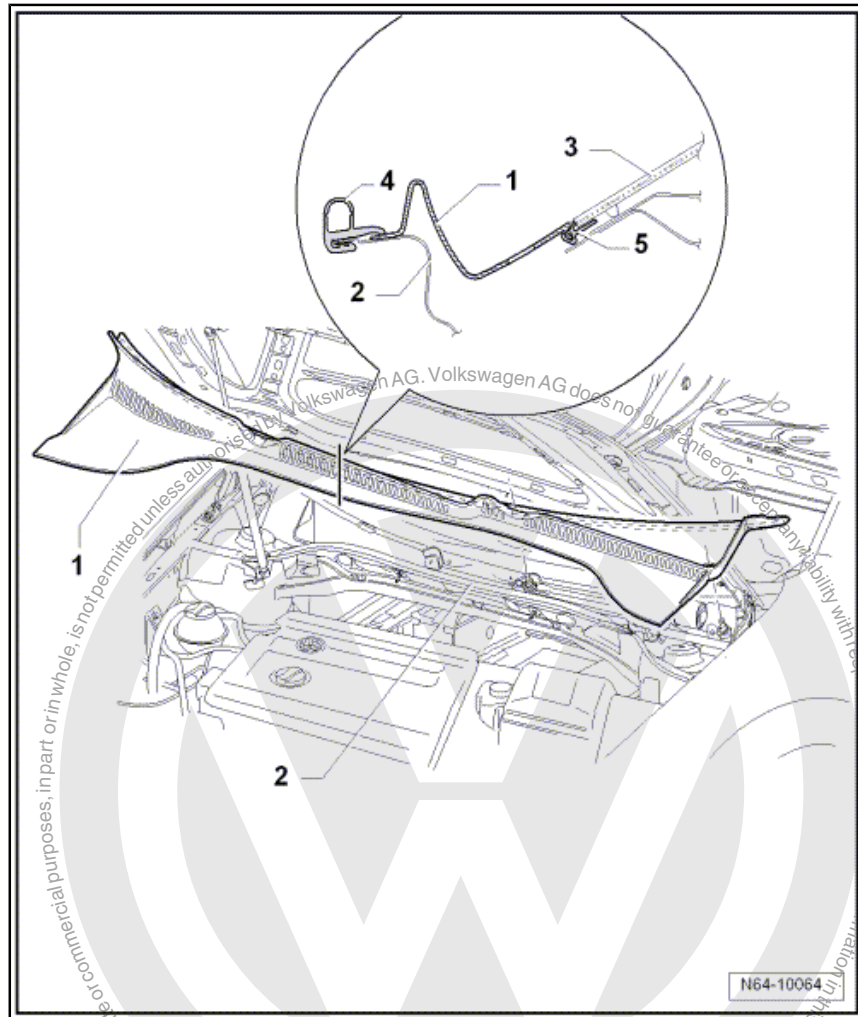
Striking the plenum chamber cover can cause cracks in the windscreen.

- Spray windscreen seal -5- with a soapy solution so that plenum chamber cover -1- is easier to press on.
- Position plenum chamber cover -1- on windscreen seal -5- and clip it into windscreen seal -5- using light pressure beginning in the middle.
- Install plenum chamber seal -4- and windscreen wiper => Electrical system; Rep. Gr. 92; Wiper system .



Note

An insert is installed in windscreen seal of new windscreens. Remove this insert before installing plenum chamber cover.



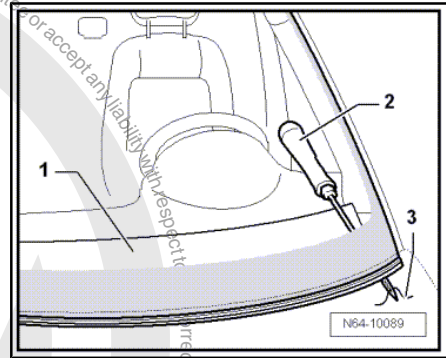
1.6 Removing and installing windscreen

1.6.1 Removing windscreen

- Remove plenum chamber cover ⇒ [page 262](#) .
- Remove A-pillar trim ⇒ General body repairs, interior; Rep. Gr. 70 ; Pillar and side panel trim .
- Remove sun visor ⇒ General body repairs, interior; Rep. Gr. 68 ; Compartments, covers and trims .
- Remove interior mirror ⇒ General body repairs, interior; Rep. Gr. 68 ; Interior mirror



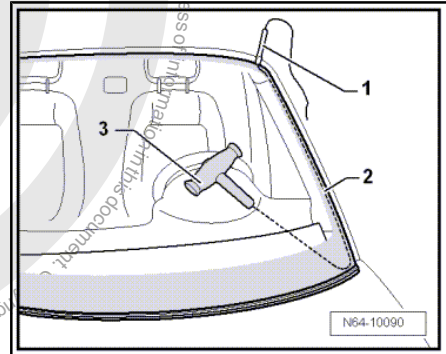
- Slide cover -V.A.G 1474/8- between windscreen -1- and dash panel.
- Thrust awl -V.A.G 1474/2- -2- through adhesive bead.
- Pull cutting cord -3- through adhesive sealing material into inside of vehicle using awl -V.A.G 1474/2- -2-.



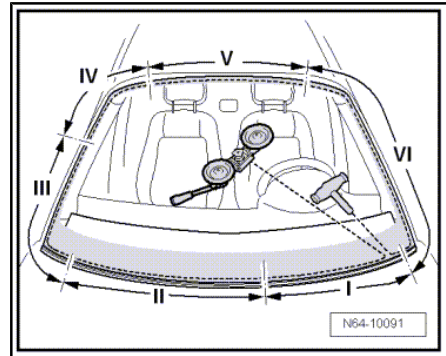
- Secure inside end of cutting cord against falling out using pull handle -V.A.G 1351/1- -3-.
- Place cutting cord -2- using small tube -1- in upper area of window.
- Lay cutting cord -2- around window and guide second end of cord inwards into interior.

Ensure that cutting cord -2- lies under window in corners.

- Secure other end of cord to reel device -V.A.G 1654- .



- Position reel device -V.A.G 1654- in "position I".
- Reposition reel device -V.A.G 1654- as necessary and cut window free.
- Use wedge -V.A.G 1474/5- to press cutting cord against window glass while cutting in order to avoid damaging dash panel and to create clearance at window flange.



1.6.2 Installing windscreen

Preparing used undamaged window for glazing ⇒ [page 274](#)

Preparing new window for glazing ⇒ [page 274](#)

Preparing body flange for glazing ⇒ [page 275](#)

Installation instructions ⇒ [page 276](#) .

Minimum curing period ⇒ [page 276](#)



1.7 Assembly overview - rear window (saloon)

1 - Rear window

- ❑ Removing and installing
⇒ [page 266](#)

2 - Rear lid

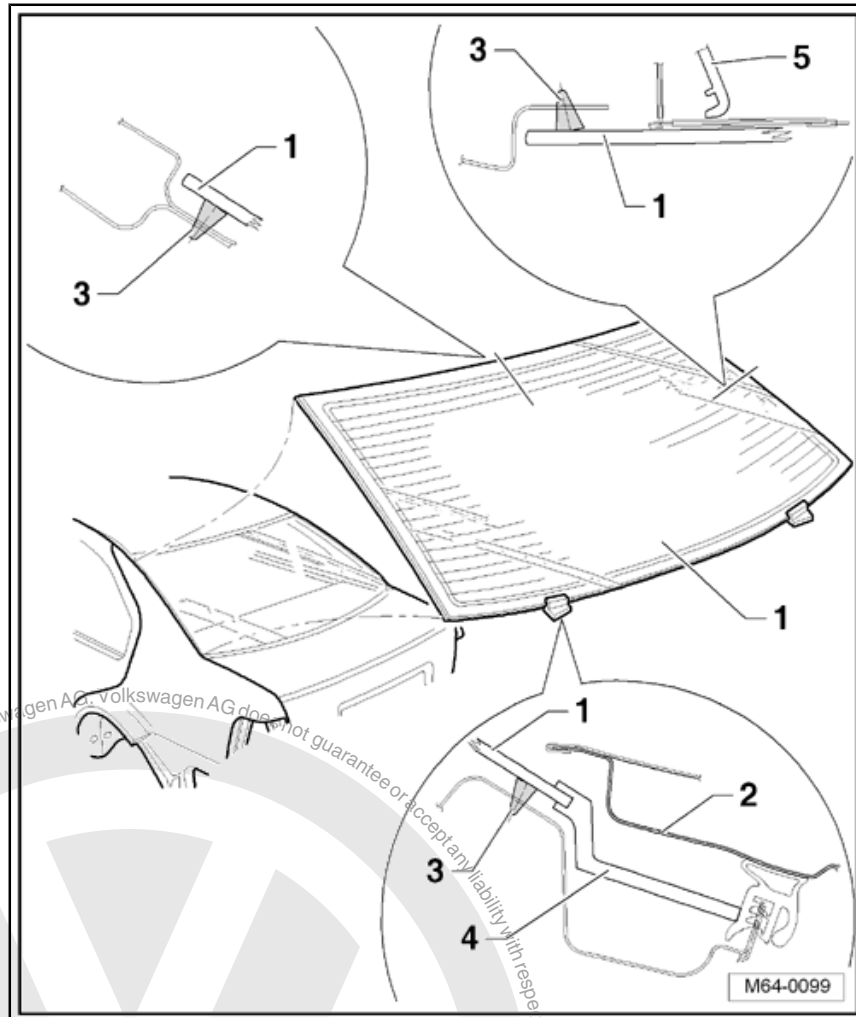
3 - PUR adhesive sealant

- ❑ Cross section of bead:
width = 6.5 mm, height =
10 mm (including resid-
ual material on window
glass and window
flange).
- ❑ Minimum curing period
⇒ [page 276](#)

4 - Windscreen adjuster

5 - C-pillar trim

- ❑ Removing ⇒ General
body repairs, interior;
Rep. Gr. 70 ; Pillars and
side panel trim .



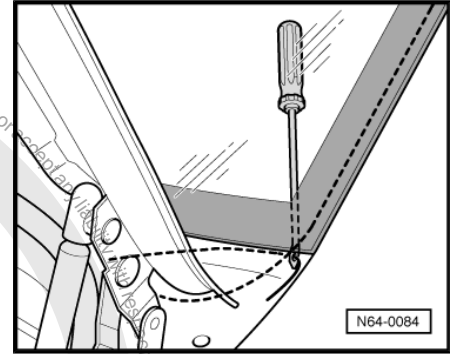
1.8 Removing and installing rear window (saloon)

1.8.1 Removing undamaged rear window

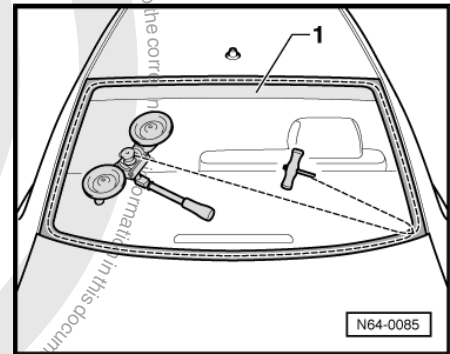
- Remove C-pillar trims ⇒ General body repairs, interior; Rep. Gr. 70 ; Pillars and side trims .
- Remove roof end strip ⇒ General body repairs, interior; Rep. Gr. 70 ; Roof trims .
- Remove rear shelf ⇒ General body repairs, interior; Rep. Gr. 70 ; Luggage/load compartment trim .
- Remove high-level brake light ⇒ Electrical system; Rep. Gr. 94 ; Additional brake lights
- Disconnect connections for heated rear window and window aerial.
- Insert cutting cord into window flange using tube.



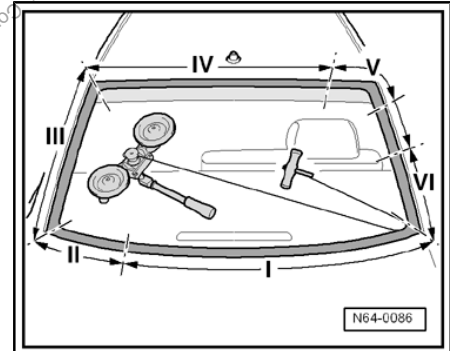
- Pull cutting cord through adhesive sealing material into inside of vehicle using awl -V.A.G 1474/2- .



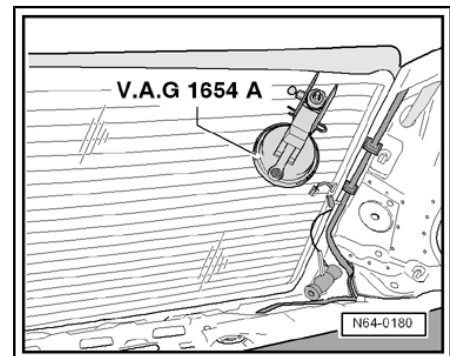
- Pull the other end of the cord through into the interior and counterhold using handle -V.A.G 1351/1- .
- Secure inner end of cord on reel device -V.A.G 1654- .
- Position reel device -V.A.G 1654- .
- Carefully slide cover -V.A.G 1474/8- -1- between rear window and moulded headliner, remove moulded headliner securing screws for this.



- Position reel device -V.A.G 1654- in "position I".
- Move reel device according to position required and cut window free.
- Press cutting thread against window glass with plastic wedge during cutting process, in order to have clearance at window flange.



- Instead of reel device -V.A.G 1654- , reel device -V.A.G 1654 A- can be used.
- One suction cup can be removed from the reel device as shown in illustration. This ensures that the reel device roller can be guided closer to the window flange.



1.8.2 Removing broken rear window

- Protect body and interior from glass splinters.
- Remove pieces of glass up to adhesive sealing material.
- Remove C-pillar trims => General body repairs, interior; Rep. Gr. 70 ; Pillars and side trims .

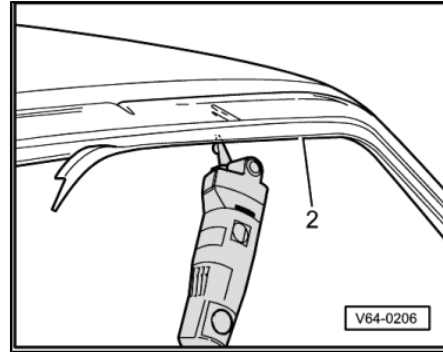


- Remove roof end strip ⇒ General body repairs, interior; Rep. Gr. 70 ; Roof trims .
- Remove rear shelf ⇒ General body repairs, interior; Rep. Gr. 70 ; Luggage/load compartment trim .
- Remove high-level brake light ⇒ Electrical system; Rep. Gr. 94 ; Additional brake lights .
- Pull off connectors for rear window heating and aerial.
- Cover flange -2- all round with textile-reinforced adhesive tape.
- Cut through adhesive sealing material (with remains of window) in window aperture using electric cutter -V.A.G 1561 A- and blade -V.A.G 1561/10- (with stop roller).



WARNING

Always wear safety goggles and leather gloves.



1.8.3 Installing rear window

Preparing used undamaged window for glazing ⇒ [page 274](#)

Preparing new window for glazing ⇒ [page 274](#)

Preparing body flange for glazing ⇒ [page 275](#)

Installation instructions ⇒ [page 276](#) .

Minimum curing period ⇒ [page 276](#)



1.9 Assembly overview - rear window (Variant)

1 - Rear window

- ❑ Removing and installing
⇒ [page 269](#)

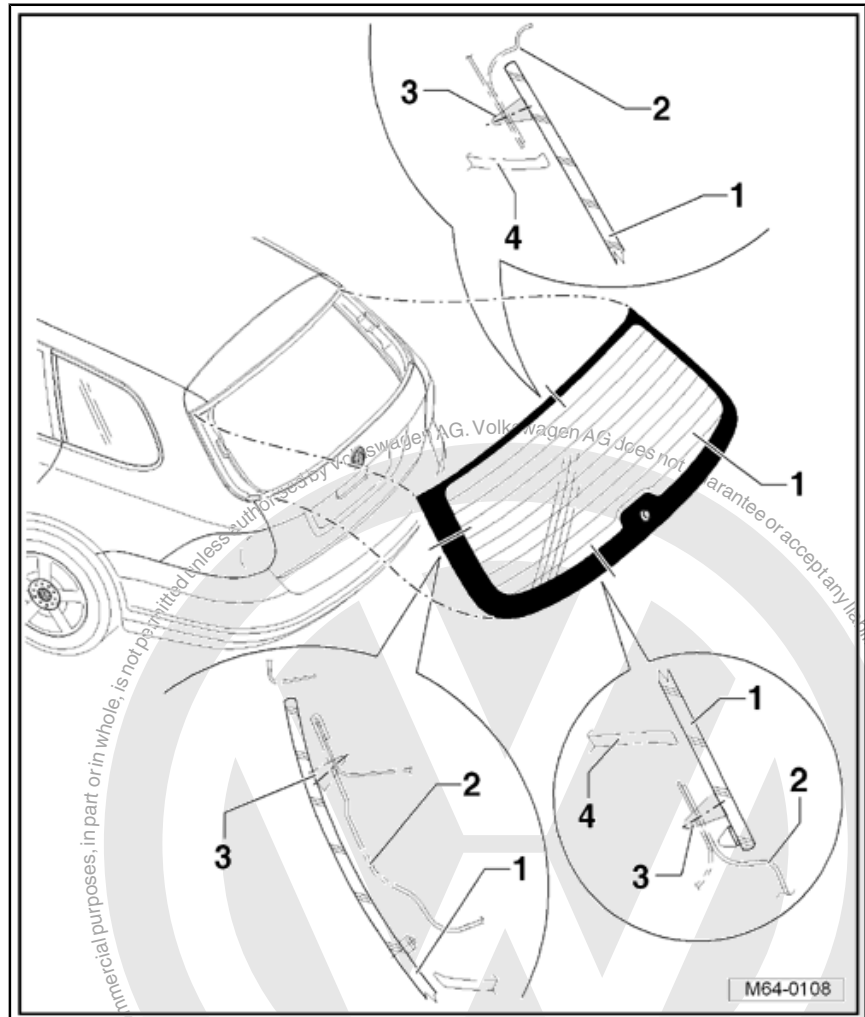
2 - Rear lid

3 - PUR adhesive sealant

- ❑ Cross section of bead:
width = 6.5 mm, height =
10 mm (including resid-
ual material on window
glass and window
flange).
- ❑ Minimum curing period
⇒ [page 276](#)

4 - Rear lid trim

- ❑ Removing ⇒ General
body repairs, interior;
Rep. Gr. 70 ; Rear lid
trim



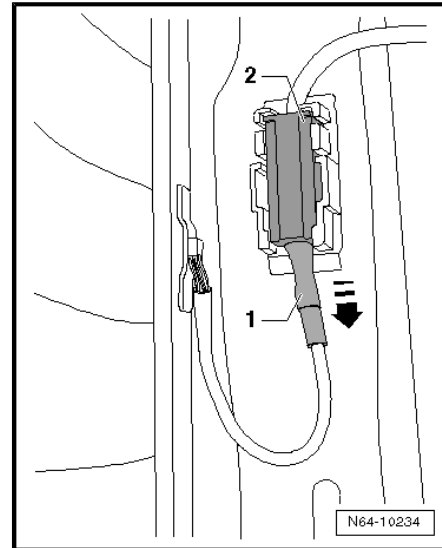
1.10 Removing and installing rear window (Variant)

1.10.1 Removing undamaged rear window

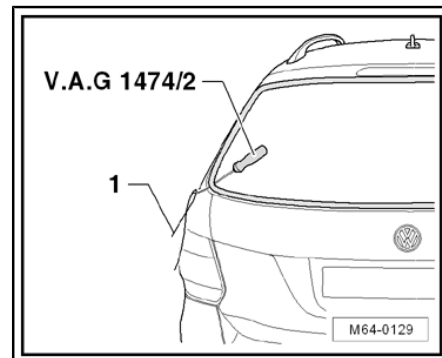
- Remove rear lid trim ⇒ General body repairs, interior; Rep. Gr. 70 ; Trim, insulation .
- Remove window frame trim ⇒ General body repairs, interior; Rep. Gr. 70 ; Trim, insulation .
- Remove rear window wiper ⇒ Electrical system; Rep. Gr. 92 ; Window wash/wipe system .



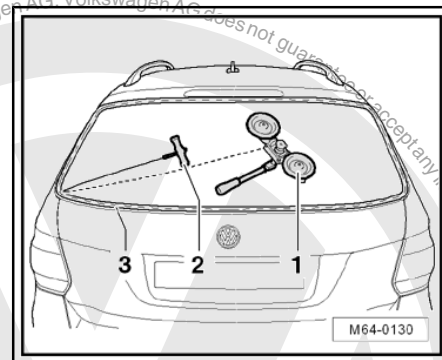
- Pull off connector -1- for heated rear window -arrow- and press connecting tabs onto window.



- Pull cutting cord -1- through adhesive sealing material at lower radius of rear window and into inside of vehicle using awl - V.A.G 1474/2- from removal kit for flush bonded windows - V.A.G 1474 A- .
- Lay cutting cord -1- around rear window and pull second end of cord inwards into interior.



- Secure one end of cord to pull handle -V.A.G 1351/1- -2- to counterhold.
- Secure other end of cord to reel device -1-.
- Reposition reel device -1- as necessary and cut window free.
- Use plastic wedge to press cutting cord against window glass while cutting in order to have clearance at window flange.



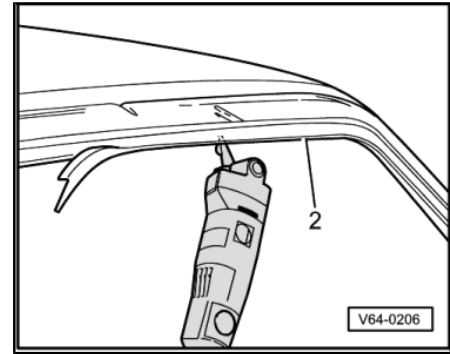
1.10.2 Removing broken rear window

- Protect body and interior from glass splinters.
- Remove pieces of glass up to adhesive sealing material.
- Remove rear lid trim ⇒ General body repairs, interior; Rep. Gr. 70 ; Trim, insulation .
- Remove window frame trim ⇒ General body repairs, interior; Rep. Gr. 70 ; Trim, insulation .
- Remove rear window wiper ⇒ Electrical system; Rep. Gr. 92 ; Window wash/wipe system .
- Disconnect connections for heated rear window.



- Cover flange -2- all round with textile-reinforced adhesive tape.
- Cut through adhesive sealing material (with remains of window) in window aperture using electric cutter -V.A.G 1561 A- and blade -V.A.G 1561/10- (with stop roller).

⚠ WARNING
 Always wear safety goggles and leather gloves.



1.10.3 Installing rear window

Preparing used undamaged window for glazing ⇒ [page 274](#)

Preparing new window for glazing ⇒ [page 274](#)

Preparing body flange for glazing ⇒ [page 275](#)

Installation instructions ⇒ [page 276](#) .

Minimum curing period ⇒ [page 276](#)

1.11 Assembly overview - side window (Variant)

1 - Side window

- Removing side window ⇒ [page 272](#)
- Installing side window ⇒ [page 273](#)

2 - Trim strip

- Integral part of side window.

3 - Seal

- Integral part of side window.

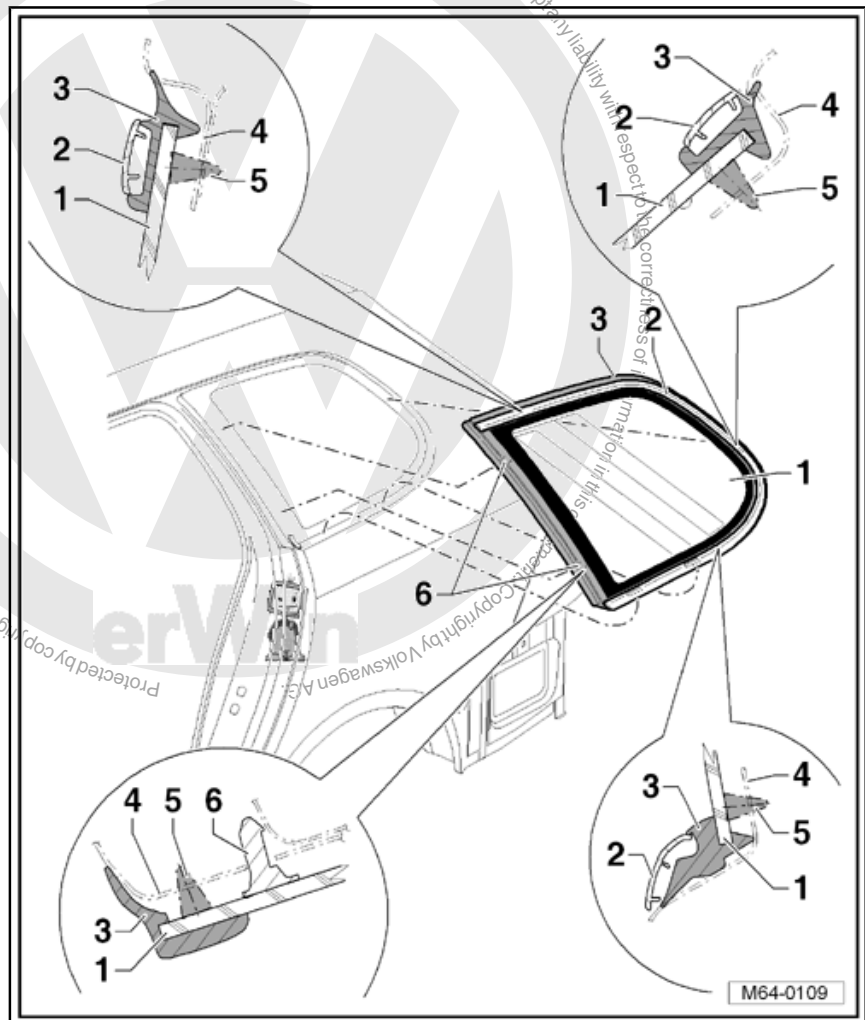
4 - Side panel

5 - PUR adhesive sealant

- Cross section of bead: width = 6.5 mm, height = 10 mm (including pre-coating, residual material on window glass and window flange)
- Minimum curing period ⇒ [page 276](#)

6 - Retaining clip

- Integral part of side window.





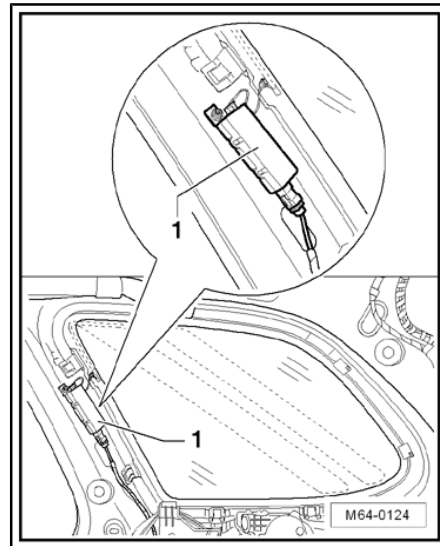
1.12 Removing undamaged side window (Variant)

Note

The removal and installation sequence is only for the right side window. The removal and installation of the left side window is similar.

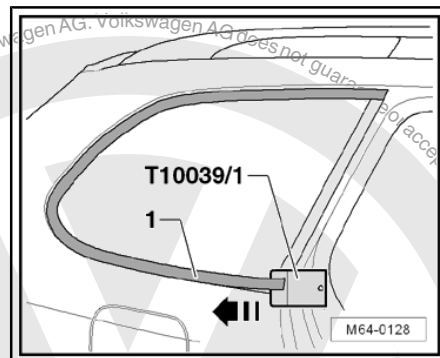
- Remove C and D-pillar trim: => General body repairs, interior; Rep. Gr. 70 ; Trims, insulation; Pillars and side trims .
- Depending on equipment, disconnect connector from impedance converter -1-.

Vehicles with side window trim

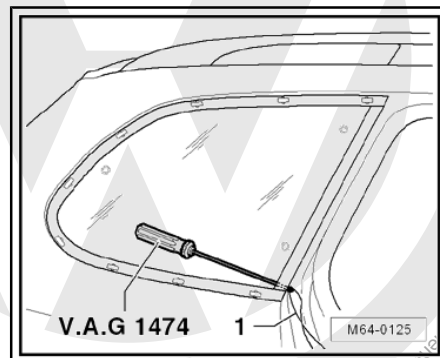


- Carefully insert wedge -T10039/1- in direction of -arrow- under trim strip -1-.
- Remove trim strip -1-.

All vehicles

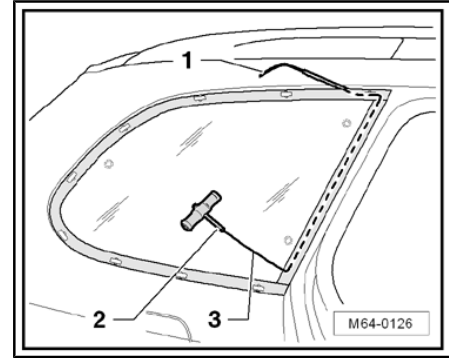


- Pull cutting cord -1- through adhesive sealing material at point marked on illustration and into inside of vehicle using awl - V.A.G 1474/2- from removal kit for flush bonded windows - V.A.G 1474 A- .

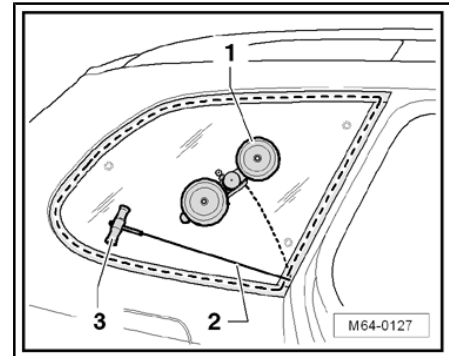




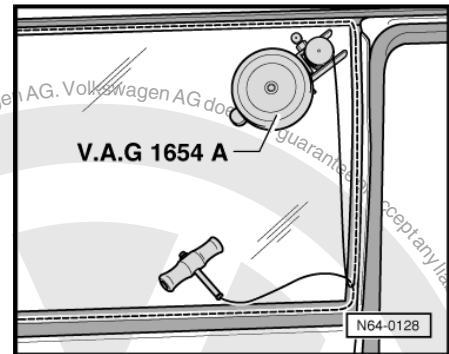
- Insert cutting cord -3- behind seal in window flange with aid of tube -1-.



- Secure one end of cord -2- to pull handle -V.A.G 1351/1- -2- to counterhold.
- Pull other end of cord into vehicle interior.
- Secure other end of cord to reel device -V.A.G 1654 A- -1-.
- Reposition reel device -V.A.G 1654 A- -1- as necessary and cut window free.
- Use plastic wedge to press cutting cord against window glass while cutting in order to have clearance at window flange.



- Instead of reel device -V.A.G 1654- , reel device -V.A.G 1654 A- can be used.
- One suction cup can be removed from the reel device -V.A.G 1654- as shown in figure. This ensures that the reel device -V.A.G 1654 A- roller can be guided closer to the window flange.



1.13 Removing broken side window (Variant)

Removing a broken side window is performed in the same manner as removing a broken rear window ⇒ [page 270](#) .

1.14 Installing side window (Variant)

Preparing old undamaged window for glazing ⇒ [page 274](#)

Preparing new window for glazing ⇒ [page 274](#)

Preparing body flange for glazing ⇒ [page 275](#)

Installation instructions ⇒ [page 276](#)

Minimum curing period ⇒ [page 276](#)



1.15 Preparing old undamaged window for glazing

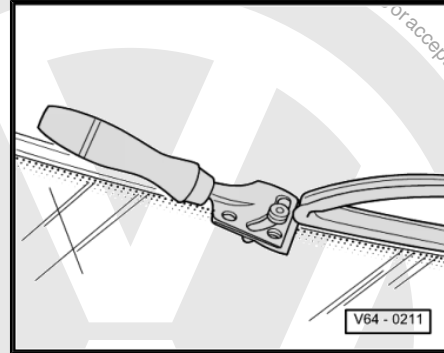
Note

- ◆ If installing an undamaged window, cut back residual adhesive seal to 1...2 mm, being careful not to damage primer and ceramic coating.
- ◆ Remaining material serves as adhesion base for newly applied adhesive sealing compound.



Caution

Do not prime bonding surface and do not treat with a cleaning solution. Keep bonding surface free of dirt and grease.



Exception: If bonding is not performed immediately after cutting back, the remaining residual material must be activated with activator -D 181 801 A1- .

1.16 Preparing new window for glazing

Only the applied ceramic layer and injection moulded sealing lip with spacer rib are found on all new windows.

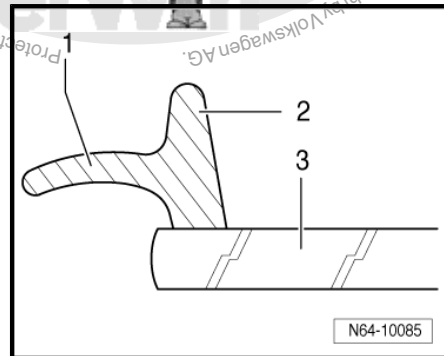
Exception: rear window does not have a sealing lip or spacing lip

- 1 - Sealing lip
- 2 - Spacing lip
- 3 - Window

Note

The area on which the adhesive bead is applied is not pre-coated or primed.

- Clean a 20 mm wide strip all around edge of window using cleaning solution -D 009 401 04- .
- Then rub edge of window dry using a lint free cloth.



WARNING

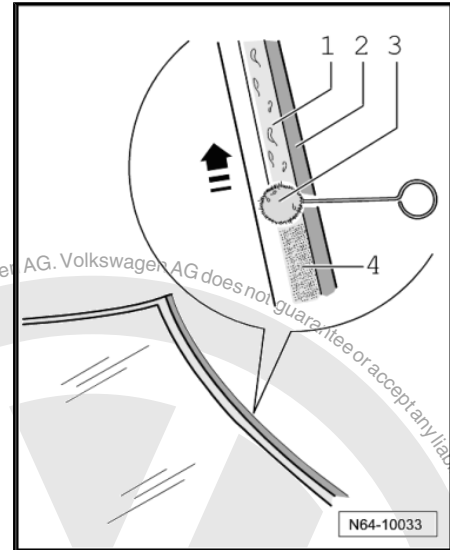
Ceramic coating on window is not primer! It must be primed before application of adhesive sealing compound! Use only primer -D 009 200 02- !



- Now apply primer -4- evenly in one motion using applicator - D 009 500 25- -3- to the previously cleaned area -1- of window.

Ensure that glass adhesive is applied to primed area at a distance of approx. 2 mm from sealing lip -2-.

Drying time approx. 10 minutes



1.17 Touching up paint damage

If paintwork is damaged, paint structure must be restored according to specifications in "Paint" workshop manual.

1.18 Preparing body flange for glazing

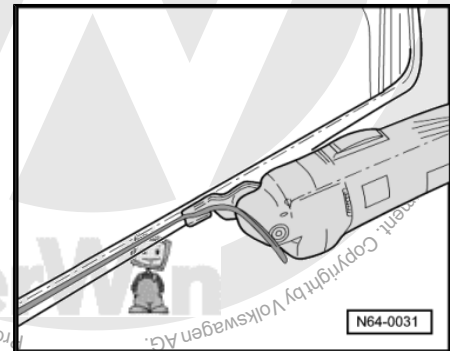
- Cut back remaining material on body flange with electric cutter -V.A.G 1561 A- and scraping blade -V.A.G 1561/8- , but do not remove completely.



Note

Remaining material serves as adhesion base for newly applied adhesive sealing compound. Keep bonding surfaces free of dirt and grease.

Exception: If bonding is not performed immediately after cutting back, the remaining residual material must be activated with activator -D 181 801 A1- .



Caution

Activator must not have contact with paint or the paintwork will be damaged.

If the window flange has been repaired or partially renewed, the area concerned must be cleaned and primed again after painting.



1.19 Installation instructions

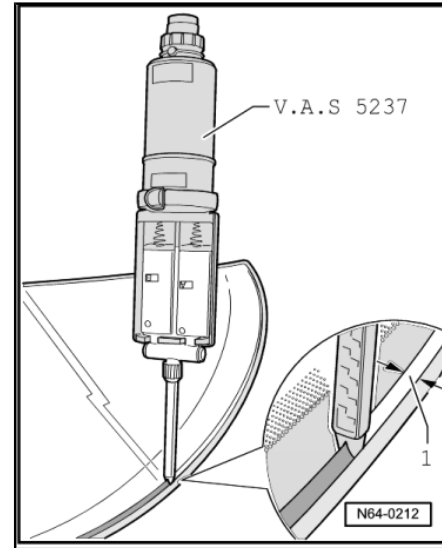
- Apply adhesive material to primed area -1- or to trimmed sealant bead, holding double cartridge gun -VAS 5237- at right angle to window.



WARNING

Window must be installed within 10 minutes, or adhesive properties of glass adhesive will be impaired.

- ◆ Using two suction lifters -V.A.G 1344- , install glass pane in window aperture, align to centre and press in onto spacing lip.
- ◆ Secure windscreen during curing period with window adjusters.
- ◆ It is absolutely necessary to install the plenum chamber cover as described ⇒ [page 263](#) .
- ◆ Replace stickers (e.g. for airbag) which may be installed.
- ◆ The activator must not come into contact with the window heater bus bar.
- ◆ If the adhesive bead is too thick and the adhesive expands onto the area of the window heating, excess adhesive must be removed.



1.20 Minimum curing period



WARNING

Special standards must be adhered to when replacing bonded windows. One of these standards is, for example, that a freshly bonded windscreen must comply with the safety requirements, even in an accident, following the minimum prescribed curing period.

The minimum curing period for 2K adhesive -DA 004 600 A2- is three hours for all windows.

Minimum curing period is the time from bonding the window until vehicle may be used. During this time, the vehicle must stand on a level surface at room temperature (at least 15 °C).



WARNING

Vehicle is safe to use only after the curing period is completed.

1.21 Touching up paint damage

Paint structure must be restored according to specifications in the "Paint" workshop manual.

The following repair method is suitable for paint finish damaged in areas which are not visible:

Painting over twice (wet-on-wet) with glass/paint primer -D 009 200 02- - flash-off time = at least 10 minutes.



1.22 Cleaning off excess adhesive sealing material

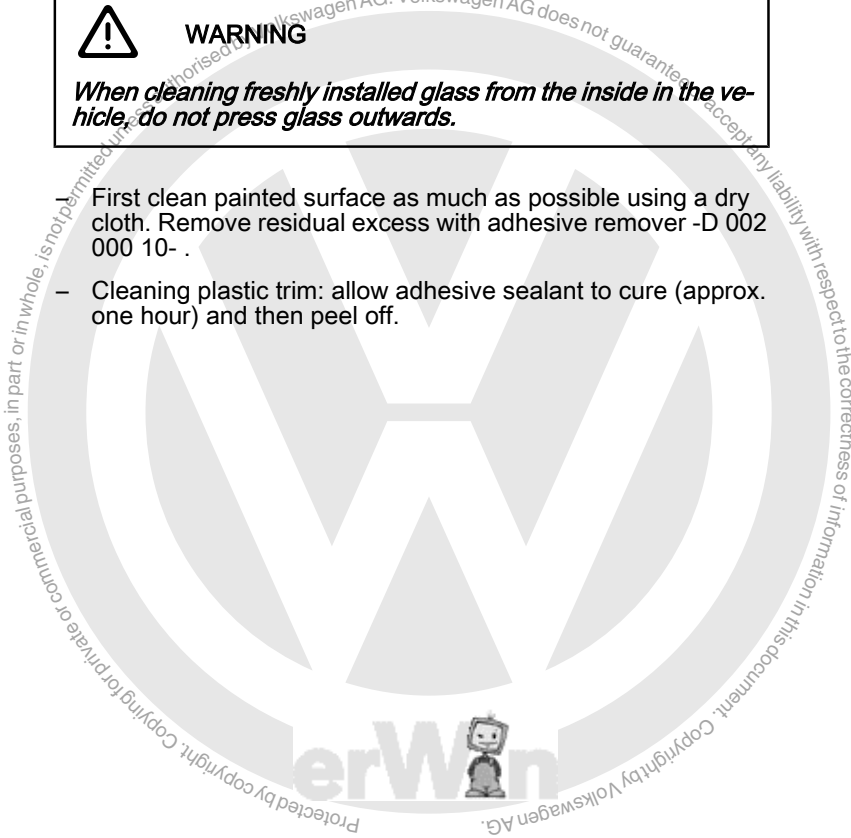
- Use of adhesive remover -D 002 000 10- as a cleaning solution is recommended. Observe the appropriate safety precautions when performing this work.



WARNING

When cleaning freshly installed glass from the inside in the vehicle, do not press glass outwards.

- First clean painted surface as much as possible using a dry cloth. Remove residual excess with adhesive remover -D 002 000 10- .
- Cleaning plastic trim: allow adhesive sealant to cure (approx. one hour) and then peel off.



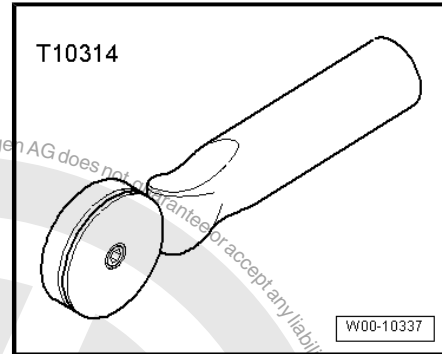


2 Front door windows

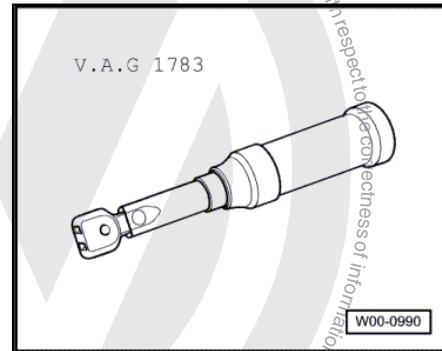
2.1 Tools

Special tools and workshop equipment required

- ◆ Roller -T10314-



- ◆ Torque wrench -V.A.G 1783-





2.2 Assembly overview- front door window



Note

- ◆ *The right side is shown. The left side is similar.*
- ◆ *The bolt -4- is accessible from interior and exterior. From exterior the bolt has a right-hand thread. This means: from exterior the bolt is removed by turning it to left, from interior the bolt is removed by turning it to right.*

1 - Door window

- Removing and installing
 ⇒ [page 279](#)

2 - Window channel

- Removing and installing
 ⇒ [page 287](#)

3 - Mounting

4 - Bolt

- Accessible from exterior (right-hand thread), remove by turning anti-clockwise (to remove: remove door outer panel ⇒ [page 112](#))
- Accessible from interior, remove by turning clockwise (to remove: remove front door trim ⇒ General body repairs, interior; Rep. Gr. 70 ; Trims, insulation; Door trims)
- Qty. 2
- 8 Nm

5 - Window regulator

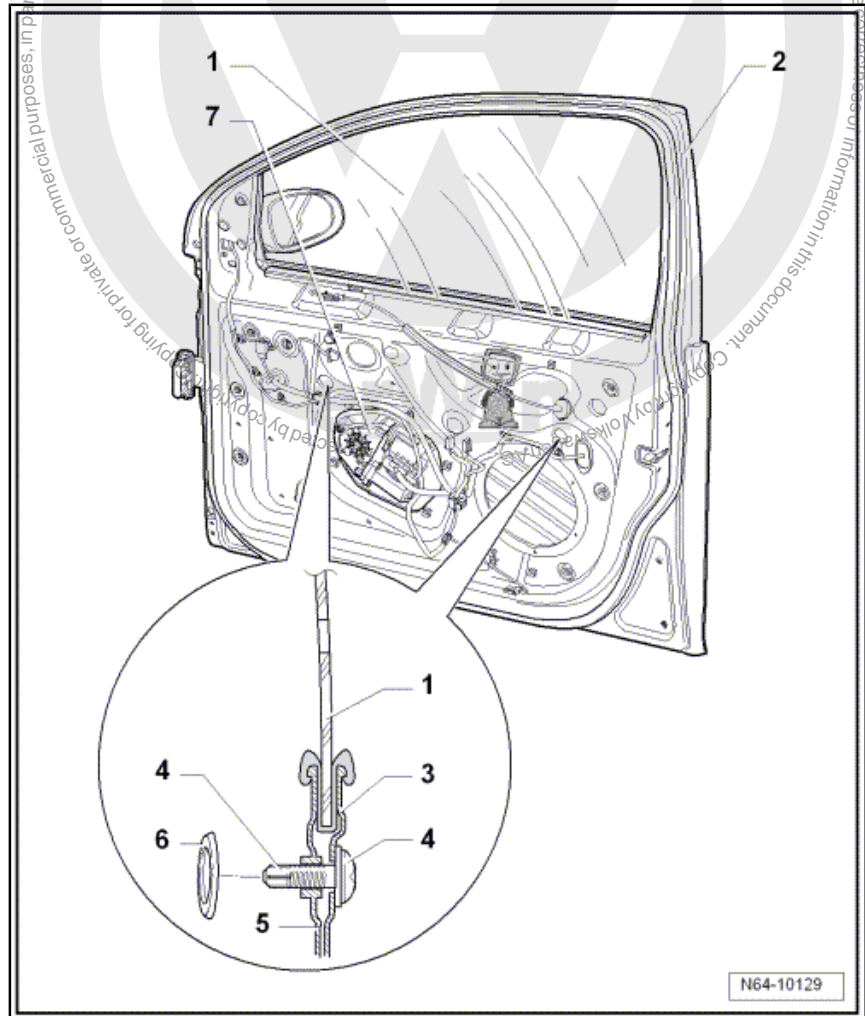
- Removing and installing
 ⇒ [page 291](#)

6 - Cover

- Qty. 2

7 - Window regulator motor

- Removing and installing
 ⇒ [page 284](#)



2.3 Removing and installing door window



Note

Removal and installation is described only for the right door window. Removal and installation of the left door window is done in the same manner.



2.3.1 Removing



Note

The bolt -3- is accessible from interior and exterior. From exterior the bolt has a right-hand thread. This means: from exterior the bolt is removed by turning it to left, from interior the bolt is removed by turning it to right.

- Removing front door trim ⇒ General body repairs, interior;
Rep. Gr. 70 ; Door trim .
- Lever out caps -4-.
- Lower door window -1- until clamping bolts -3- for mounting
-2- are accessible.



Note

If the work step cannot be carried out because there is a fault with the electric window motor, remove motor to slide window down.

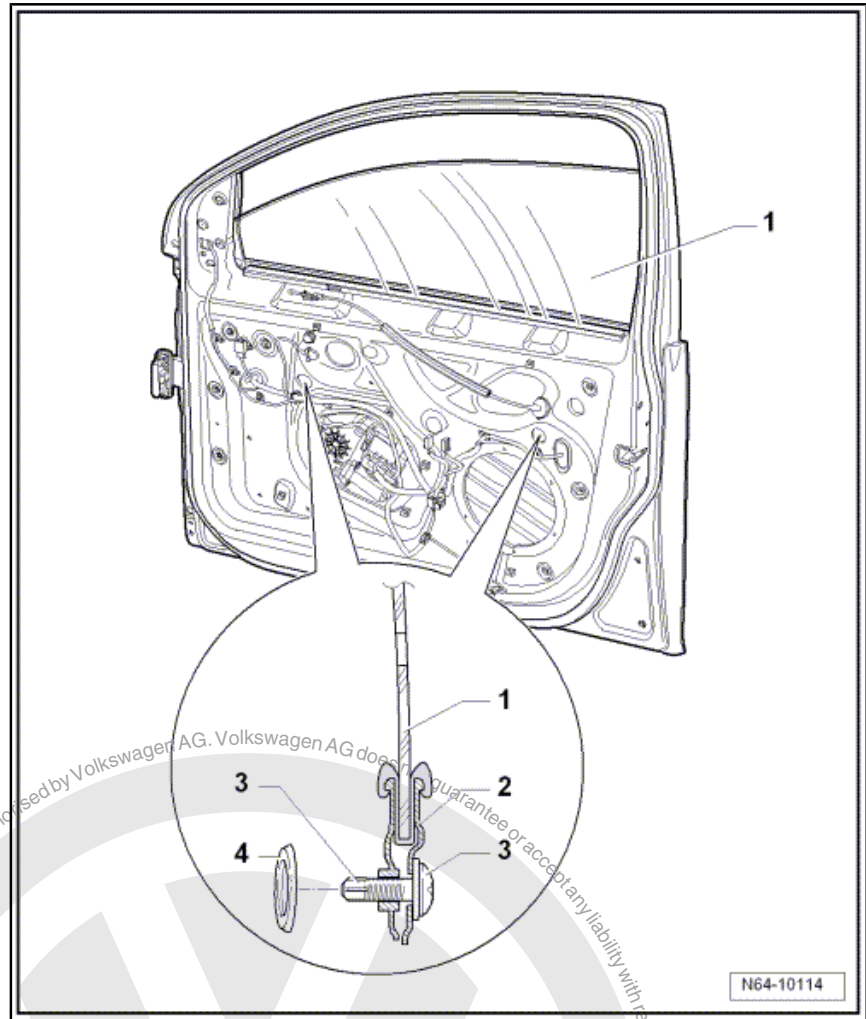


Caution

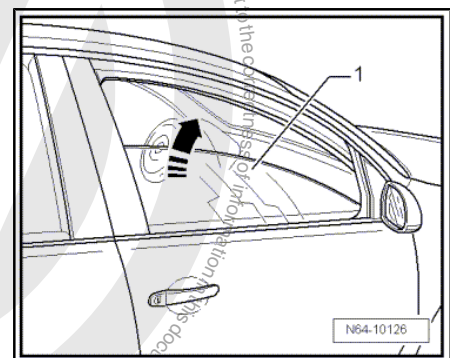
Remove bolt -3- from interior by turning it clockwise.



- Loosen bolts -3- (do not remove) from inside by turning to right and press clamping jaws apart.



- Lift rear of door window -1- and swivel out of door forwards, in direction of arrow-.





2.3.2 Installing

- Insert door window -1- in door in -direction of arrow-.

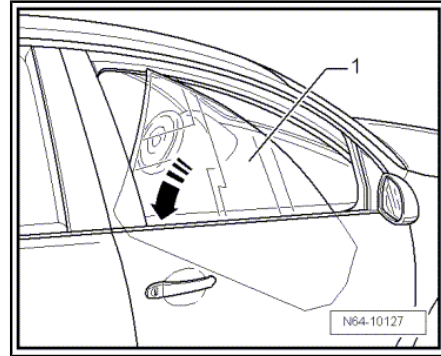
Ensure that door window -1- is properly located in window channels.

- The bolt can now be tightened by turning to left.

Specified torque for bolt: 8 Nm.

Further installation is performed in reverse order of removal.

Then test for proper function.



2.4 Adjusting door window

- Removing front door trim => General body repairs, interior;
Rep. Gr. 70 ; Door trim .
- Lever out caps -4-.
- Lower door window -1- until clamping bolts -3- for mounting
-2- are accessible.



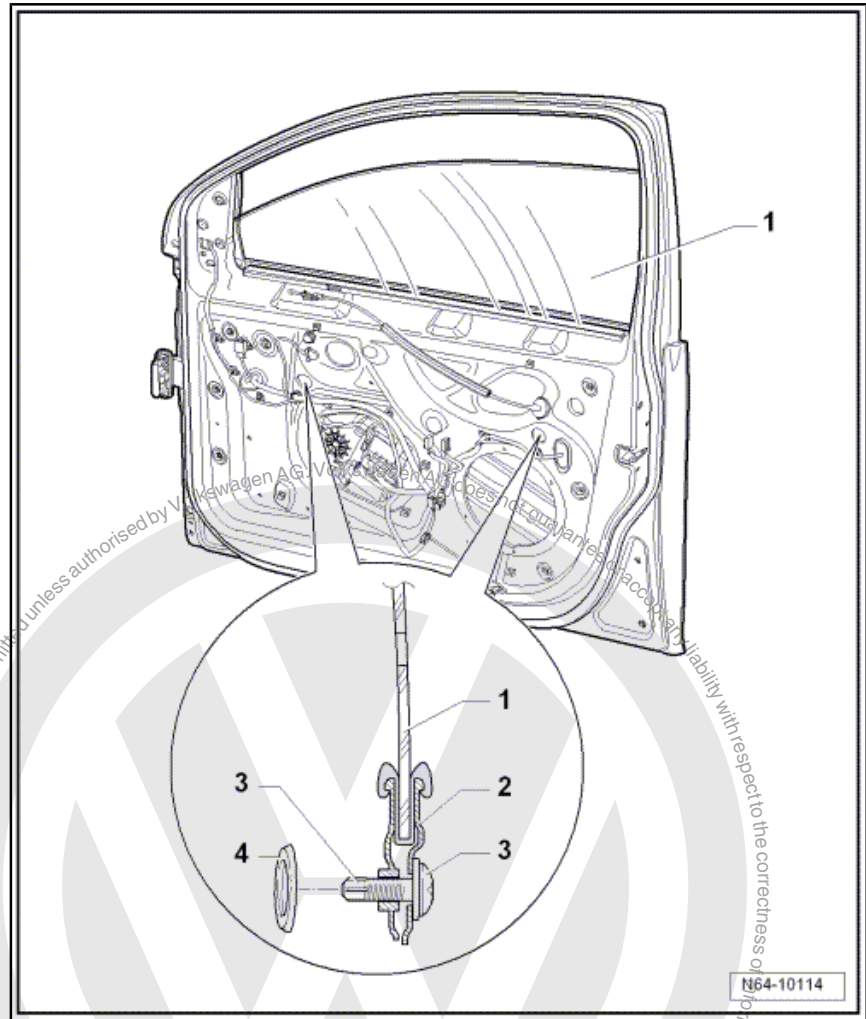
Caution

Remove bolt -3- from interior by turning it clockwise.





- Loosen bolts -3- (do not remove) from inside by turning to right and press clamping jaws apart.



- Applying light pressure press door window -1- in clamping jaws in -direction of arrow- and align door window tension free at rear window channel.

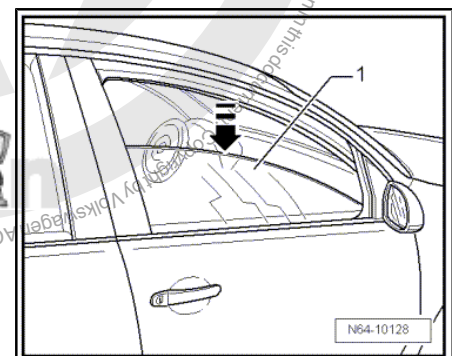
When doing so, ensure that door window -1- is positioned parallel to window channel.

- Tighten clamping jaws by turning bolts anti-clockwise from interior.

Specified torque for bolt: 8 Nm.

Then test for proper function.

Further installation is performed in reverse order of removal.





2.5 Assembly overview - window regulator motor

Note

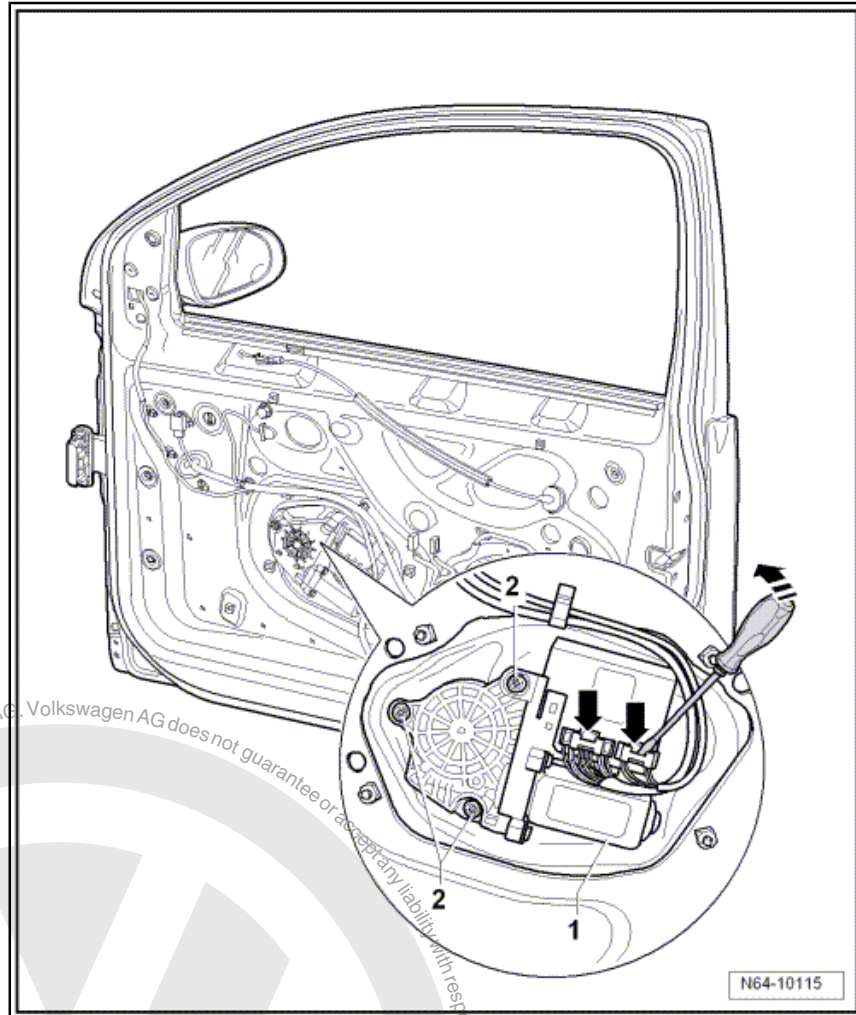
The right side is shown. The left side is similar.

1 - Window regulator motor

- Removing and installing
⇒ [page 284](#)

2 - Bolt

- Qty. 3
- 3.5 Nm



2.6 Removing and installing window regulator motor

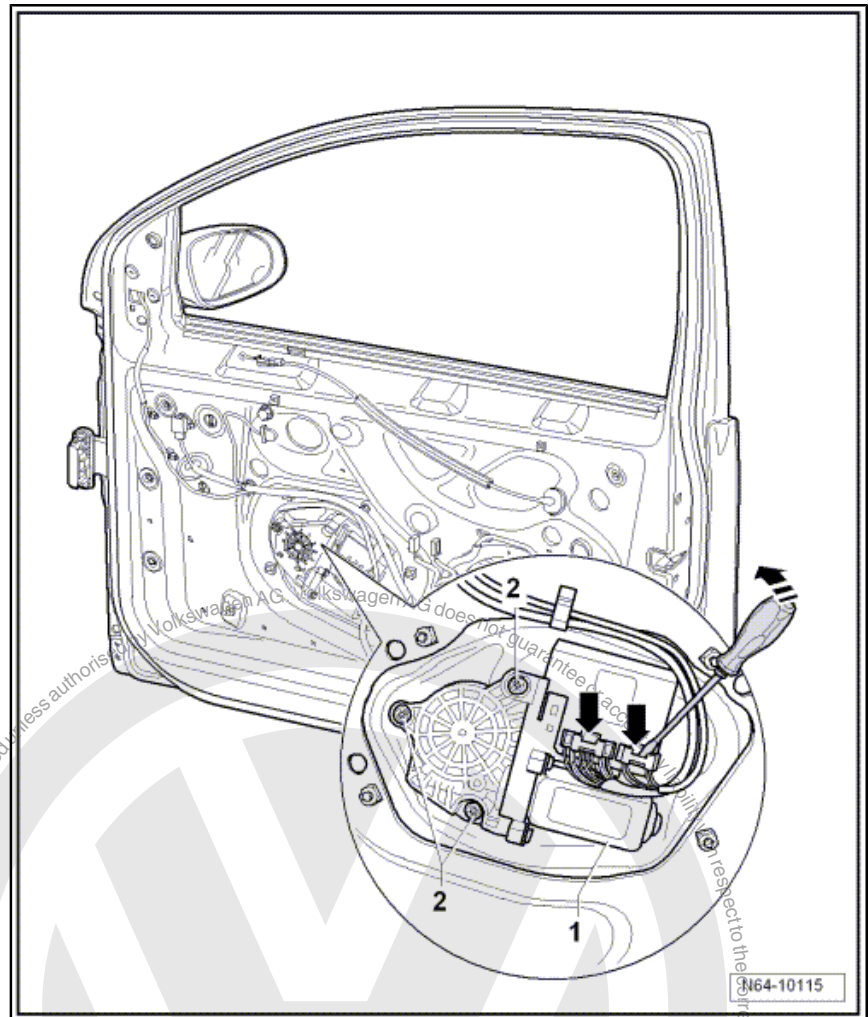
Note

- ◆ *The removal and installation sequence is only for the right window regulator motor. The removal and installation of the left window regulator motor is similar.*
- ◆ *The window regulator motor can also be removed with mounting plate when door outer panel is removed.*



2.6.1 Removing

- Removing front door trim => General body repairs, interior; Rep. Gr. 70 ; Door trim .
- Secure door window against sliding down with adhesive tape.
- Release connectors -arrows- using a screwdriver in -direction of arrow-.
- Remove the three bolts -2-.
- Remove window regulator motor with control unit -1- from mounting plate.



2.6.2 Installing

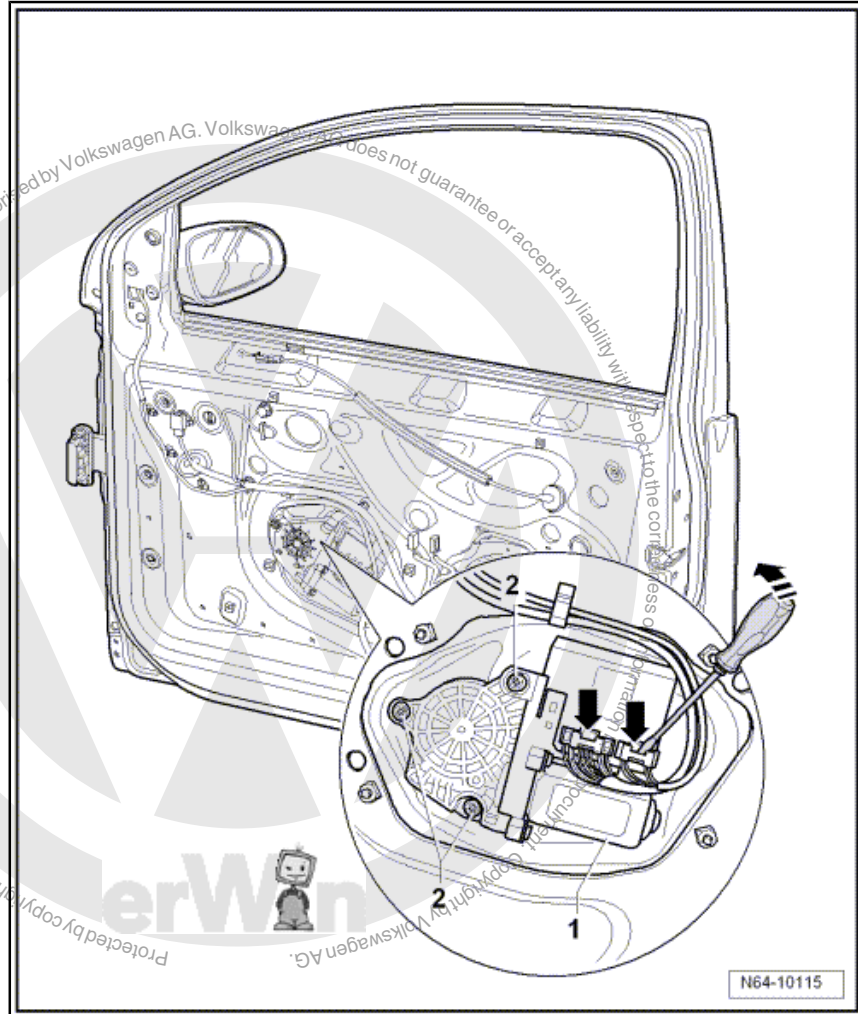
- Push window regulator motor -1- into place and reconnect connector -arrows-.
- Move door window lightly up and down so that the splines between motor and cable drum engage easier.
- Tighten bolts -2- window regulator motor.

Specified torque: 3.5 Nm



- Run window regulator twice in each direction to upper and lower stops. This initiates and readies the window regulator motor and activates the roll-back function.

Further installation is performed in reverse order of removal.





2.7 Assembly overview - window channel



Note

- ◆ The right side is shown. The left side is similar.
- ◆ For a better representation the illustration is drawn without door outer panel.

1 - Window channel

2 - Trim

3 - Bolt

- Qty. 2
- 2 Nm

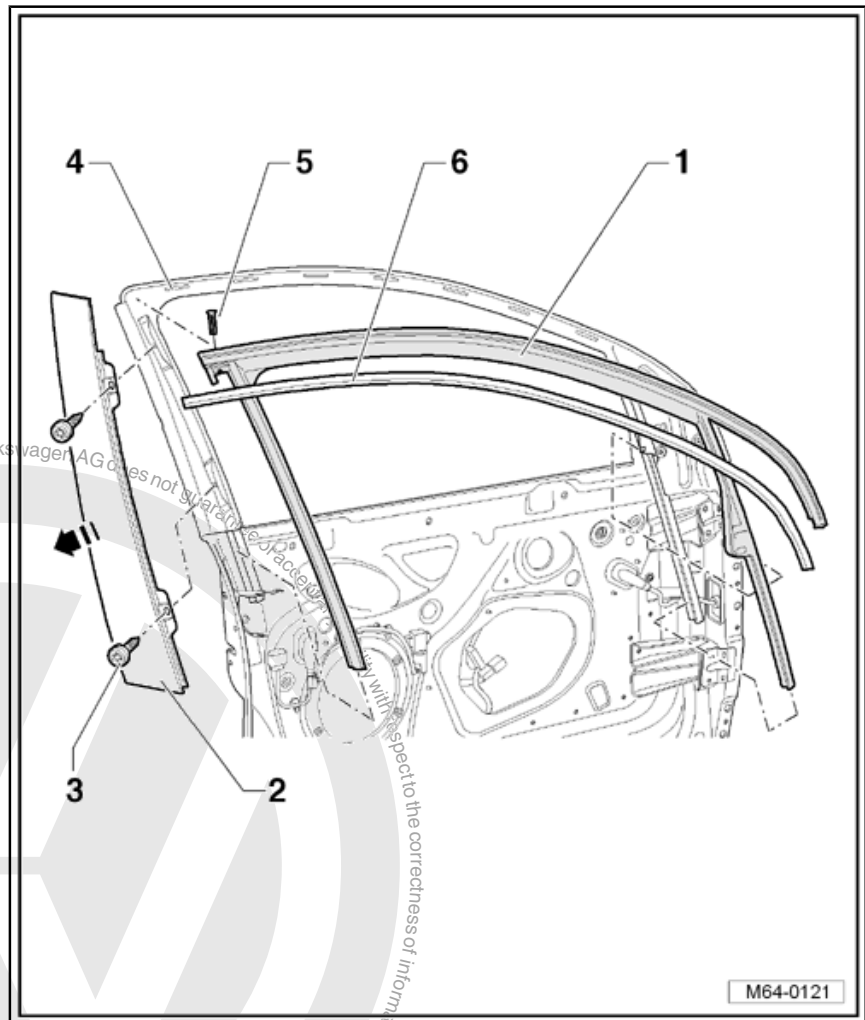
4 - Window frame on door inner part

5 - Trim strip fasteners

- Spreader rivet or screw

6 - Window channel trim strip

- Depends on equipment
- Removing and installing
⇒ [page 289](#)



2.8 Removing and installing window channel



Note

- ◆ Removal and installation is described only for the right window channel. The removal and installation of the left window channel is similar.
- ◆ For a better representation the removal and installation is drawn without door outer panel.



2.8.1 Removing

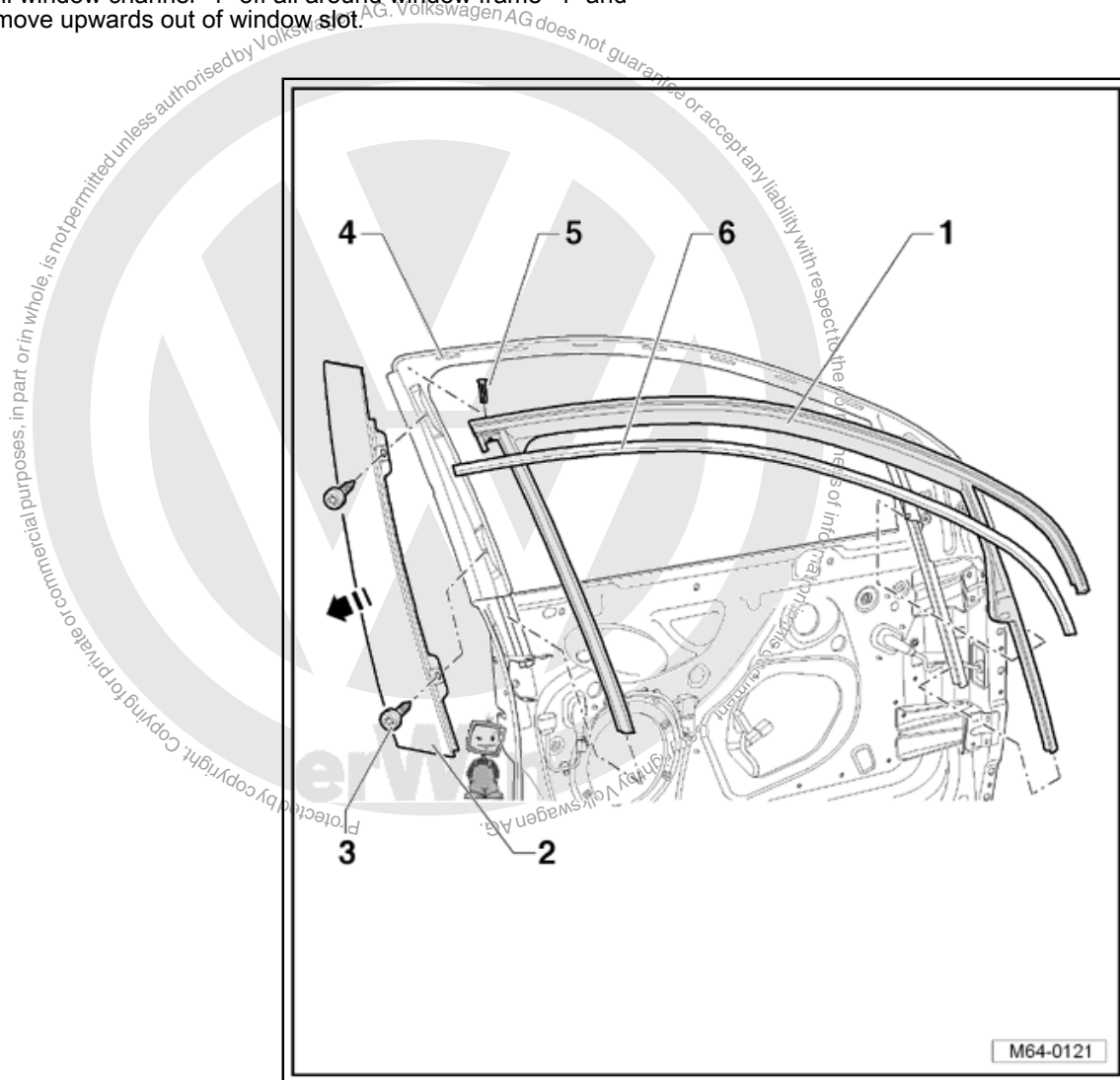
- Removing front door trim ⇒ General body repairs, interior;
Rep. Gr. 70 ; Door trim .
- Remove exterior mirror ⇒ [page 331](#) .
- Removing door window ⇒ [page 279](#) .

Vehicles with window channel trim strip

- Remove window channel trim strip -6- ⇒ [page 289](#) .

All vehicles

- Pull window channel -1- out of mounting.
- Remove bolts -3- (Qty. 2) and pull trim plate -2- off in direction of B-pillar -direction of arrow-.
- Pull window channel -1- off all around window frame -4- and remove upwards out of window slot.



2.8.2 Installing

Install in reverse order of removal.



i Note

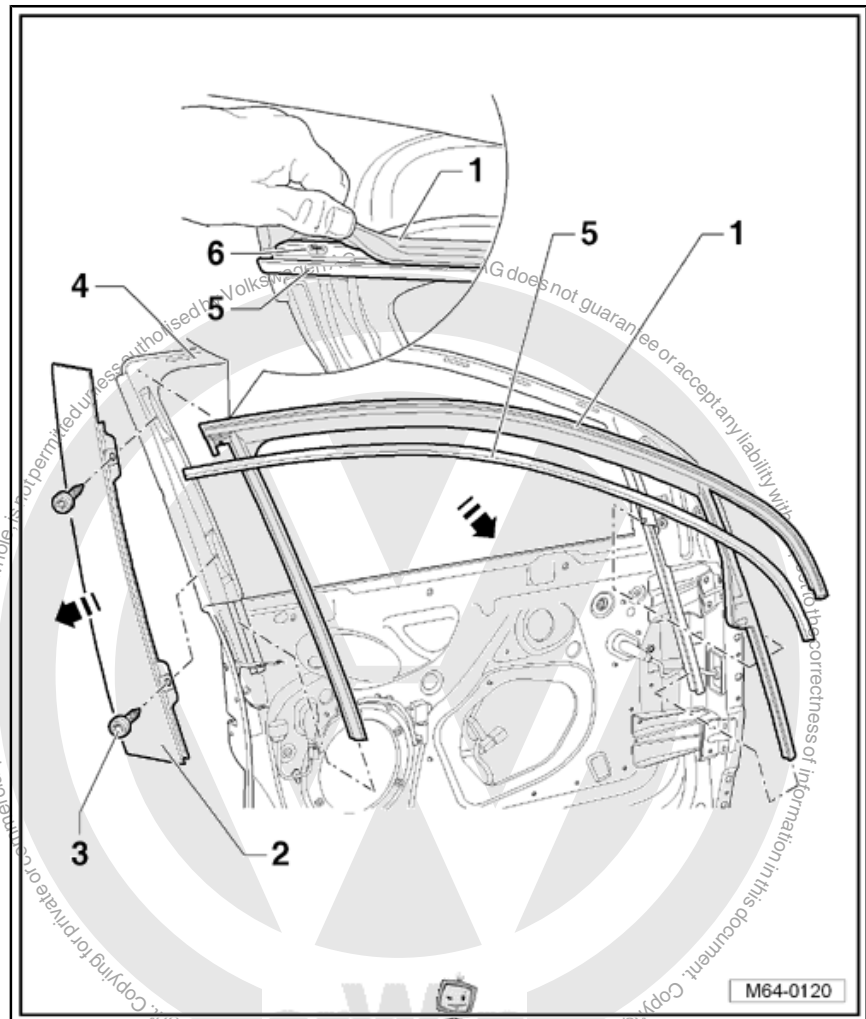
To prevent wind noise, ensure window channel seats evenly when installing.

2.9 Removing and installing window channel trim strip

2.9.1 Removing

- Push window channel -1- in top rear area slightly to side.
- Remove spreader rivet -6- for window channel -1-.
- Pull trim strip -5- out of window channel -1- in direction of -arrow-.

Trim -2- must not be removed.



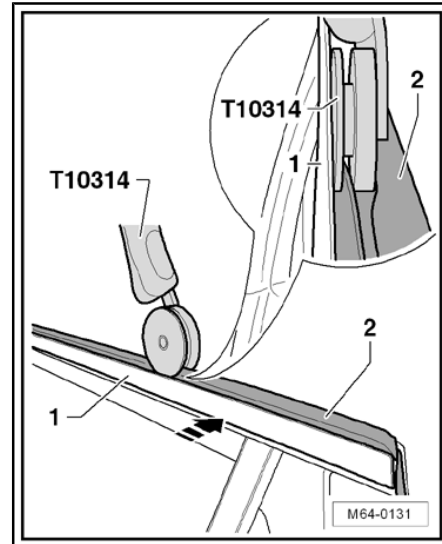
2.9.2 Installing

- Spray window channel with soapy water.



- Press trim strip -1- evenly in direction of -arrow- into window channel -2- by hand.
- Then press window channel -2- fully into mounting of trim strip -1- with roller -T 10314- .

Further installation is performed in reverse order of removal.



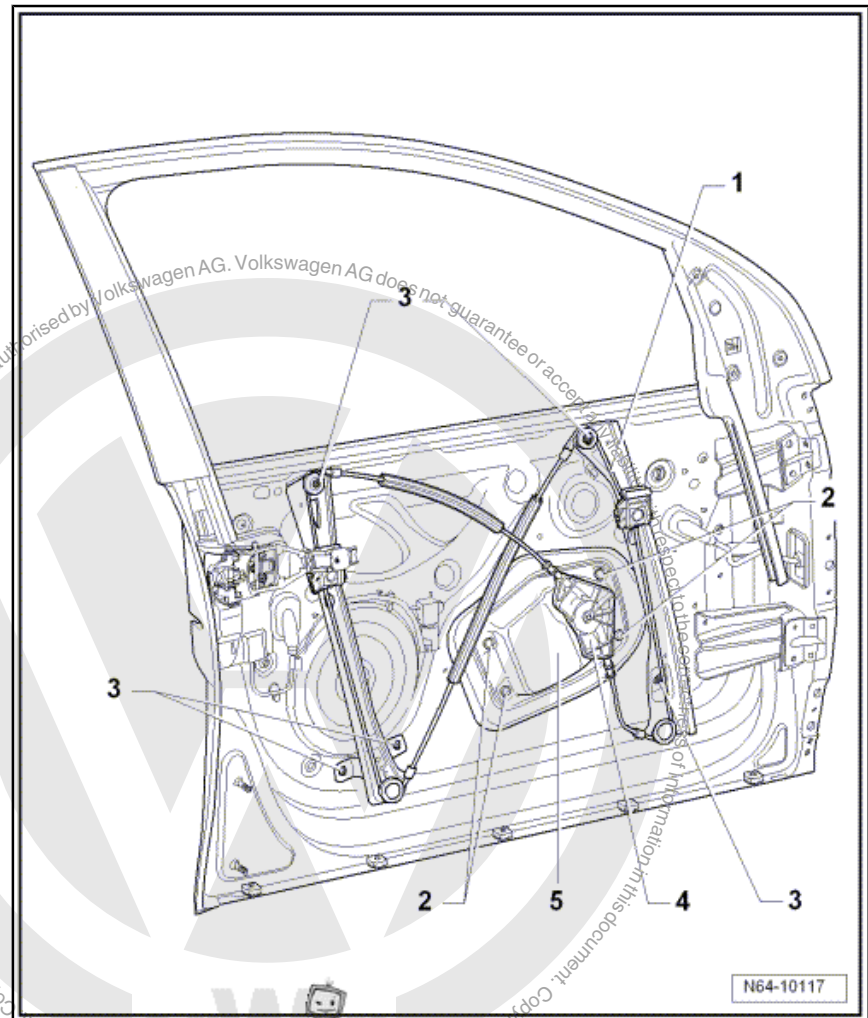


2.10 Assembly overview - window regulator



The right side is shown. The left side is similar.

- 1 - Window regulator
 - Removing and installing
⇒ [page 291](#)
- 2 - Bolt
 - Qty. 4
 - 8 Nm
- 3 - Bolt
 - Qty. 5
 - 8 Nm
- 4 - Drive
- 5 - Mounting plate



2.11 Removing and installing window regulator



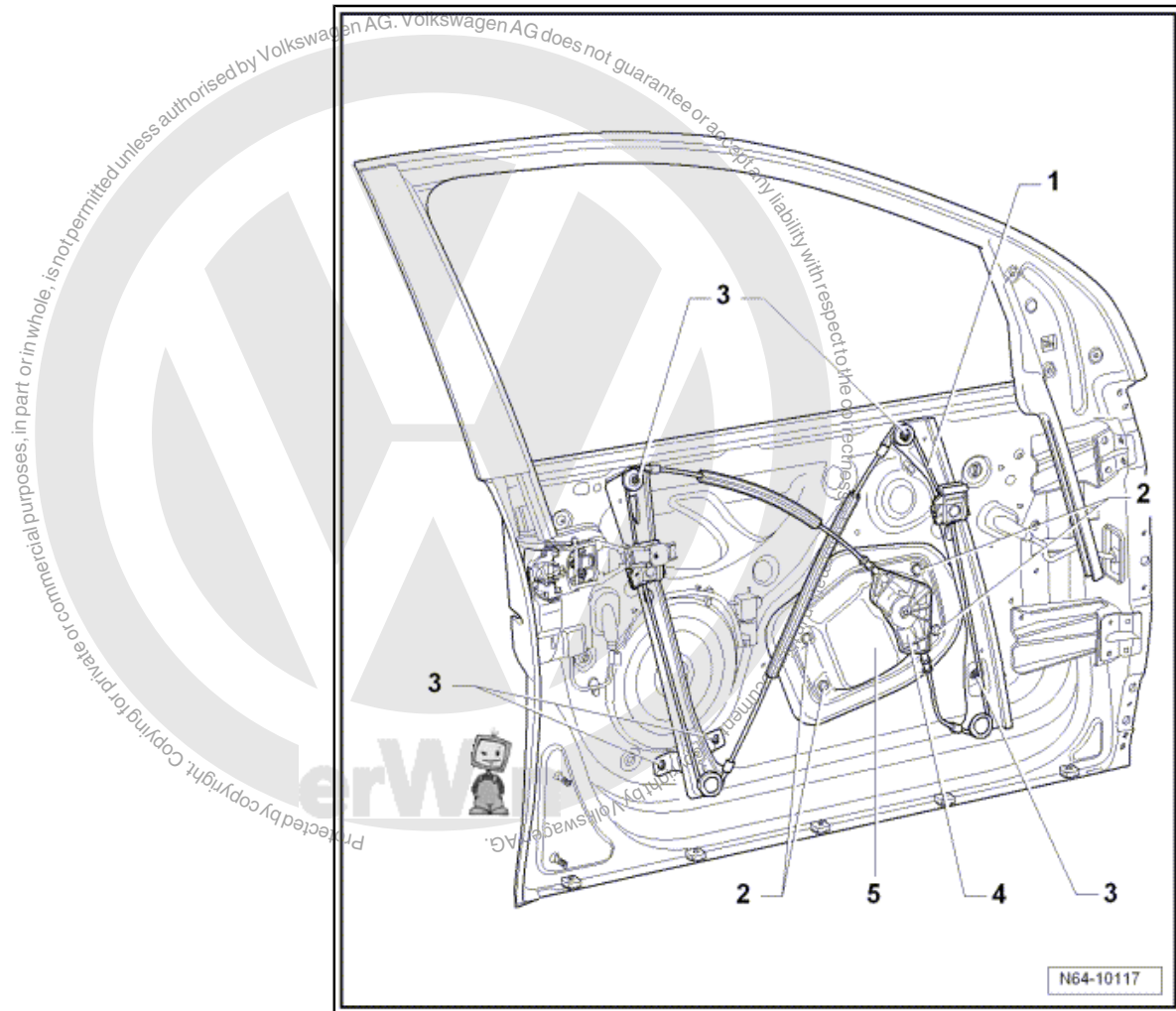
The removal and installation sequence is only for the right window regulator. The removal and installation of the left window regulator is similar.

2.11.1 Removing

- Remove door outer panel ⇒ [page 112](#) .
- Remove side impact protection ⇒ [page 92](#) .



- Removing door window ⇒ [page 279](#) .
- Remove bolts -2- from mounting plate -5-.
- Remove bolts -3- for window regulator.
- Remove window regulator -1- with drive -4- and mounting plate -5- for window regulator motor from inner part of door.
- Disconnect connections for window regulator motor
⇒ [page 285](#) .



2.11.2 Installing

Install in reverse order of removal.

Carry out functional check before installing door outer panel.

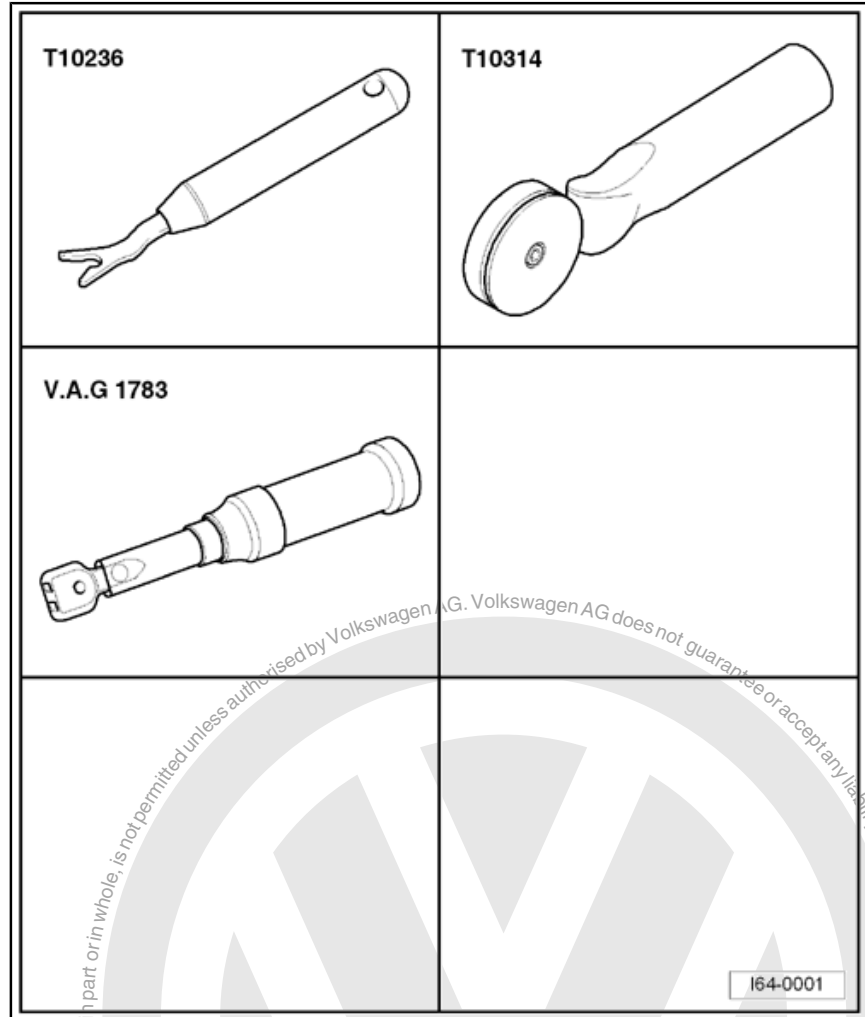


3 Rear door window (saloon)

3.1 Tools

Special tools and workshop equipment required

- ◆ Release tool -T10236-
- ◆ Roller -T10314-
- ◆ Torque wrench -V.A.G 1783-





3.2 Assembly overview - rear door window



Note

The right side is shown. The left side is similar.

1 - Door window

- ❑ Removing and installing
⇒ [page 294](#)

2 - Window channel

- ❑ Component part of fixed door window
- ❑ Removing and installing
⇒ [page 297](#)

3 - Fixed door window

- ❑ Part of window channel.
- ❑ Removing and installing
⇒ [page 297](#)

4 - Window regulator guide

5 - Spreader plug

- ❑ Always renew when working on door window

6 - Spreader pin

- ❑ Always renew when working on door window

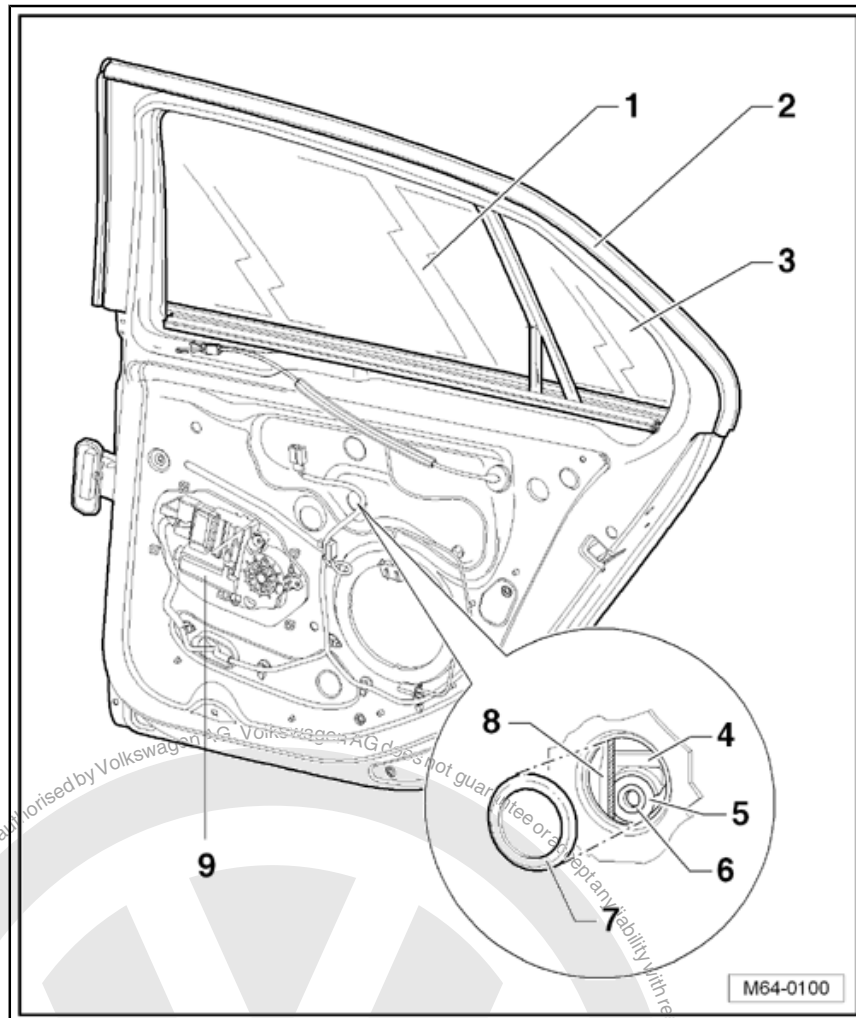
7 - Cover

8 - Window regulator

- ❑ Removing and installing
⇒ [page 305](#)

9 - Window regulator motor

- ❑ Removing and installing
⇒ [page 302](#)



3.3 Removing and installing door window



Note

The removal and installation sequence is only for the rear right door window. The removal and installation of the rear left door window is similar.



3.3.1 Removing

i Note

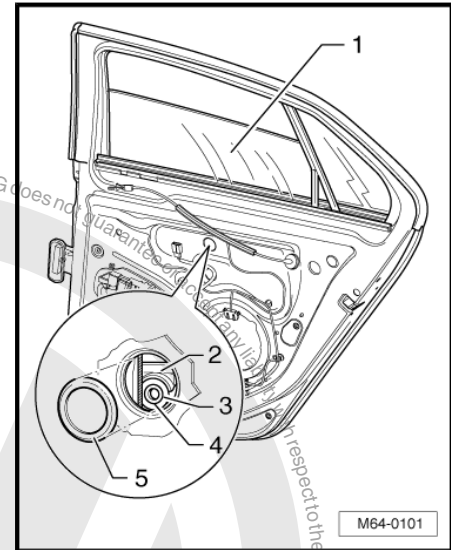
When door outer panel has been removed the spreader pin and spreader plug to remove door window are accessible from exterior.

- Remove rear door trim ⇒ General body repairs, interior; Rep. Gr. 70 ; Door trim .
- Lever out caps -5-.
- Lower door window until spreader pin -3- and spreader plug -4- in cut-out of window regulator is accessible.

i Note

If the work step cannot be carried out because there is a fault with the electric window motor, remove motor to slide window down.

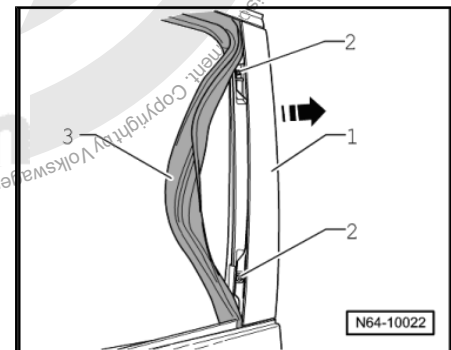
- Screw a 5 mm bolt (approx. 70 mm long) into spreader pin -3-.
- Pull bolt and spreader pin out of spreader plug -4-.
- Screw an 8 mm bolt (approx. 80 mm long) into spreader plug -4-.



i Note

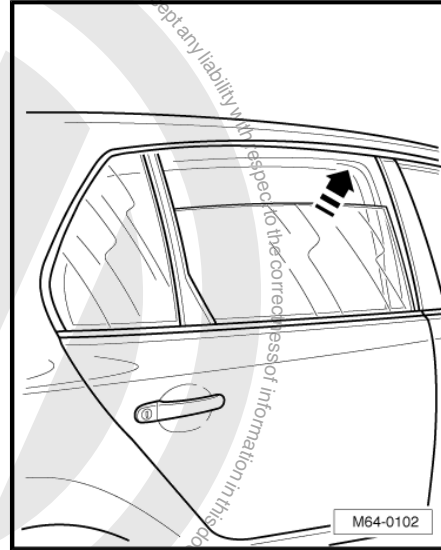
Do not exert too great a pressure on the plug because otherwise the plug will fall into the door.

- Pull spreader plug -4- out of clamping jaws -2- and therefore out of door window.
- Remove window regulator motor ⇒ [page 302](#) .
- Lower door window fully.
- Pull window channel -3- out of mounting.
- Remove screws -2- and pull trim -1- towards B-pillar -direction of arrow-.





- Pull door window upwards -arrow- out of window slot.



3.3.2 Installing

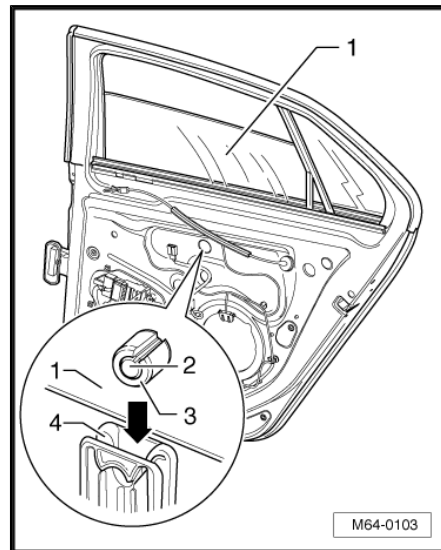


Note

- ◆ *When installing door window, always renew spreader plug and spreader pin.*
- ◆ *Before inserting spreader plug and spreader pin check washer for damage.*
- With door window -1- removed insert spreader plug -3- in middle - centralised.
- Press spreader pin -2- flush into spreader plug -3-.
- Remove window slot seal (⇒ [Item 1 \(page 123\)](#)).
- Guide door window -1- into door and insert door window into mounting of window regulator guide -4-.
- With light pressure from above -arrow-, engage window -1- in mounting of window regulator guide -4-.
- Install window slot seal (⇒ [Item 1 \(page 123\)](#)) again.

Further installation is performed in reverse order of removal.

Carry out functional test function before installing door trim.





3.4 Assembly overview - door with fixed window with window channel



Note

The right side is shown. The left side is similar.

1 - Window channel

- Component part of fixed door window
- Removing and installing
⇒ [page 297](#)

2 - Fixed door window

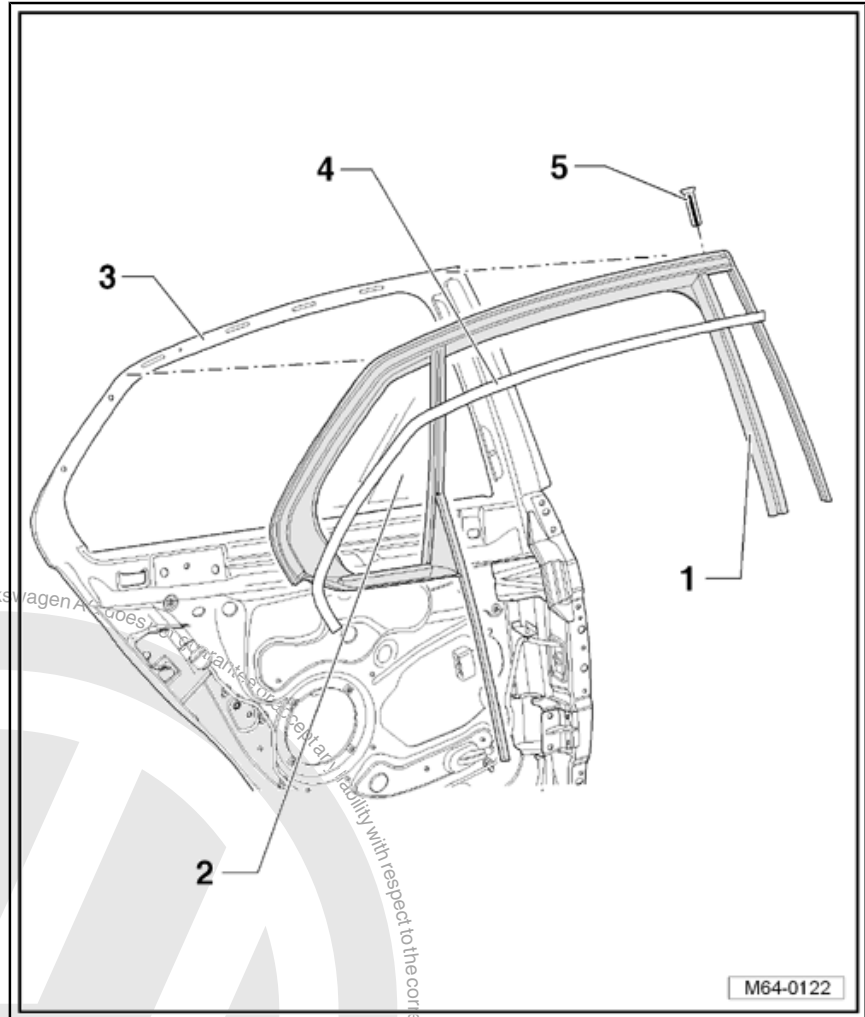
- Part of window channel.
- Removing and installing
⇒ [page 297](#)

3 - Window frame on door inner part

4 - Window channel trim strip

- Depends on equipment
- Removing and installing
⇒ [page 300](#)

5 - Spreader rivet



3.5 Removing and installing door with fixed window with window channel



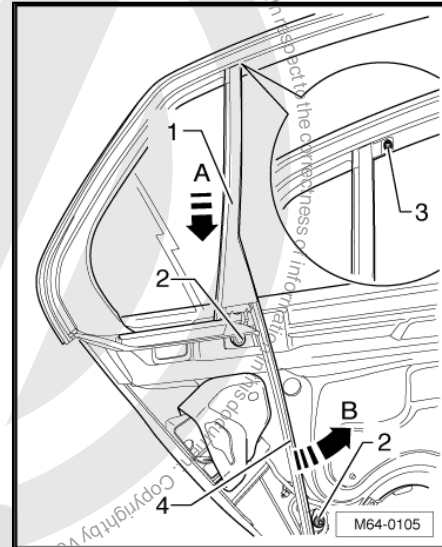
Note

- ◆ The removal and installation sequence is only for the right door fixed window with window channel. The removal and installation of the left door fixed window with window channel is similar.
- ◆ When door outer panel has been removed the spreader pin and spreader plug to remove door window are accessible from exterior.

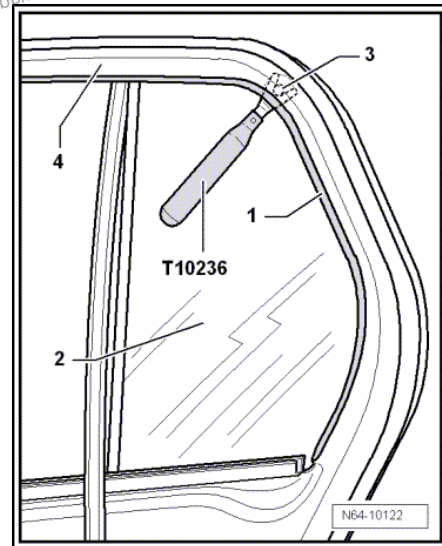


3.5.1 Removing

- Remove door outer panel ⇒ [page 112](#) .
- Removing door window ⇒ [page 294](#) .
- Pull window channel -4- out of middle frame -1- and guide window channel inwards.
- Remove bolts -2- and -3- and slide middle frame -1- downwards -arrow A-.
- Pull middle frame -4- off fixed door window seal -arrow B-.



- Release window channel -1- with fixed door window -2- on inside and outside from window frame -4-.
- Using release tool -T10236- release locking lugs on guide pin -3- in window frame -4-.

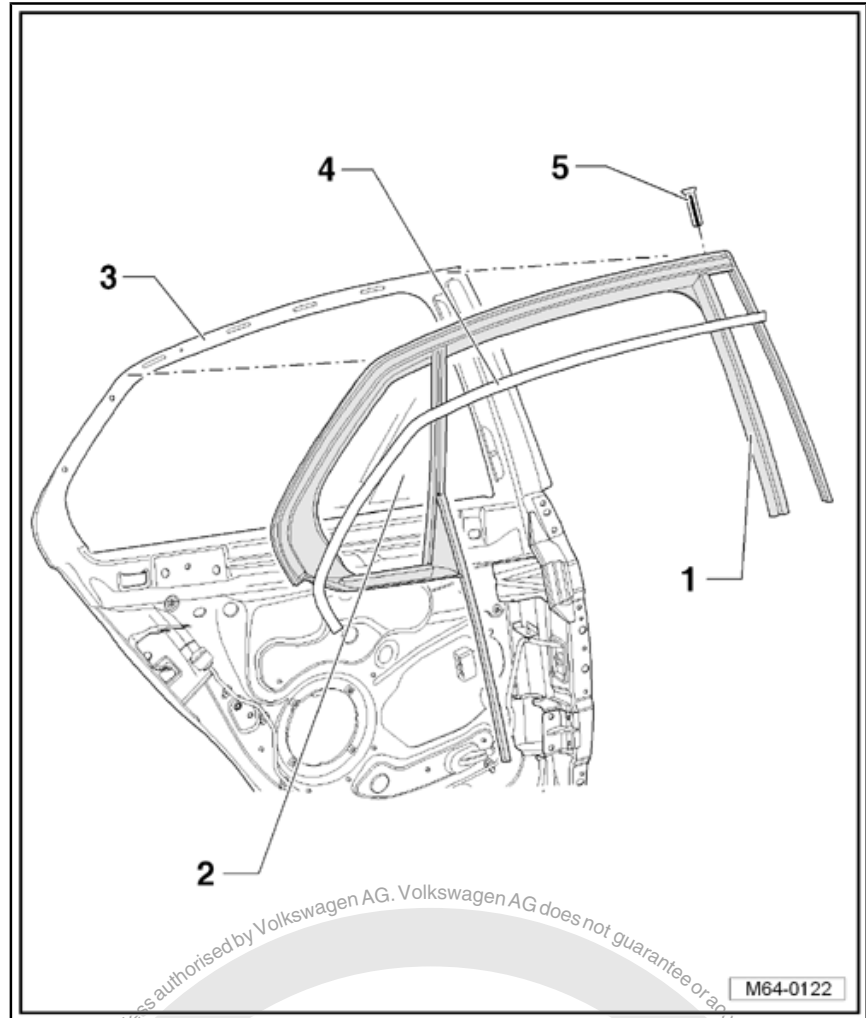


Vehicles with window channel trim strip

Remove window channel trim strip -4- ⇒ [page 300](#) .

All vehicles

- Pull complete window channel -1- with fixed door window -2- off window frame -3- in -direction of arrow-.



3.5.2 Installing

Install in reverse order of removal.

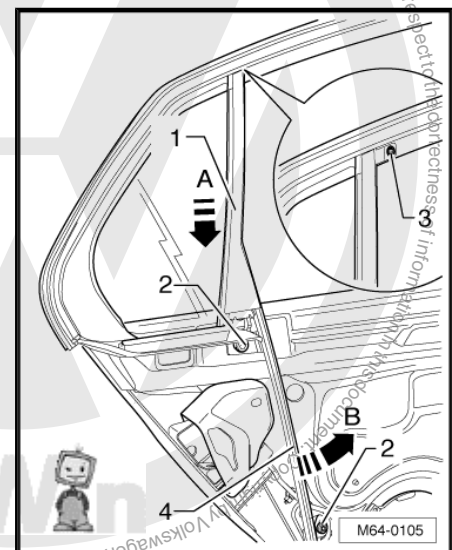
Specified torque for bolts -2- on middle frame: 5.5 Nm

Specified torque for bolts -3- on middle frame: 4.5 Nm



Note

When installing fixed door window with window channel ensure it is seated uniformly (wind noise).

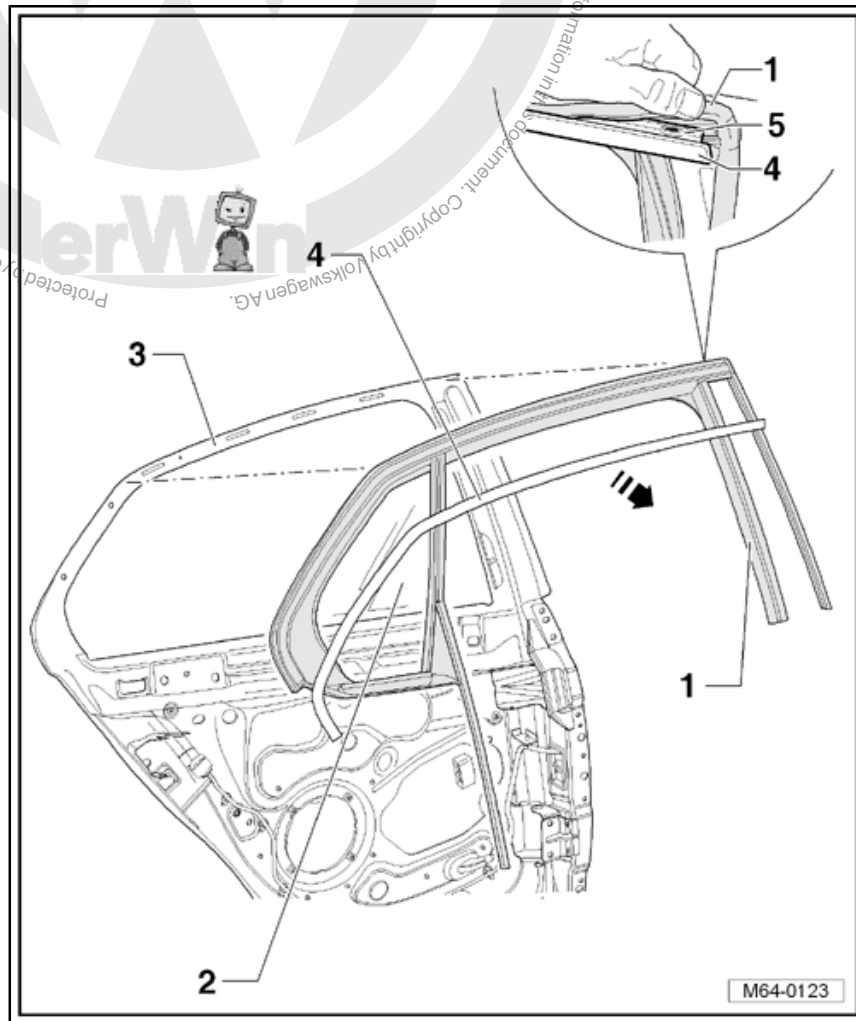




3.6 Removing and installing window channel trim strip

3.6.1 Removing

- Push window channel -1- in top front area slightly to side.
- Remove spreader rivet -5-.
- Pull trim strip -4- out of window channel -1- in direction of -arrow-.



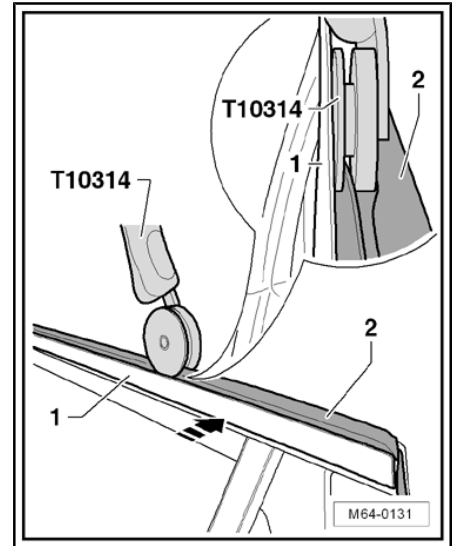
3.6.2 Installing

- Spray window channel with soapy water.



- Press trim strip -1- evenly -arrow- into window channel -2- by hand.
- Then press window channel -2- fully into mounting of trim strip with roller -T 10314- .

Further installation is performed in reverse order of removal.





3.7 Assembly overview - window regulator motor

Note

The right side is shown. The left side is similar.

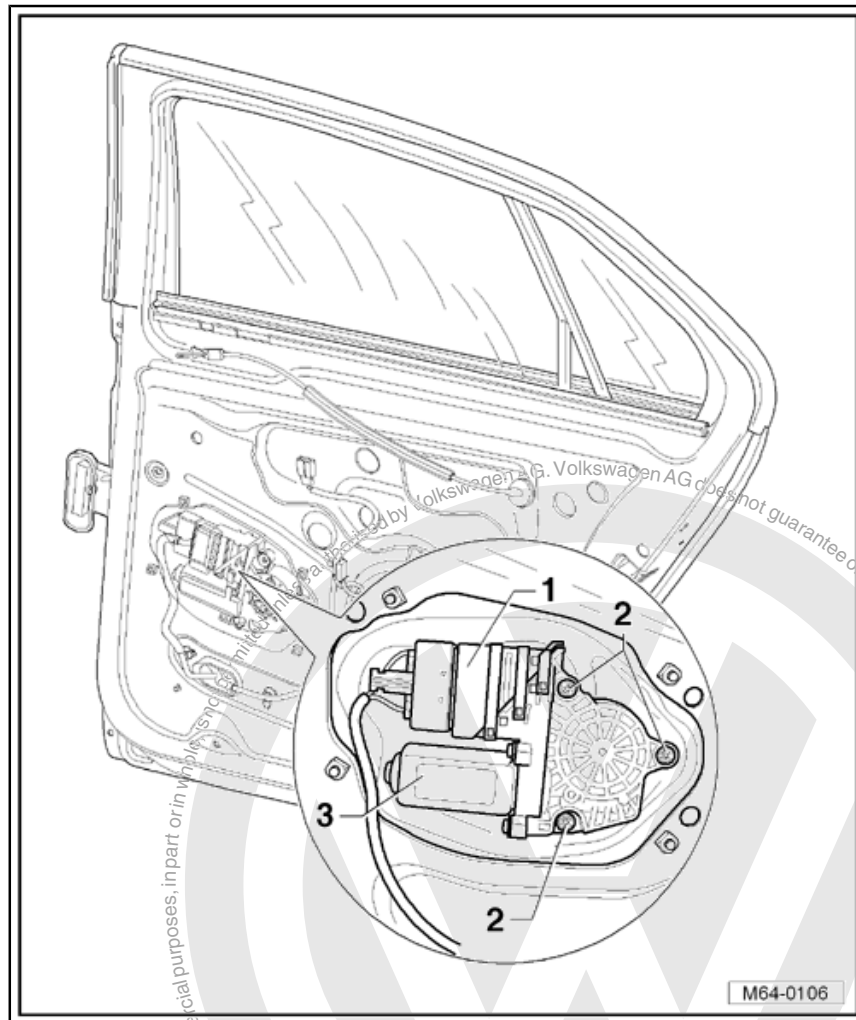
1 - Connector

2 - Bolt

- Qty. 3
- 3.5 Nm

3 - Window regulator motor

- Removing and installing
[=> page 302](#)



3.8 Removing and installing window regulator motor

Note

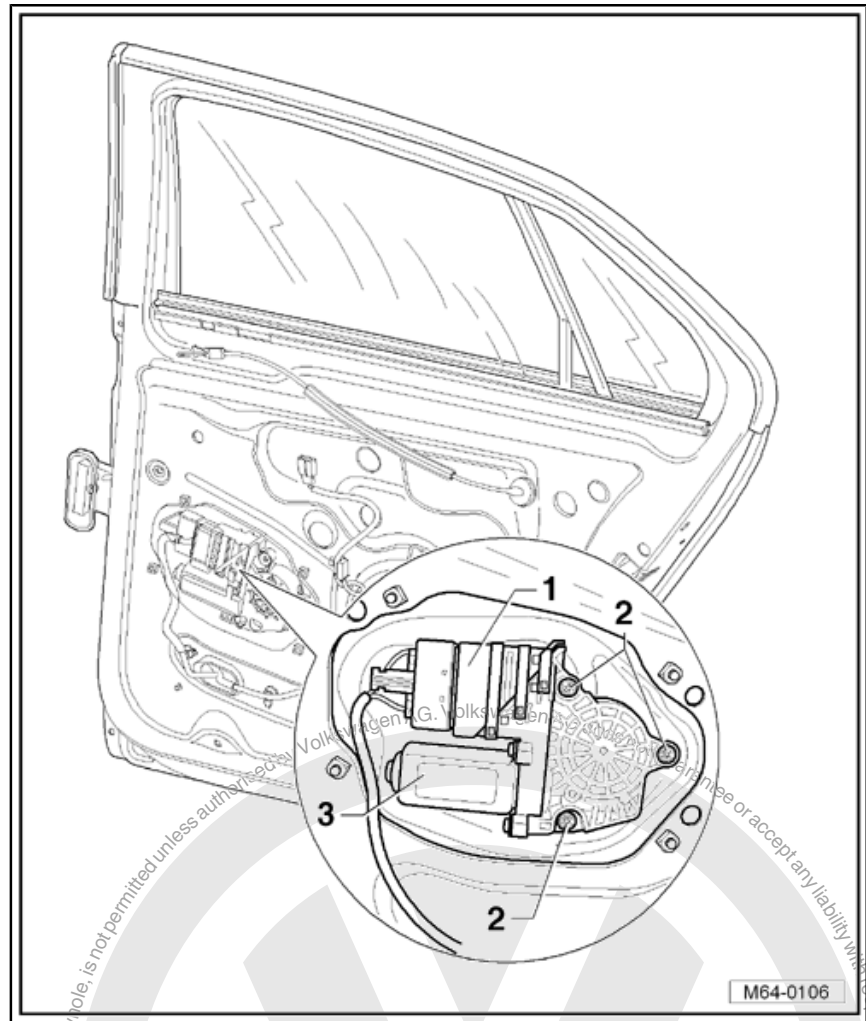
The removal and installation sequence is only for the right window regulator motor. The removal and installation of the left window regulator motor is similar.

3.8.1 Removing

- Removing door trim => General body repairs, interior; Rep. Gr. 70 ; Door trim .



- Secure door window against sliding down with adhesive tape.
- Remove the three bolts -2-.
- Disconnect connector -1-.
- Remove window regulator motor with control unit -3- from mounting plate.



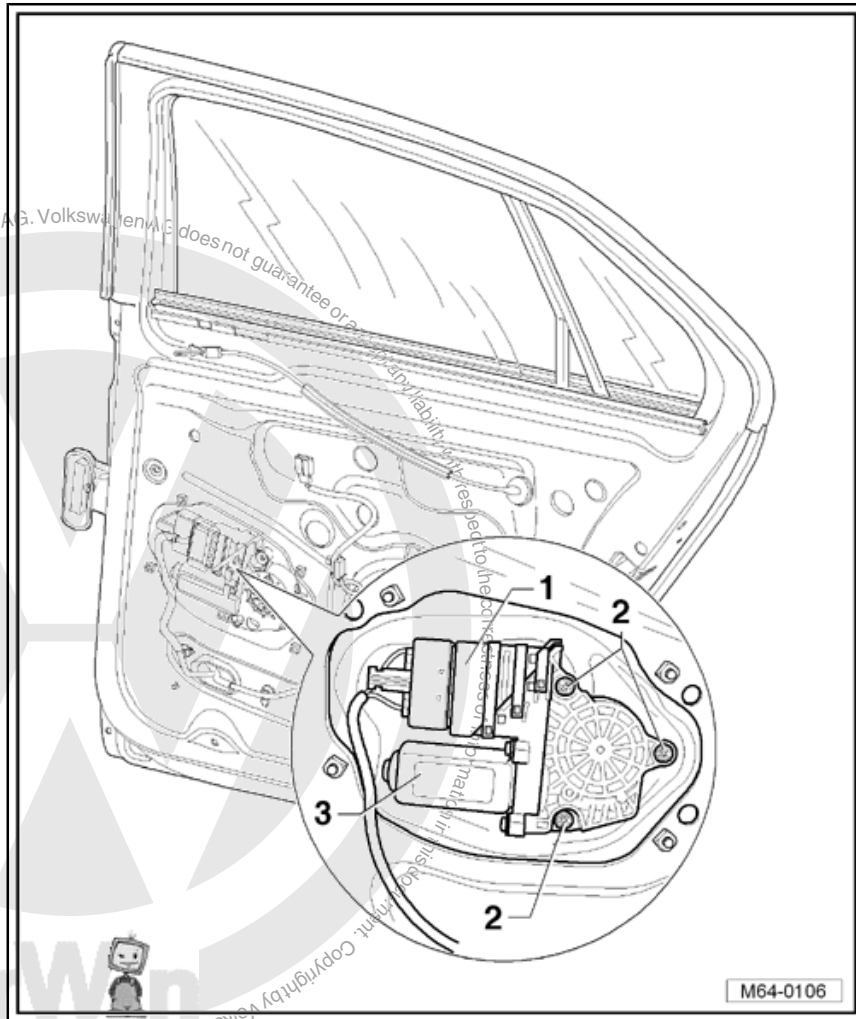
3.8.2 Installing

- Push window regulator motor -3- into place and reconnect connector -1-.
- Move door window lightly up and down so that the splines between motor and cable drum engage easier.
- Tighten bolts -2- window regulator motor.
Specified torque for bolts -2- 3.5 Nm
- Run window regulator twice in each direction to upper and lower stops. This initiates and readies the window regulator motor and activates the roll-back function.





Further installation is performed in reverse order of removal.



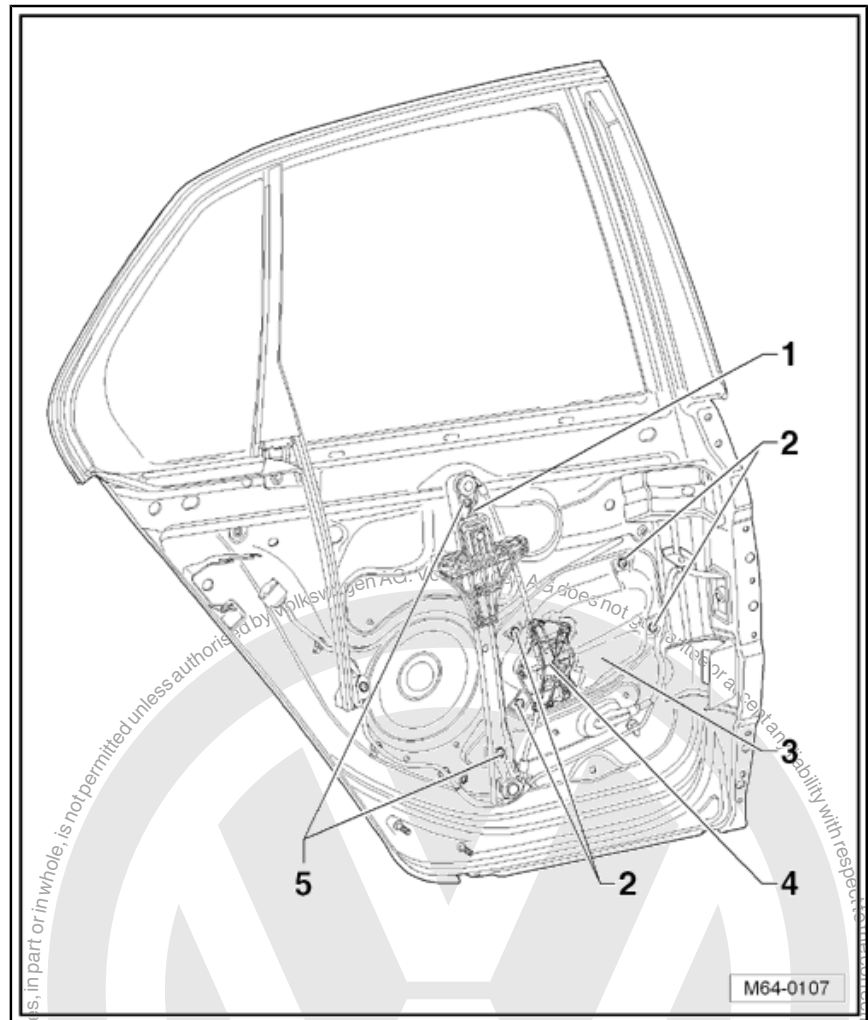


3.9 Assembly overview - window regulator



The right side is shown. The left side is similar.

- 1 - Window regulator
 - Removing and installing
⇒ [page 305](#)
- 2 - Bolt
 - Qty. 4
 - 8 Nm
- 3 - Mounting plate
- 4 - Drive
- 5 - Bolt
 - Qty. 2
 - 8 Nm



3.10 Removing and installing window regulator

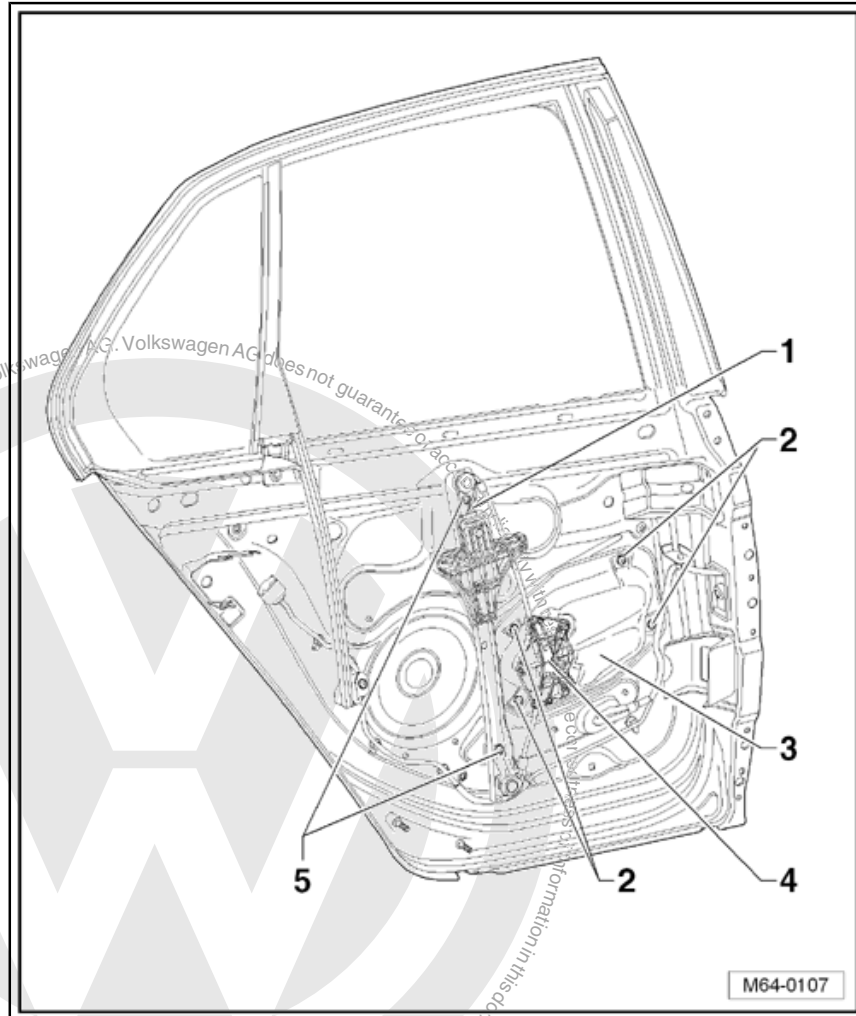


- ◆ The removal and installation sequence is only for the right window regulator. The removal and installation of the left window regulator is similar.
- ◆ For clarity the side impact protection is not shown in the illustration



3.10.1 Removing

- Remove door outer panel ⇒ [page 112](#) .
- Removing door window ⇒ [page 294](#) .
- Remove bolts -2- from mounting plate -3-.
- Remove bolts -5- for window regulator.
- Remove window regulator -1- with drive -4- and mounting plate -3- for window regulator motor from inner part of door.



3.10.2 Installing

Install in reverse order of removal.

Carry out functional check before installing door outer panel.

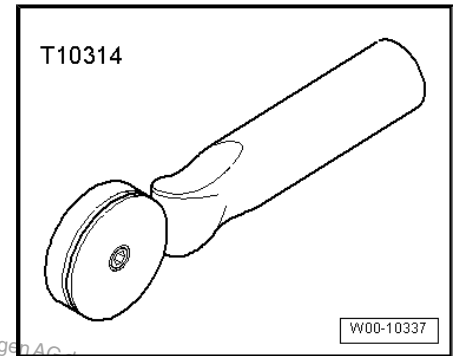


4 Rear door window (Variant)

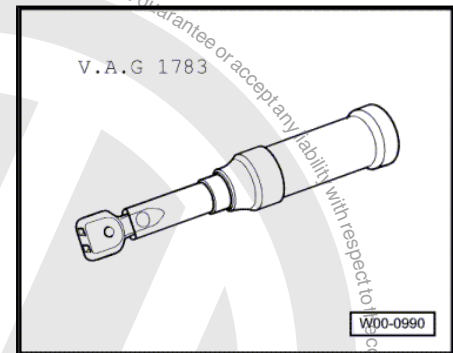
4.1 Tools

Special tools and workshop equipment required

- ◆ Roller -T10314-



- ◆ Torque wrench -V.A.G 1783-



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4.2 Assembly overview - rear door window



Note

The right side is shown. The left side is similar.

1 - Door window

- Removing and installing
 => [page 308](#)

2 - Window channel

- Component part of fixed door window
- Removing and installing
 => [page 312](#)

3 - Fixed door window

- Removing and installing
 => [page 312](#)

4 - Window regulator guide

5 - Spreader plug

- Always renew when working on door window

6 - Spreader pin

- Always renew when working on door window

7 - Cover

8 - Window regulator

- Part of assembly carrier

9 - Window regulator motor

- Removing and installing
 => [page 317](#)

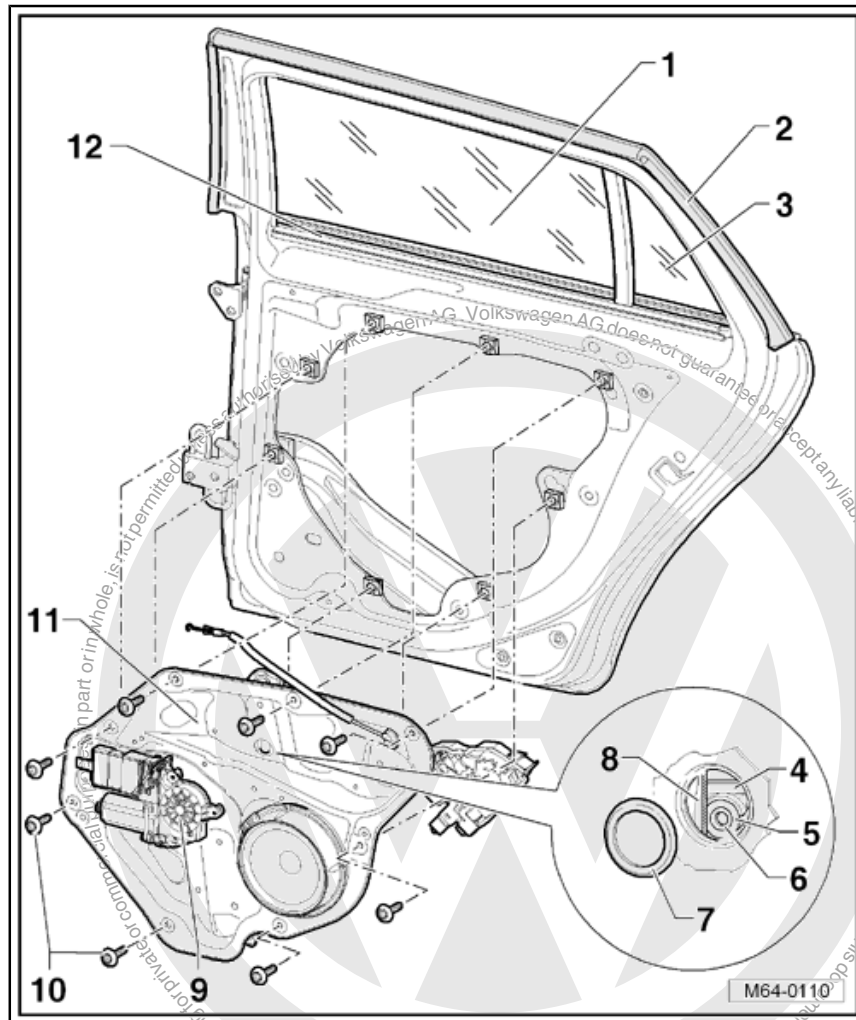
10 - Bolt

- Qty. 8
- 8 Nm

11 - Assembly carrier

- Removing and installing
 => [page 145](#)

12 - Window slot inner seal



4.3 Removing and installing door window



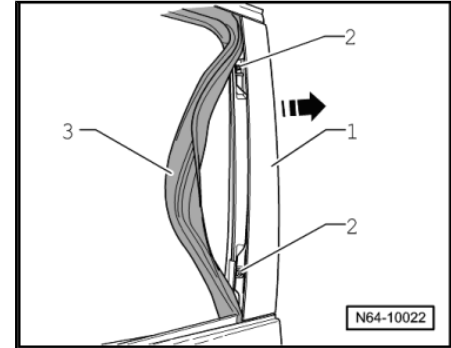
Note

- ◆ The removal and installation sequence is only for the rear right door window. The removal and installation of the rear left door window is similar.
- ◆ Outer window slot seal need not be removed.



4.3.1 Removing

- Remove rear door trim ⇒ General body repairs, interior; Rep. Gr. 70 ; Door trim .
- Lower door window completely.
- Pull window channel -3- out of mounting.
- Remove screws -2- and pull trim -1- towards B-pillar -direction of arrow-.



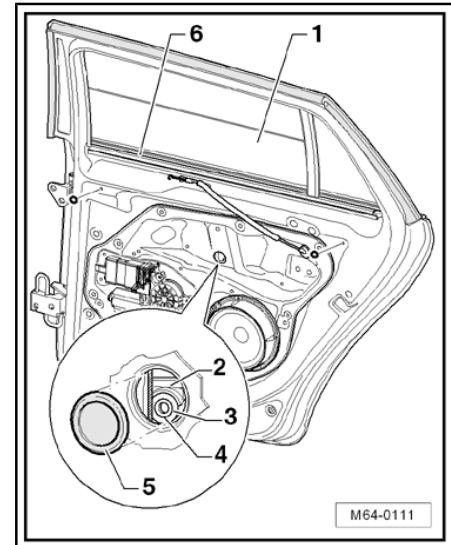
- Lever out cap -5-.
- Lift door window until spreader pin -3- and spreader plug -4- in cut-out of window regulator is accessible.



Note

If the procedure cannot be carried out because there is a fault with the electric window regulator, remove electric window motor to slide window down.

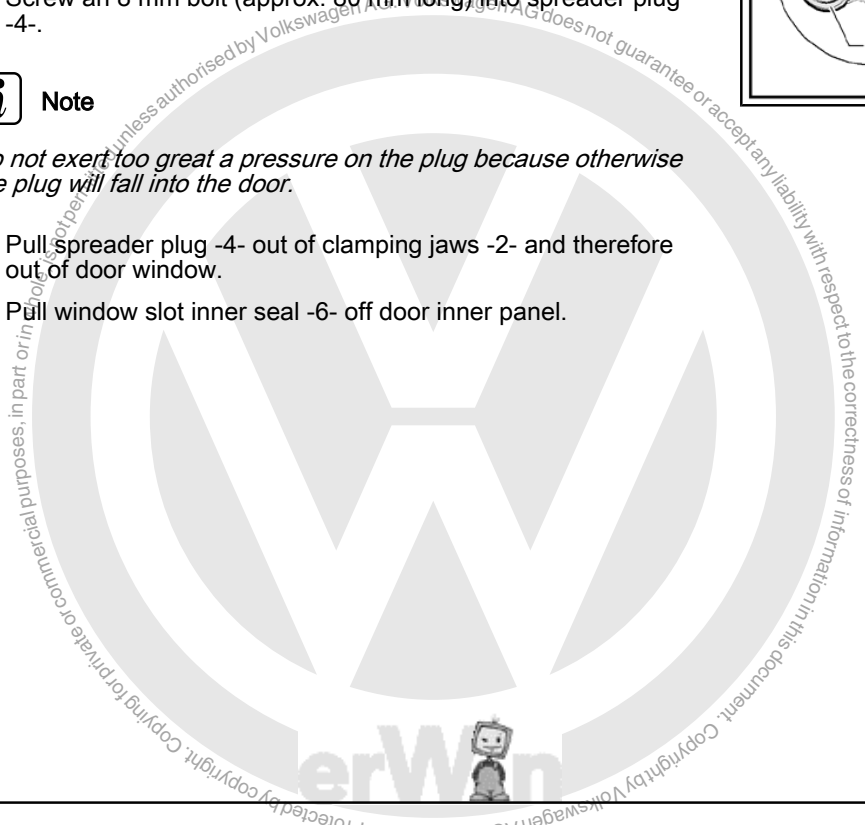
- Screw a 5 mm bolt (approx. 70 mm long) into spreader pin -3-.
- Pull bolt and spreader pin out of spreader plug -4-.
- Screw an 8 mm bolt (approx. 80 mm long) into spreader plug -4-.



Note

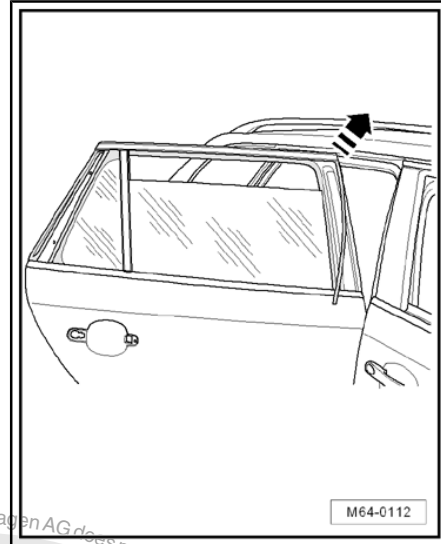
Do not exert too great a pressure on the plug because otherwise the plug will fall into the door.

- Pull spreader plug -4- out of clamping jaws -2- and therefore out of door window.
- Pull window slot inner seal -6- off door inner panel.





- Pull door window upwards -arrow- out of window slot.



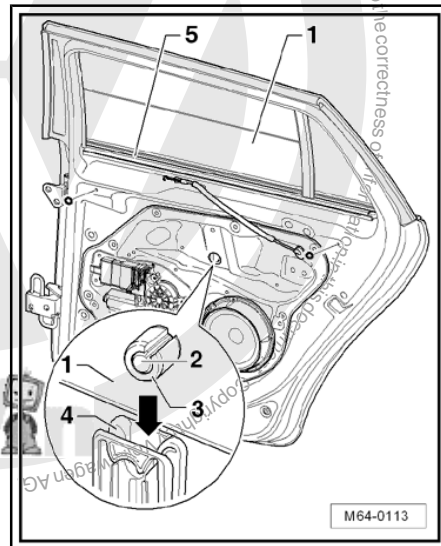
4.3.2 Installing



Note

- ◆ *When installing door window, always renew spreader plug and spreader pin.*
 - ◆ *Before inserting spreader plug and spreader pin check washer for damage.*
- With door window -1- removed insert spreader plug -3- in middle - centralised.
 - Press spreader pin -2- flush into spreader plug -3-.
 - Guide door window -1- into door and insert door window into mounting of window regulator guide -4-.
 - With light pressure from above -arrow-, engage window -1- in mounting of window regulator guide -4-.

Further installation is performed in reverse order of removal.
Carry out functional test function before installing door trim.



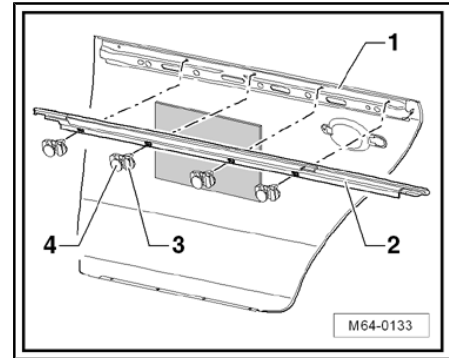
4.4 Removing and installing window slot outer seal

4.4.1 Removing

- Remove door window ⇒ [page 309](#) .



- Lever spreader clip -4- out of clip -3- using a small screwdriver.
- Pull the four clips -3- out of the window slot seal -2-.
- Pull window slot seal -2- upwards off door outer panel -1-.



4.4.2 Installing

Install in reverse order of removal.

4.5 Assembly overview - door with fixed window with window channel



Note

The right side is shown. The left side is similar.

1 - Spreader rivet

- Only with window channel trim strip

2 - Window channel trim strip

- Depends on equipment
- Removing and installing
 ⇒ [page 316](#)

3 - Window channel

- Removing and installing
 ⇒ [page 312](#)

4 - Clip

- Always renew when making repairs

5 - Middle frame

6 - Bolt

- 4.5 Nm

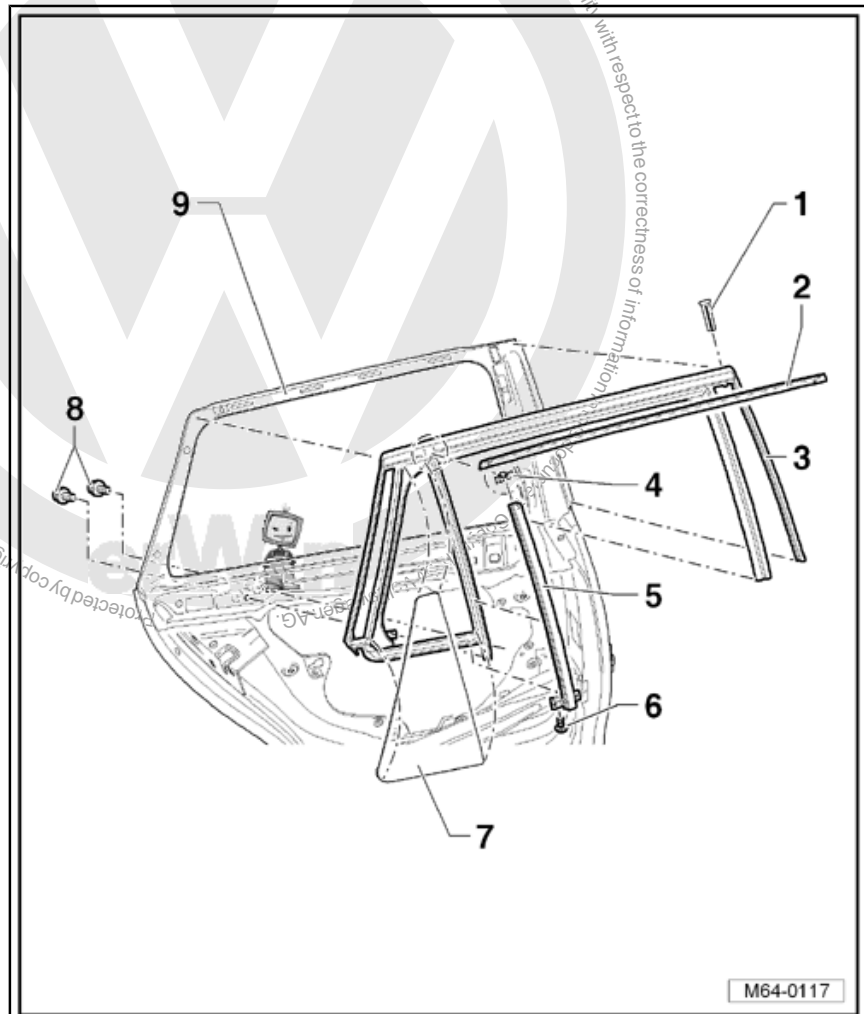
7 - Fixed door window

- Removing and installing
 ⇒ [page 312](#)

8 - Bolt

- Qty. 2
- 5.5 Nm

9 - Window frame on door inner part





4.6 Removing and installing door with fixed window with window channel

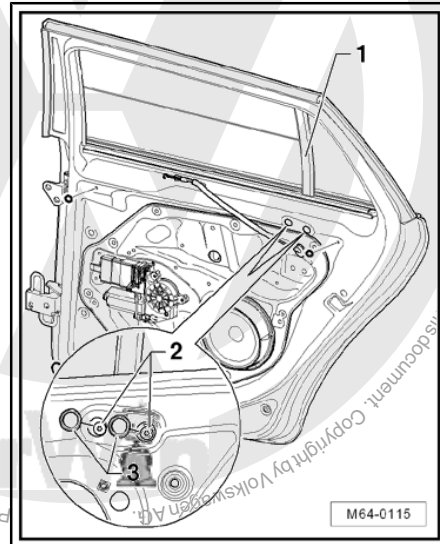


Note

The removal and installation sequence is only for the right door fixed window with window channel. The removal and installation of the left door fixed window with window channel is similar.

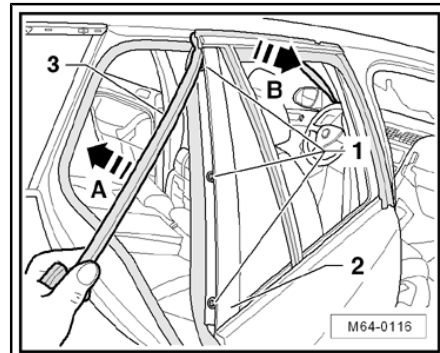
4.6.1 Removing

- Remove door window ⇒ [page 309](#) .
- Remove window slot outer seal ⇒ [page 310](#) .
- Lever out both caps -3-.
- Remove both bolts -2- from middle frame -1-.



- Pull window channel rubber -3- off trim -2- in direction of arrow A-.
- Remove bolts -1- and pull off trim -2- in direction of arrow B-.

Vehicles with window channel trim strip

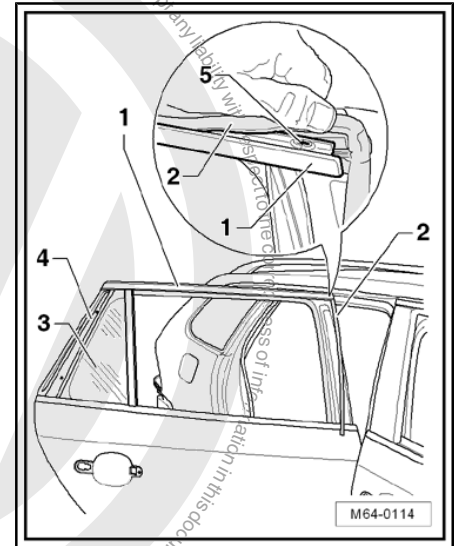




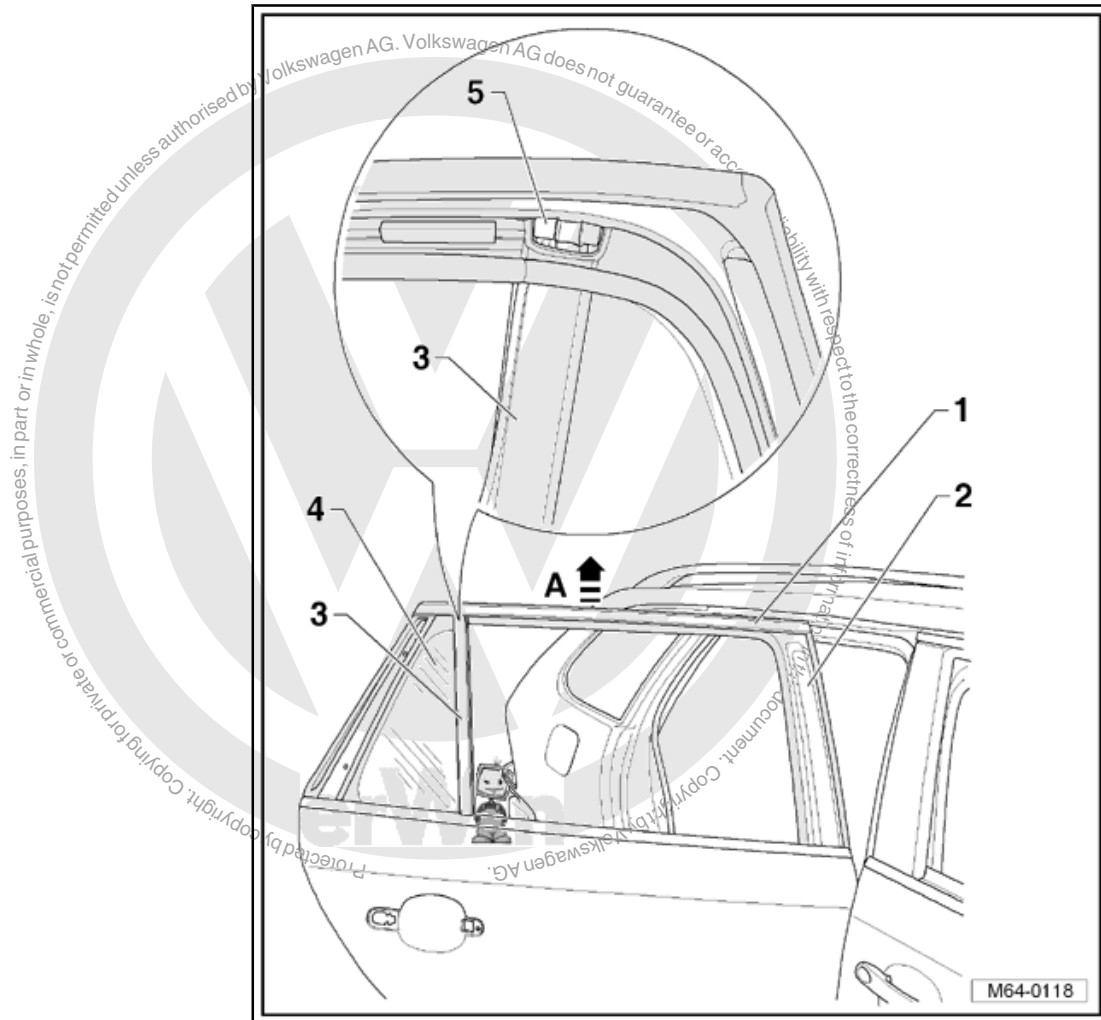
- Push window channel -2- in top front area slightly to side.
- Remove spreader rivet -5- for window channel trim strip -1-.

All vehicles

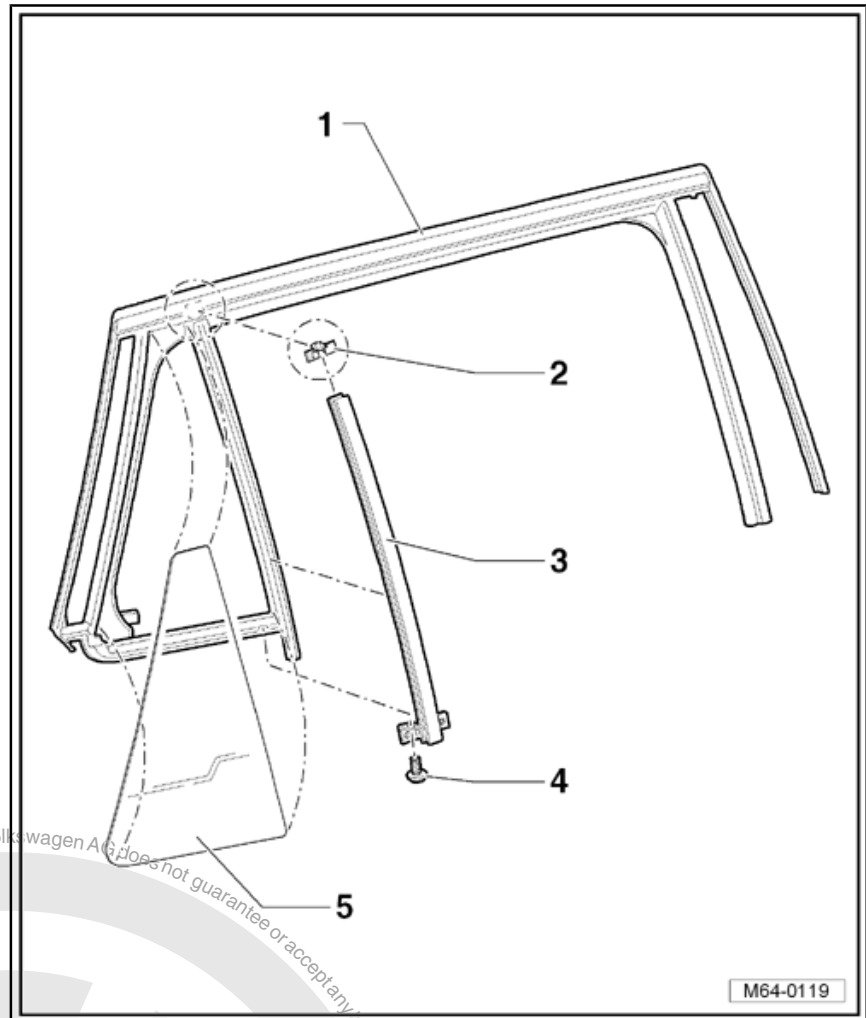
- Release window channel -2- with fixed door window -3- on inside and outside from window frame -4-.



- Carefully prise clip -5- out of window frame -2-.
- Pull complete window channel -1- with fixed door window -4- and middle frame -3- upwards and out of door in direction of -arrow A-.



- Remove bolt -4-.
- Pull middle frame -3- out of clips -2- and window channel -1-.
- Take fixed door window -5- out of window channel -1-.



4.6.2 Installing

Spray window channel with soapy water when installing.
Further installation is performed in reverse order of removal.
Use a new clip when installing middle frame.



Note

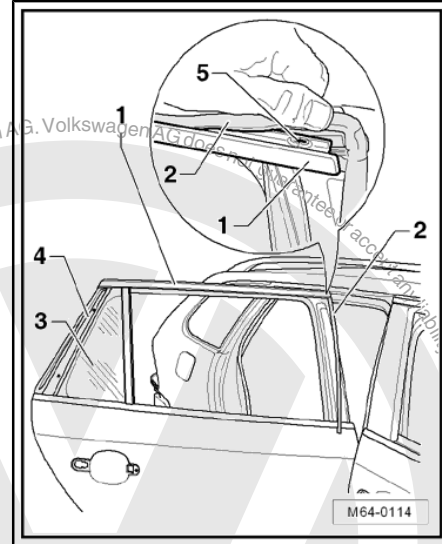
When installing fixed door window with window channel ensure it is seated uniformly (wind noise).



4.7 Removing and installing window channel trim strip

4.7.1 Removing

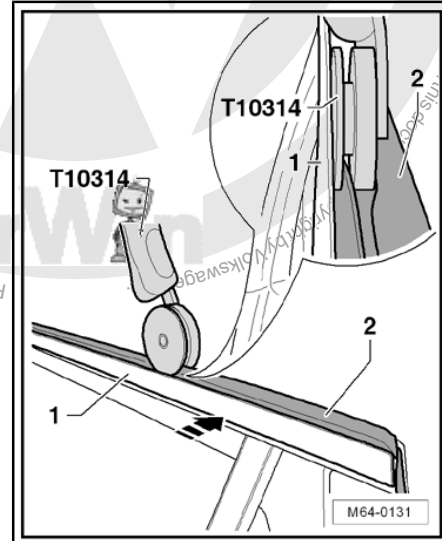
- Push window channel -2- in top front area slightly to side.
- Remove spreader rivet -5- for window channel trim strip -1-.
- Pull trim strip -1- out of window channel -2-.



4.7.2 Installing

- Spray window channel with soapy water.
- Press trim strip -1- evenly -arrow- into window channel -2- by hand.
- Then press window channel -2- fully into mounting of trim strip with roller -T 10314- .

Further installation is performed in reverse order of removal.





4.8 Assembly overview - window regulator motor



Note

The right side is shown. The left side is similar.

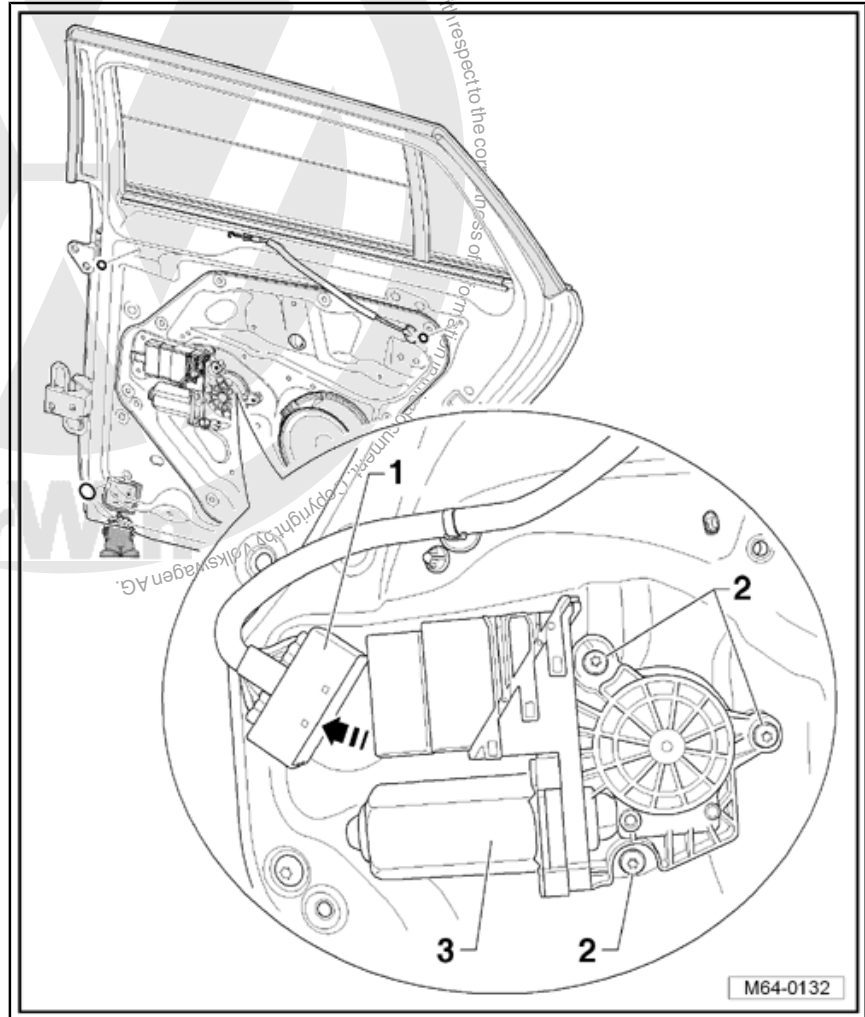
1 - Connector

2 - Bolt

- Qty. 3
- 3.5 Nm

3 - Window regulator motor

- Removing and installing
⇒ [page 317](#)



4.9 Removing and installing window regulator motor

4.9.1 Removing



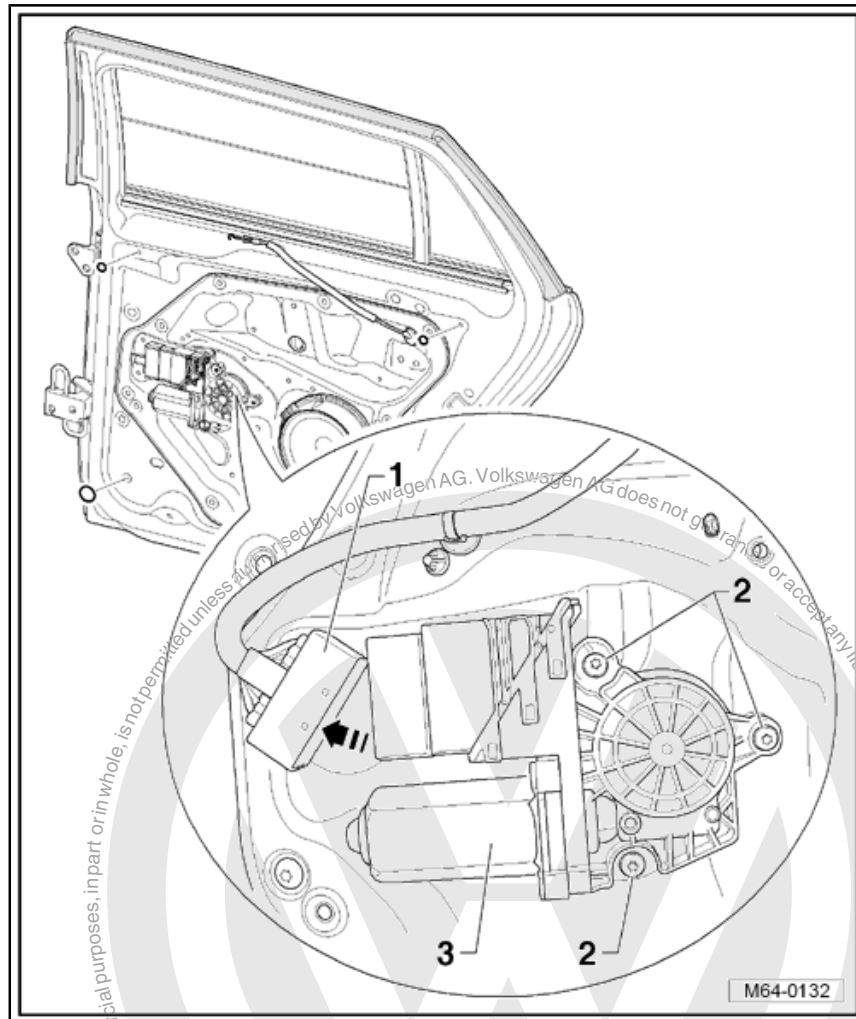
Note

The removal and installation sequence is only for the right window regulator motor. The removal and installation of the left window regulator motor is similar.

- Removing door trim ⇒ General body repairs, interior; Rep. Gr. 70 ; Door trim .



- Secure door window against sliding down with adhesive tape.
- Pull connector -1- in direction of -arrow- off window regulator motor with control unit -3-.
- Remove the three bolts -2-.
- Remove window regulator motor with control unit -3- from assembly carrier.

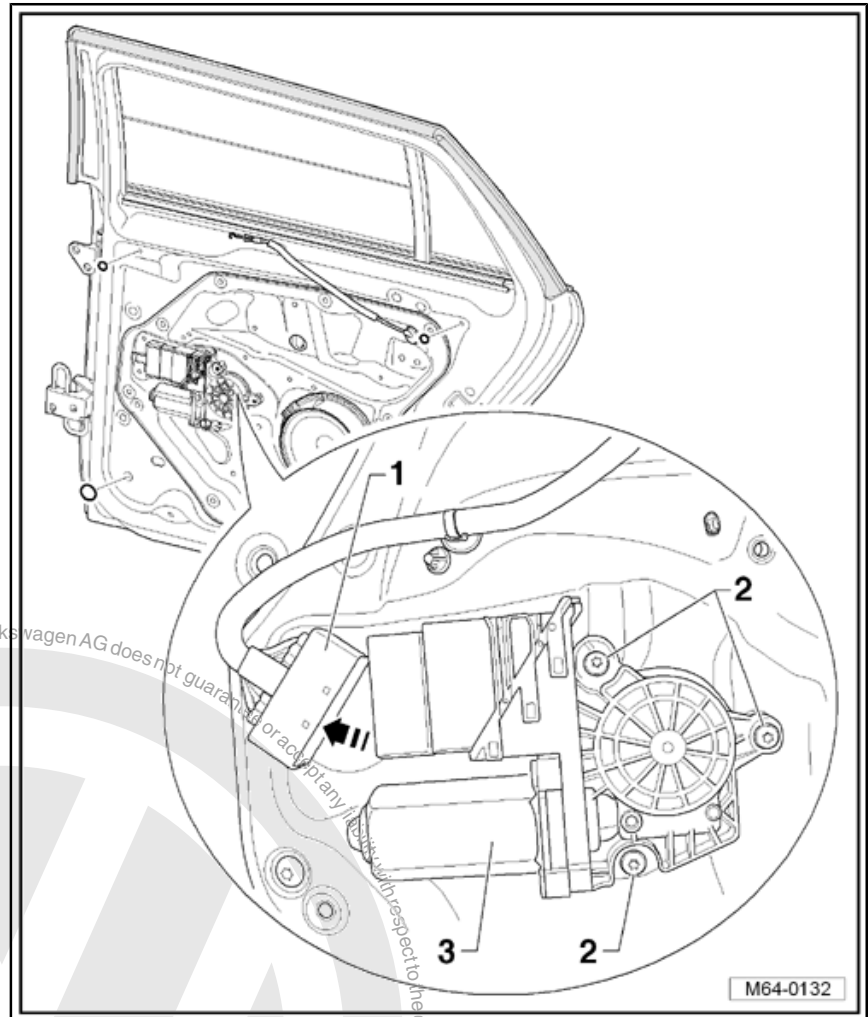


4.9.2 Installing

- Install window regulator motor with control unit -3-.
- Move door window lightly up and down so that the splines between motor and cable drum engage easier.
- Tighten bolts -2- for window regulator motor (3.5 Nm).
- Reconnect connector -1- to window regulator motor with control unit -3- (in opposite direction of -arrow-).
- Run window regulator twice in each direction to upper and lower stops. This initiates and readies the window regulator motor and activates the roll-back function.



Further installation is performed in reverse order of removal.



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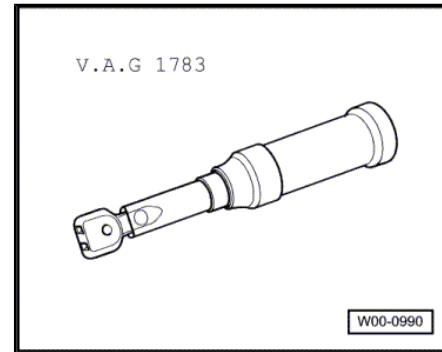
66 – Exterior equipment

1 Wheel housing liner

1.1 Tools

Special tools and workshop equipment required

- ◆ Torque wrench -V.A.G 1783-





1.2 Assembly overview - front wheel housing liner



Note

- ◆ Only the left side is shown. The right side is similar.
- ◆ The removal and installation procedures may have to be modified slightly depending on variations in equipment.
- ◆ The wheel housing liner consists of a front and a rear part.

1 - Wheel housing liner rear part

- Material: PP/EPDM

2 - Bolt

- Qty. 7
- 2 Nm

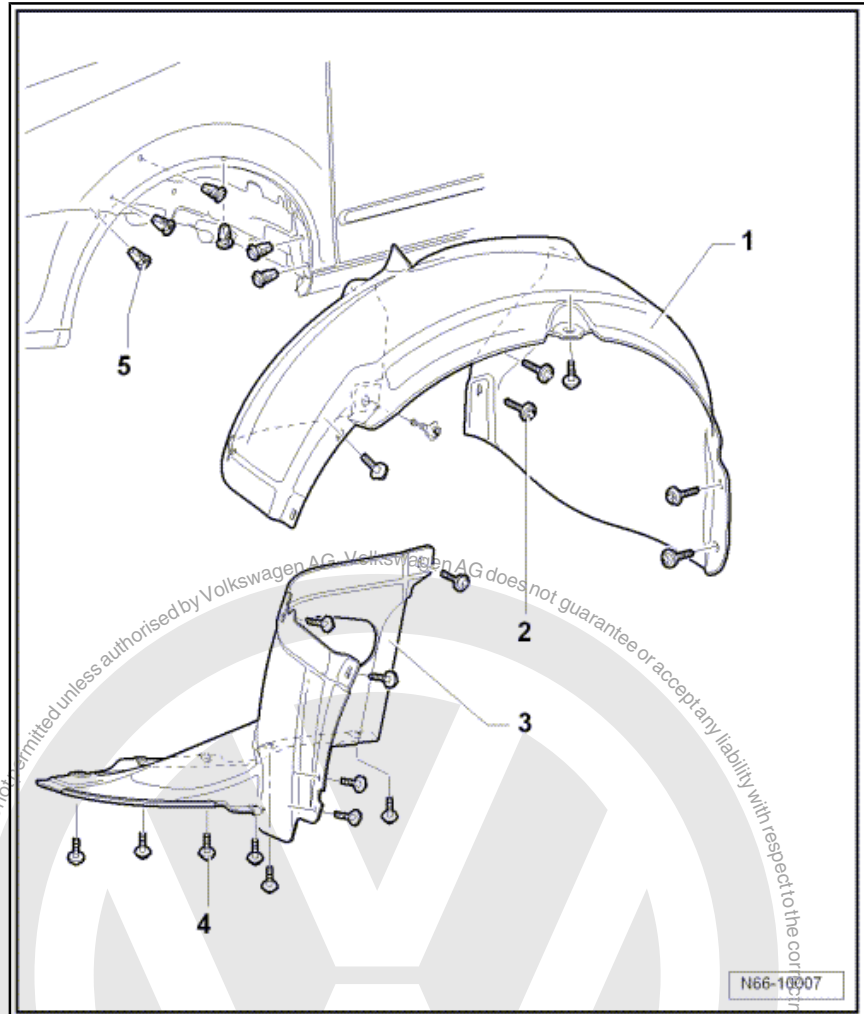
3 - Wheel housing liner front part

- Material: PP/EPDM

4 - Bolt

- Qty. 11
- 2 Nm

5 - Expanding nut



1.3 Removing and installing front wheel housing liner



Note

The removal and installation sequence is only for the left wheel housing liner. Removal and installation of the right wheel housing liner are similar.



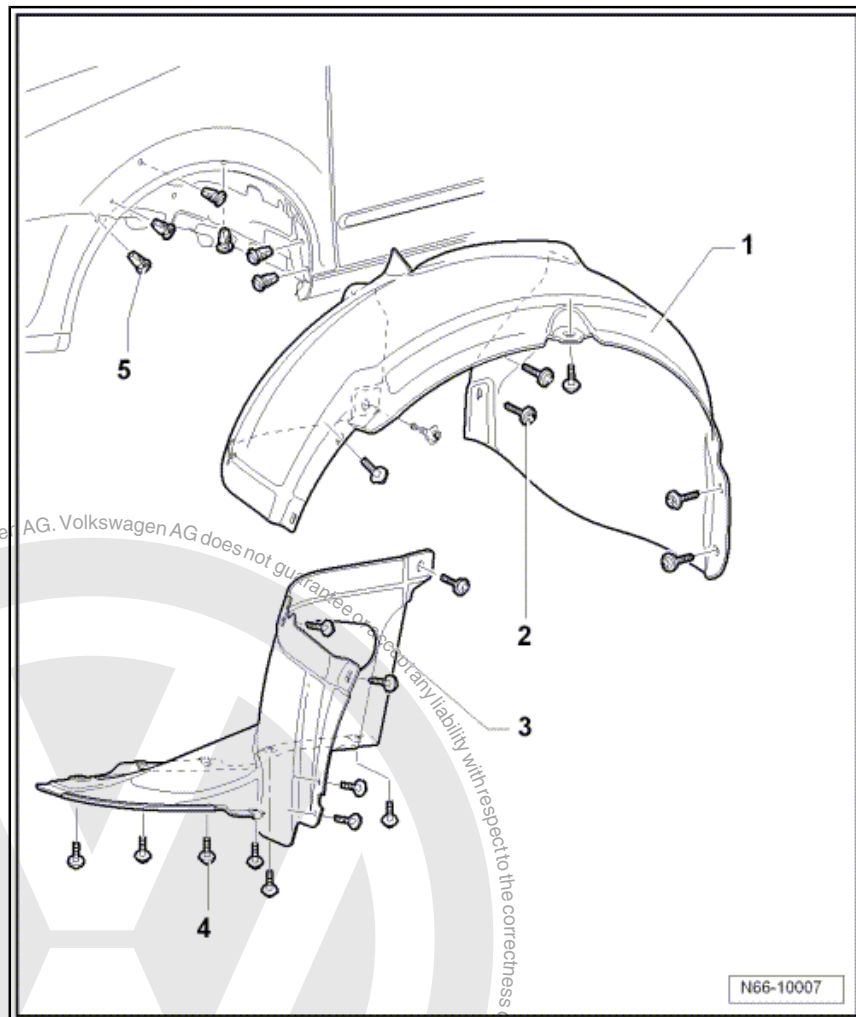
1.3.1 Removing

Wheel housing liner rear part

- Remove wheel ⇒ Running gear, axles, steering; Rep. Gr. 44 ; Specified torques for wheel bolts .
- Remove bolts -4- (Qty. 3) at transition of front and rear parts of wheel housing liner
- Remove bolts -2- (Qty 7).
- Pull off rear part of wheel housing liner -1-.

Wheel housing liner front part

- Remove bolts -4- (Qty 11).
- Pull off front part of wheel housing liner -3-.



1.3.2 Installing

Install in reverse order of removal.





1.4 Assembly overview - rear wheel housing liner



Note

Only the left side is shown. The right side is similar.

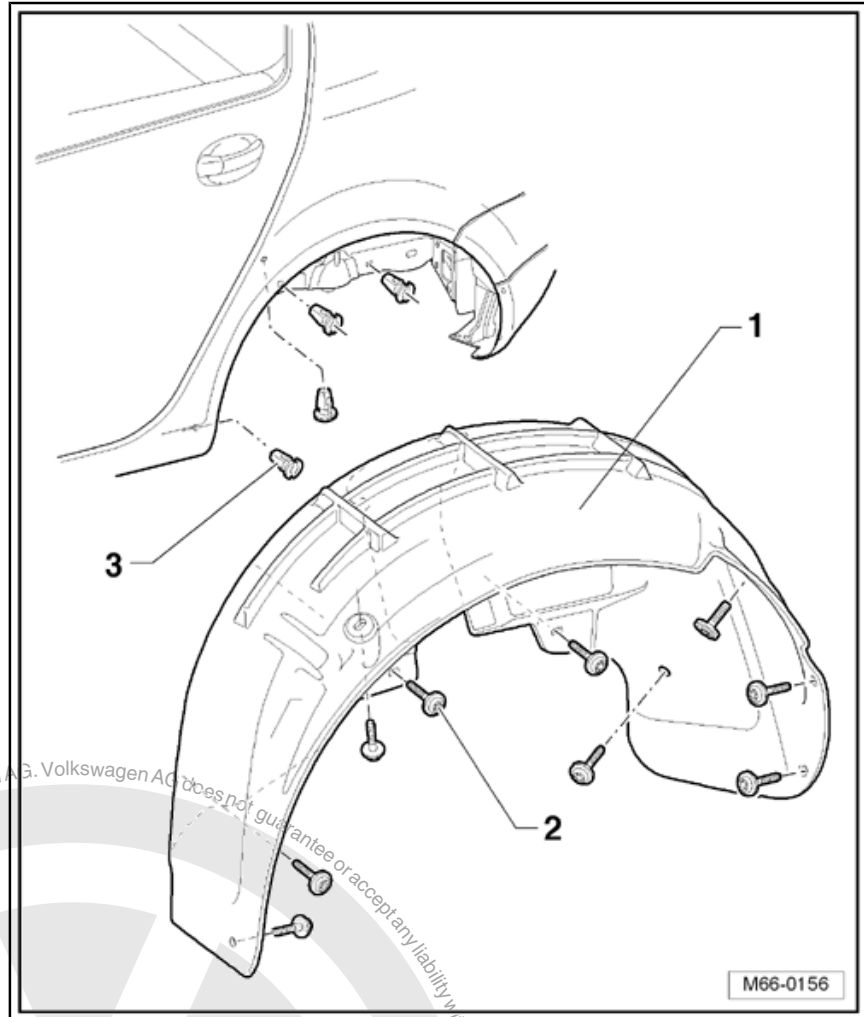
1 - Wheel housing liner

- Material: PP/EPDM

2 - Bolt

- Qty. 9
- 2 Nm

3 - Expanding nut



1.5 Removing and installing rear wheel housing liner



Note

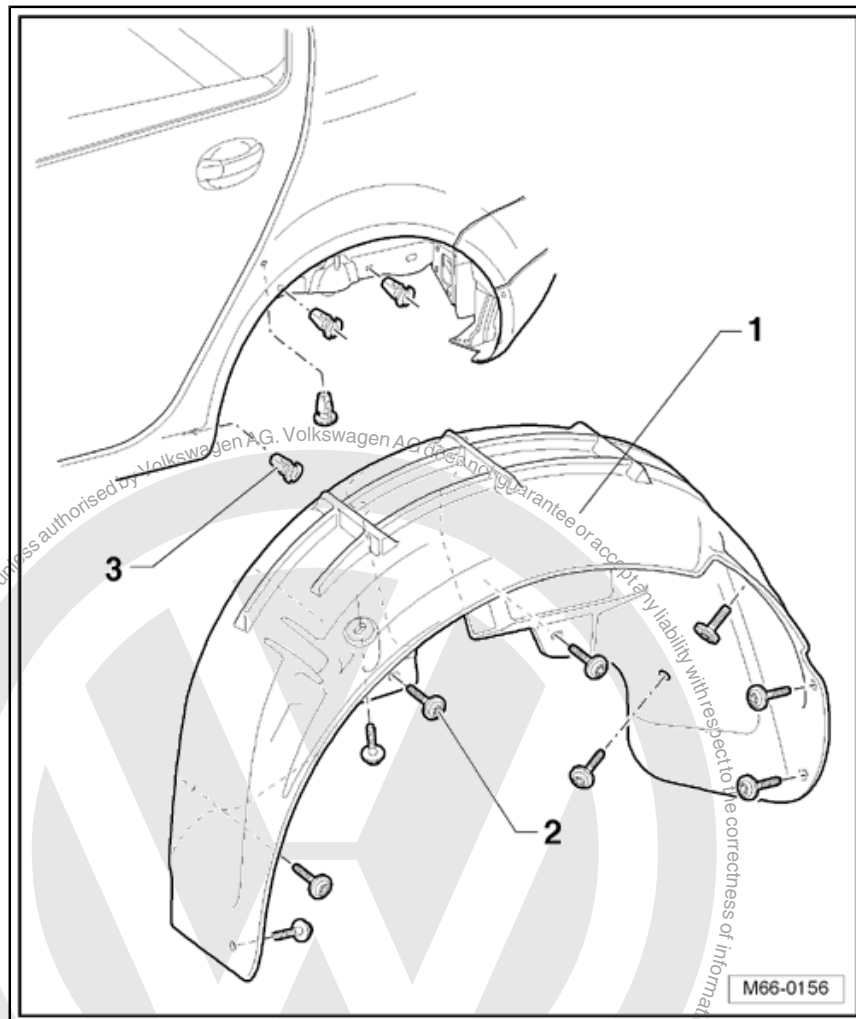
The removal and installation sequence is only for the left wheel housing liner. Removal and installation of the right wheel housing liner are similar.

1.5.1 Removing

- Remove wheel ⇒ Running gear, axles, steering; Rep. Gr. 44 ; Specified torques for wheel bolts .



- Remove bolts -2- (Qty 9).
- Pull off wheel housing liner -1-.



1.5.2 Installing

Install in reverse order of removal.

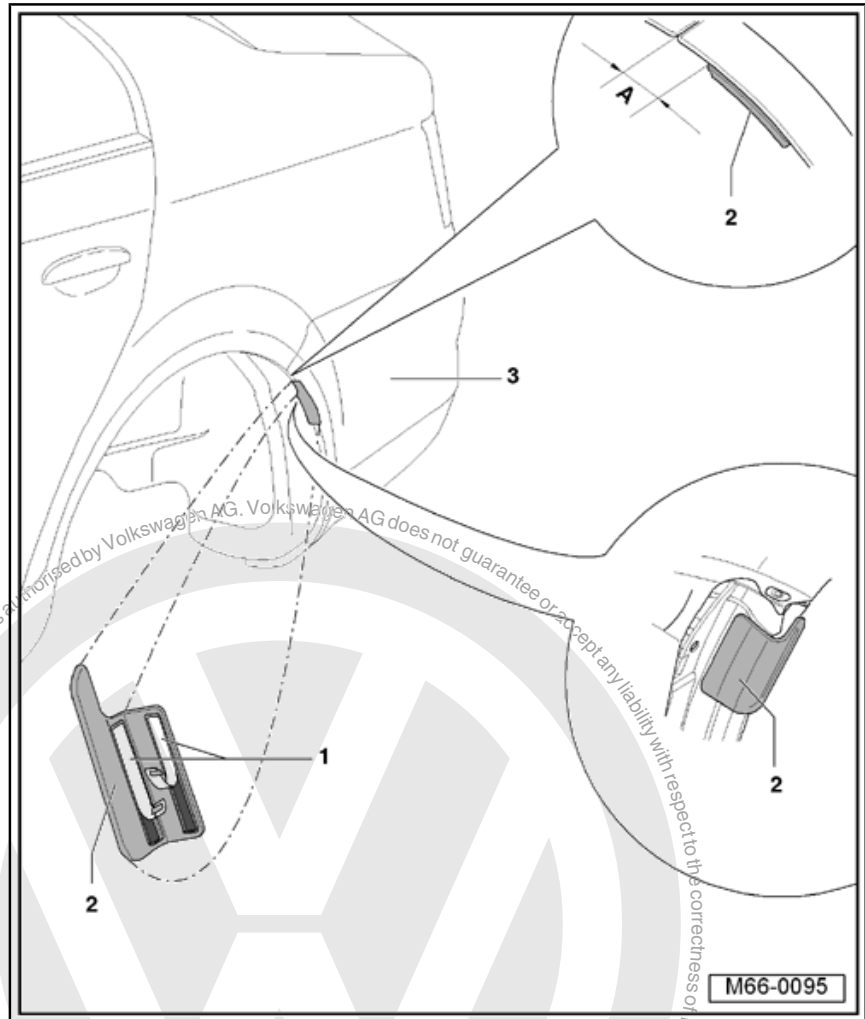
1.6 Installing protective cover for wheel housing

1.6.1 Installing

- Clean contact surfaces of bumper cover and wheel housing liner so that they are free of dust and grease. We recommend isopropyl alcohol.
- Remove protective backing -1- from protective cover -2-.



- Stick protective cover -2- on approx. 28.7 mm from -A-, where the highest point of the protective cover -2- and the upper edge of the bumper cover -3- are used as reference points.



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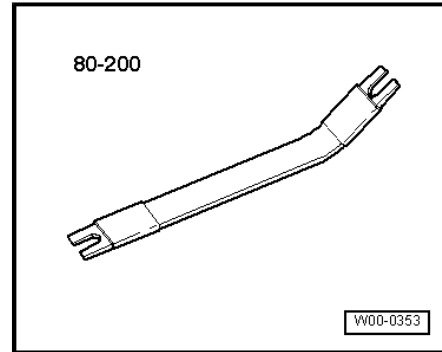


2 Exterior mirror

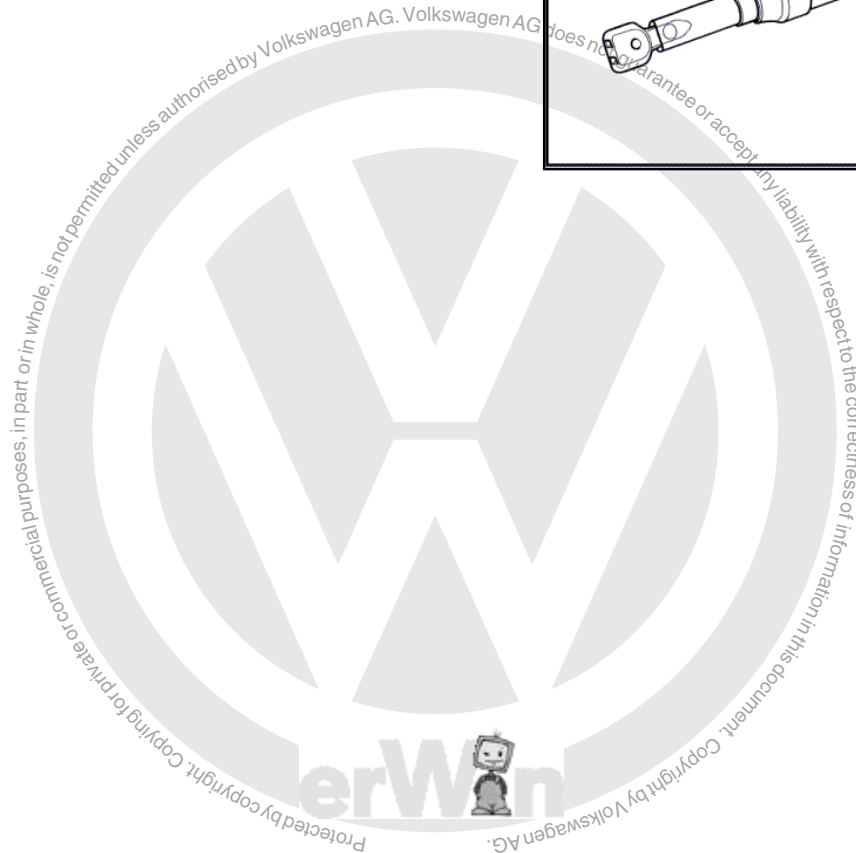
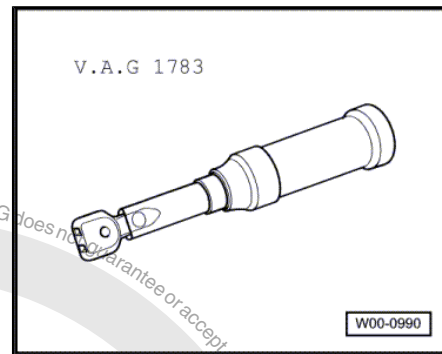
2.1 Tools

Special tools and workshop equipment required

- ◆ Removal lever -80-200-



- ◆ Torque wrench -V.A.G 1783-





2.2 Assembly overview - exterior mirror



Note

Only the left side is shown. The right side is similar.

1 - Mirror housing

- Material: ABS.
- Removing and installing
 ⇒ [page 328](#)

2 - Mirror mounting

- Removing and installing
 ⇒ [page 331](#)

3 - Bolt

- Qty. 3
- 8 Nm

4 - Bolt

- Qty. 2
- 1 Nm

5 - Assembly part

- Removing and installing
 ⇒ [page 330](#)

6 - Bolt

- Qty. 2
- 1 Nm

7 - Side turn signal repeater

- Removing and installing
 ⇒ [page 330](#)

8 - Trim

- Removing and installing
 ⇒ [page 329](#)

9 - Bolt

- Qty. 1
- 1 Nm

10 - Ambient light

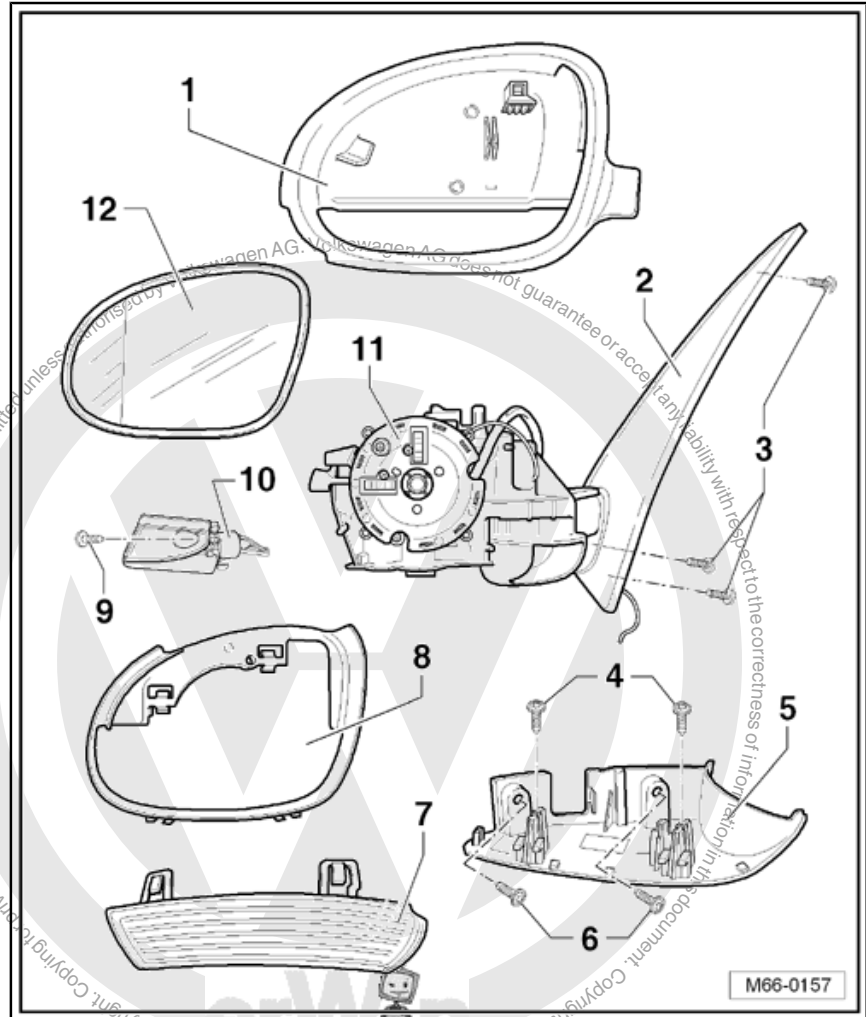
- Removing and installing ⇒ [page 330](#)

11 - Adjuster unit with motor for exterior mirror

- Removing and installing ⇒ [page 331](#)

12 - Mirror glass

- Removing and installing ⇒ [page 328](#)





2.3 Removing and installing mirror glass



Note

The removal and installation sequence is only for the left mirror glass. The removal and installation of the right mirror glass is similar.

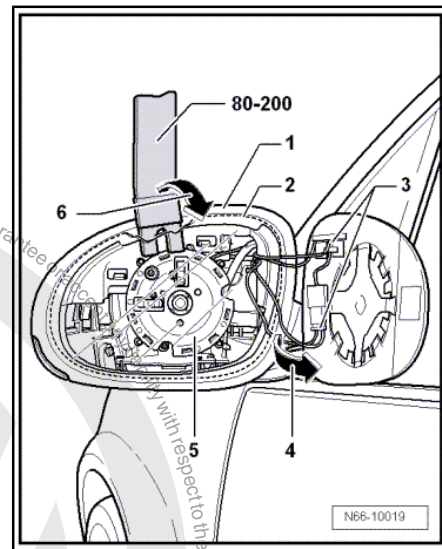
2.3.1 Removing



WARNING

When doing this repair work, always wear safety goggles and leather gloves!

- Protect edge of housing -1- against damage to paintwork with e.g. fabric-reinforced adhesive tape.
- Press bottom of mirror glass -2- into mirror housing -1-.
- Using removal lever -80-200-, lever -arrow 6- mirror glass -2- off adjuster unit with motor -5-.
- Swivel mirror glass -2- to side -arrow 4- and detach connectors -3- for electric dip and mirror heating on rear of mirror glass -2-.



2.3.2 Installing

- Push connectors onto mirror glass.
- Press mirror glass centrally onto adjuster unit with motor in housing.
- Mirror glass engages audibly.

Finally carry out a functional check.

2.4 Removing and installing mirror housing



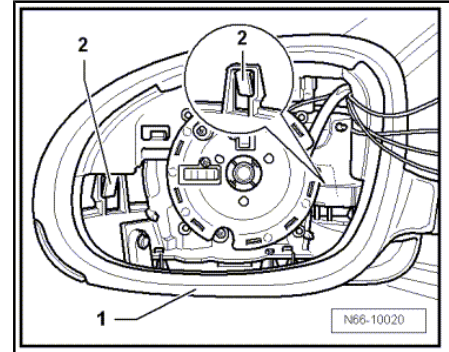
Note

The removal and installation sequence is only for the left mirror housing. The removal and installation of the right mirror housing is similar.



2.4.1 Removing

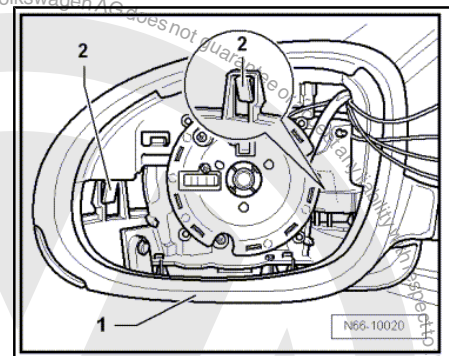
- Remove mirror glass ⇒ [page 328](#) .
- For ease of assembly, fold exterior mirror forwards.
- Using a screwdriver underneath the locking hooks -2- press mirror housing out of fastening.
- Pull mirror housing slightly forward off mirror base carrier at front.
- Then pull mirror housing -1- upwards off mirror base carrier.



2.4.2 Installing

- Place mirror housing -1- on mirror base carrier and press mirror housing down until the locking hooks -2- engage audibly.
- Install mirror glass again ⇒ [page 328](#) .

Finally carry out a functional check.



2.5 Removing and installing trim

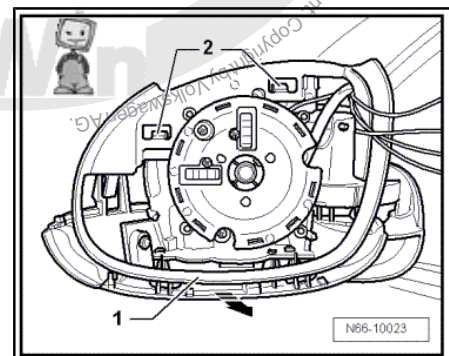


Note

The removal and installation sequence is only for the left trim plate. The removal and installation of the right trim plate is similar.

2.5.1 Removing

- Remove mirror glass ⇒ [page 328](#) .
- Remove mirror housing ⇒ [page 328](#) .
- Using a screwdriver lever locking hooks -2- out of mirror base carrier.
- Pull trim plate -1- off in -direction of arrow-.



2.5.2 Installing

Install in reverse order of removal.

Finally carry out a functional check.



2.6 Removing and installing side turn signal repeaters

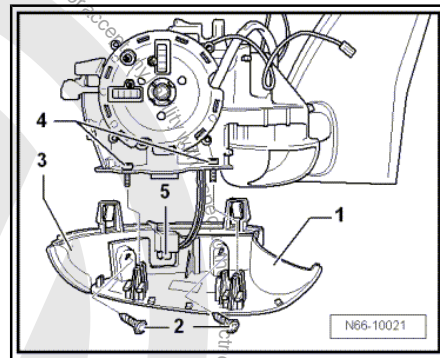


Note

- ◆ The removal and installation sequence is only for the left side mounted turn signal. The removal and installation of the right side turn signal repeater is similar.
- ◆ The side turn signal repeaters are fitted with long-life light-emitting diodes (LEDs) instead of conventional bulbs.
- ◆ Therefore, changing bulbs is not necessary. In case of damage, the entire turn signal must be renewed.

2.6.1 Removing

- Remove mirror glass ⇒ [page 328](#) .
- Remove mirror housing ⇒ [page 328](#) .
- Remove trim ⇒ [page 329](#) .
- Remove bolts -4- and remove assembly part -1- downwards.
- Detach connector -5- from turn signal -3-.
- Remove bolts -2- and take turn signal -3- off assembly part -1-.



2.6.2 Installing

Install in reverse order of removal.
Finally carry out a functional check.

2.7 Removing and installing entry light



Note

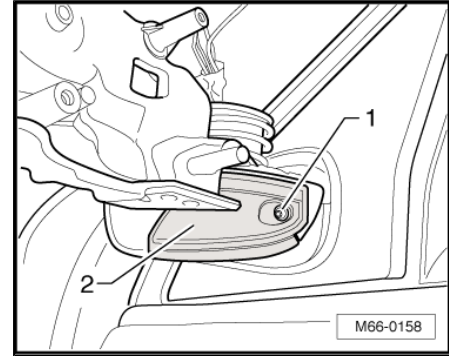
The removal and installation sequence is only for the left entry light. The removal and installation of the right entry light is similar.

2.7.1 Removing

- Remove mirror glass ⇒ [page 328](#) .
- Remove mirror housing ⇒ [page 328](#) .
- Remove trim ⇒ [page 329](#) .



- Remove assembly part with turn signal repeater ⇒ [page 330](#) .
- Remove bolt -1-.
- Swing entry light -2- out downwards and pull bulb out of entry light housing.



2.7.2 Installing

Install in reverse order of removal.

Specified torque for entry light bolt: 1 Nm

Finally carry out a functional check.

2.8 Removing and installing adjustment unit with motor for exterior mirror

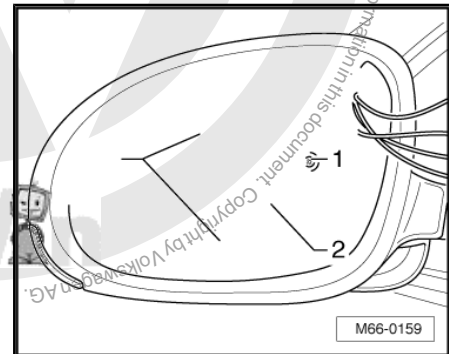


Note

The removal and installation sequence is only for the left adjustment unit with motor. The removal and installation of the left adjustment unit with motor is similar.

2.8.1 Removing

- Remove mirror glass ⇒ [page 328](#) .
- Remove bolts -1-.
- Remove adjustment unit with motor -2- and disconnect connector.



2.8.2 Installing

Install in reverse order of removal.

Specified torque for adjustment unit with motor: 1 Nm

Finally carry out a functional check.

2.9 Removing and installing exterior mirror



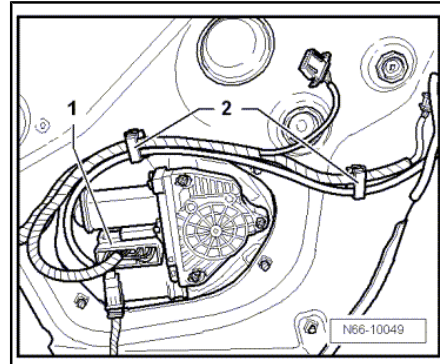
Note

The removal and installation sequence is only for the left exterior mirror. The removal and installation of the rear view mirror is similar.

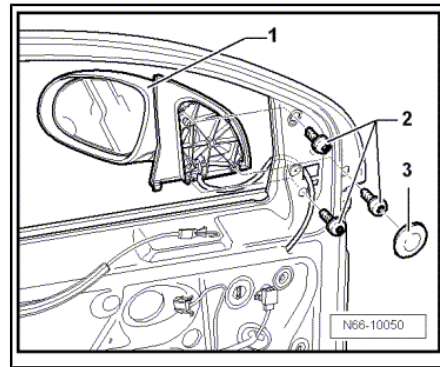


2.9.1 Removing

- Removing front door trim on driver's side ⇒ General body repairs, interior; Rep. Gr. 70 ; Door trim .
- Release cable retainer -2- and detach connector -1- for exterior mirror.



- Lever cap -3- out of door and remove bolts -2-.
- Remove exterior mirror -1- and guide wire through aperture in door.

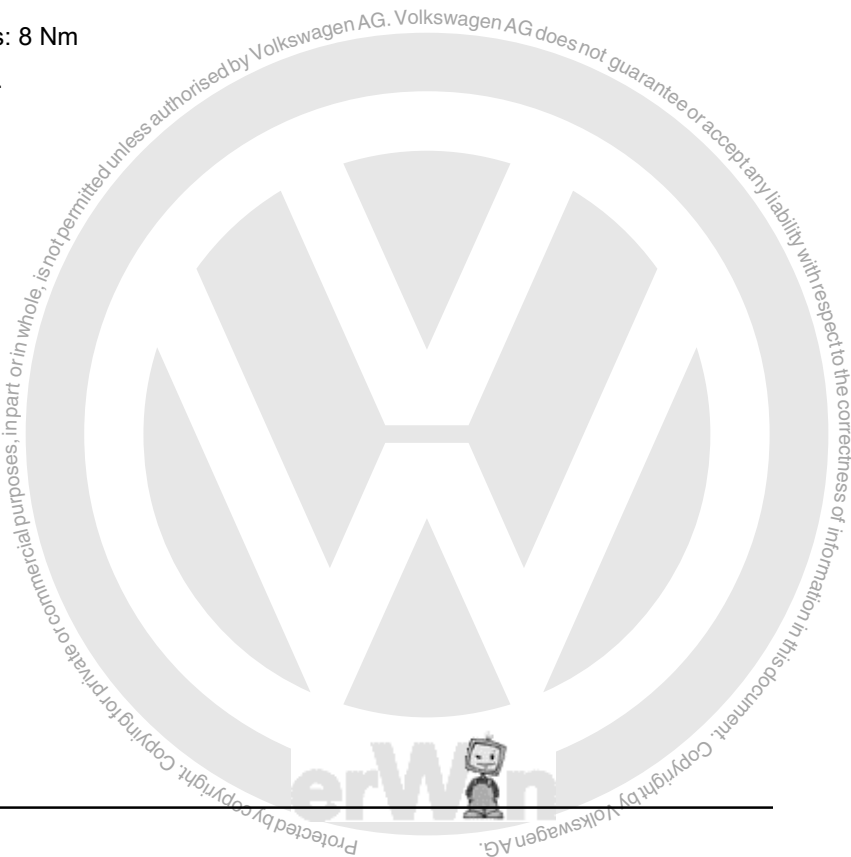


2.9.2 Installing

Install in reverse order of removal.

Specified torque for exterior mirror bolts: 8 Nm

Test function before installing door trim.



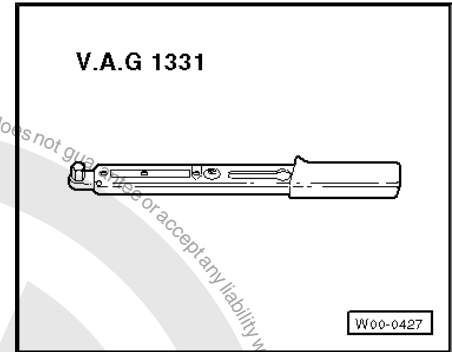


3 Roof railing

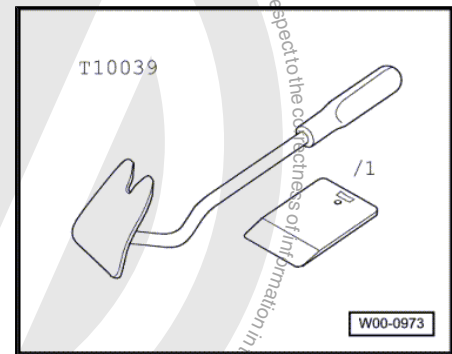
3.1 Tools

Special tools and workshop equipment required

- ◆ Torque wrench -V.A.G 1331-



- ◆ Plastic wedge -T10039/1-





3.2 Assembly overview - roof railing

1 - Roof railing

- Removing and installing
⇒ [page 334](#)

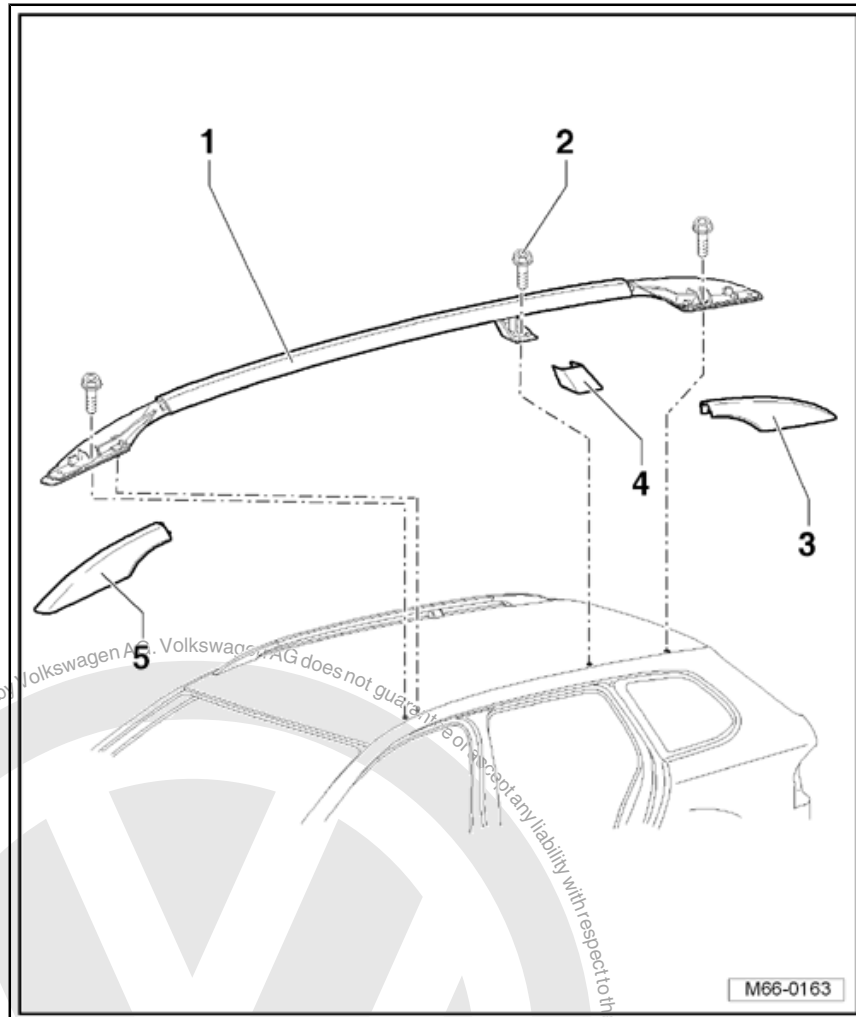
2 - Bolt

- Qty. 3 on each side
- 20 Nm

3 - Roof railing rear cover

4 - Roof railing middle cover

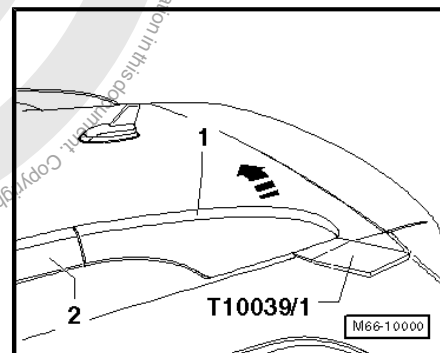
5 - Roof railing front cover



3.3 Removing and installing roof railing

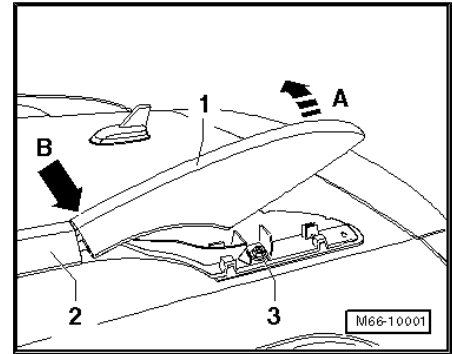
3.3.1 Removing

- Using wedge -T10039/1-, lever out front and rear roof railing covers -1- in direction of -arrow-.

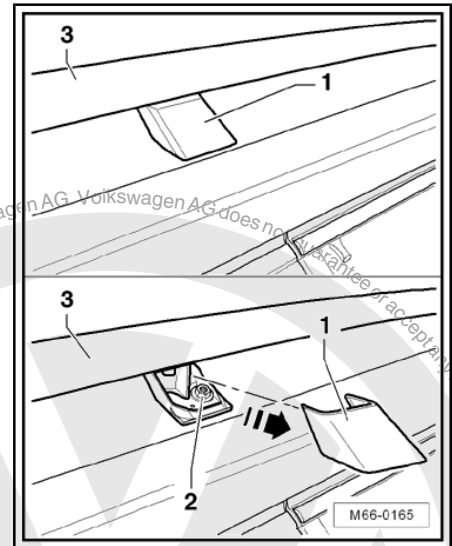




- Lever front and rear covers of roof railing -1- in direction of -arrow A- and press them in direction of -arrow B-.
- Pull out cover for roof railing -1-.
- Remove bolt -3- from front and rear roof railing mounting -2- (20 Nm).



- Pull middle cover -1- off roof railing -3- in direction of -arrow-.
- Remove bolt -2- from middle roof railing mounting -3- (20 Nm).



3.3.2 Installing

Install in reverse order of removal.

Check roof railing covers for damage and replace as necessary.

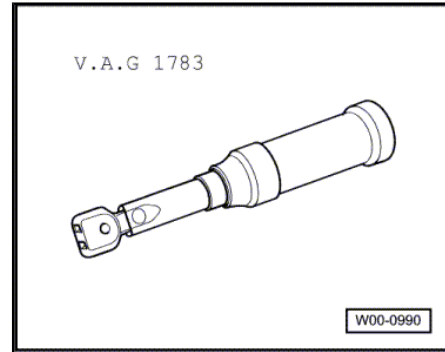


4 Radiator grille

4.1 Tools

Special tools and workshop equipment required

- ◆ Torque wrench -V.A.G 1783-





4.2 Radiator grille

4.2.1 Assembly overview - radiator grille

1 - Radiator grille

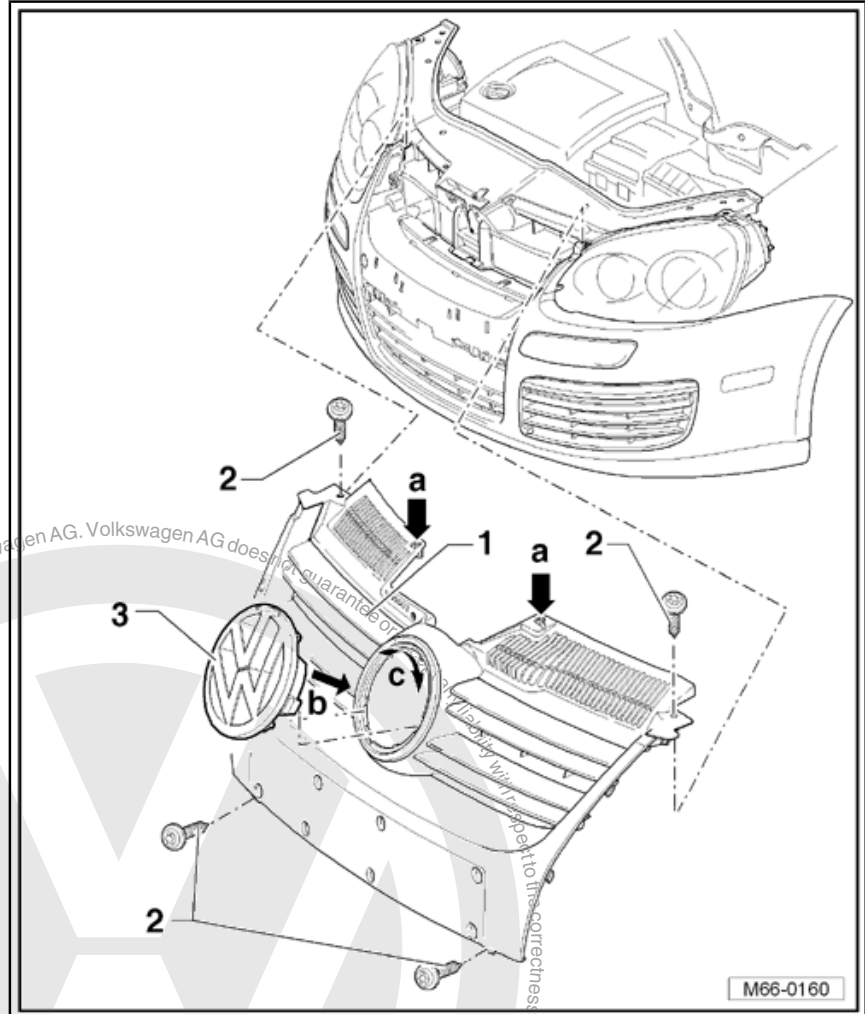
- Removing ⇒ [page 337](#)
- Installing ⇒ [page 338](#)

2 - Bolt

- Qty. 4
- Specified torque: 2 Nm

3 - VW emblem

- Clipped into radiator grille
- Removing: release locking hooks on rear of company emblem and remove by turning it in opposite direction to -arrow c-.
- Installing: guide VW emblem with locking hooks into recesses in radiator grille -arrow b-, then turn slightly in direction of -arrow c- until VW emblem engages in radiator grille

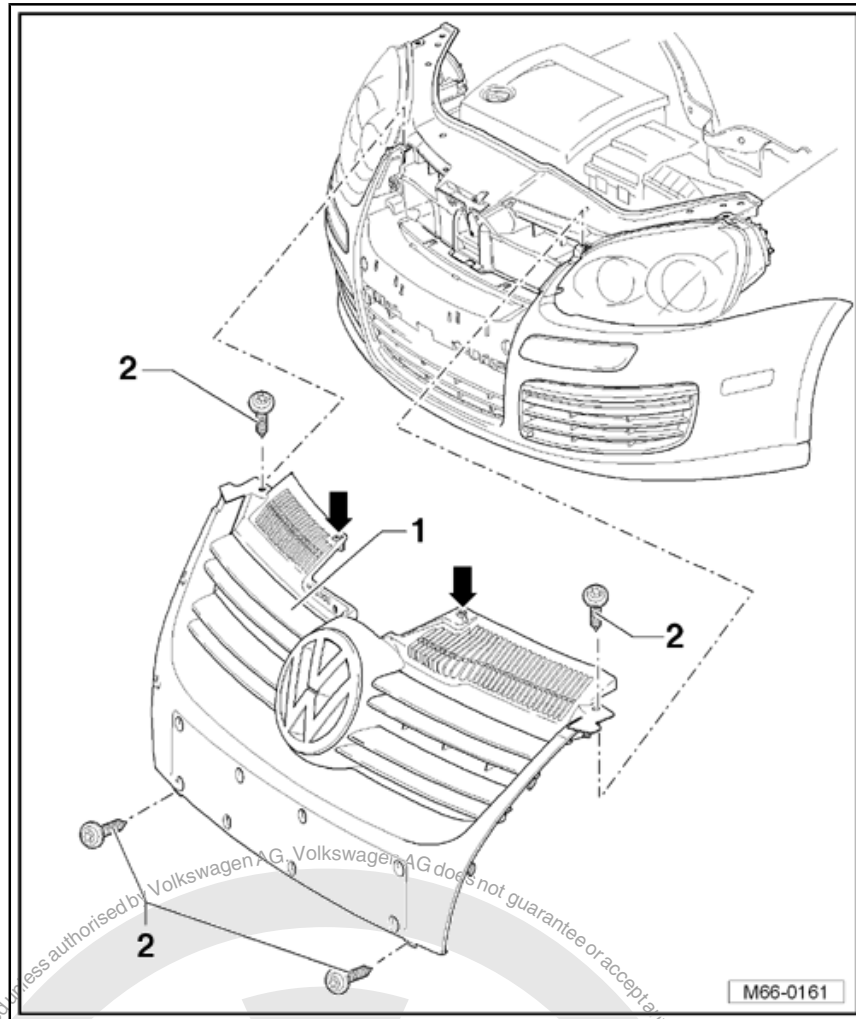


4.2.2 Removing

- Remove bolts -2-.
- Release clips -arrows- from lock carrier using a small screwdriver.



- Tilt radiator grille -1- forwards slightly and pull it upwards out of bumper cover.

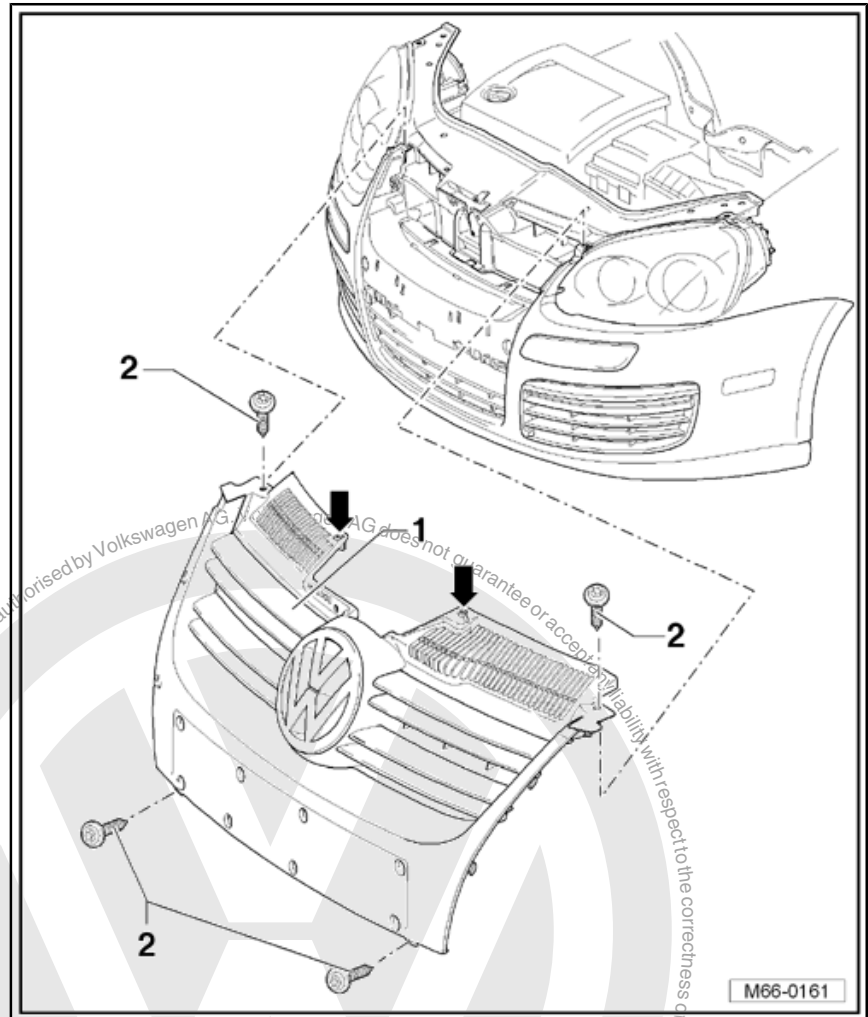


4.2.3 Installing

- Insert radiator grille -1- into bumper cover mounting from above and tilted forwards slightly.
- Tilt radiator grille -1- towards lock carrier and locate clips -arrows- in lock carrier.



- Install bolts -2- (2 Nm).



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4.3 Radiator grille, Cup Edition

4.3.1 Assembly overview - radiator grille

1 - Radiator grille

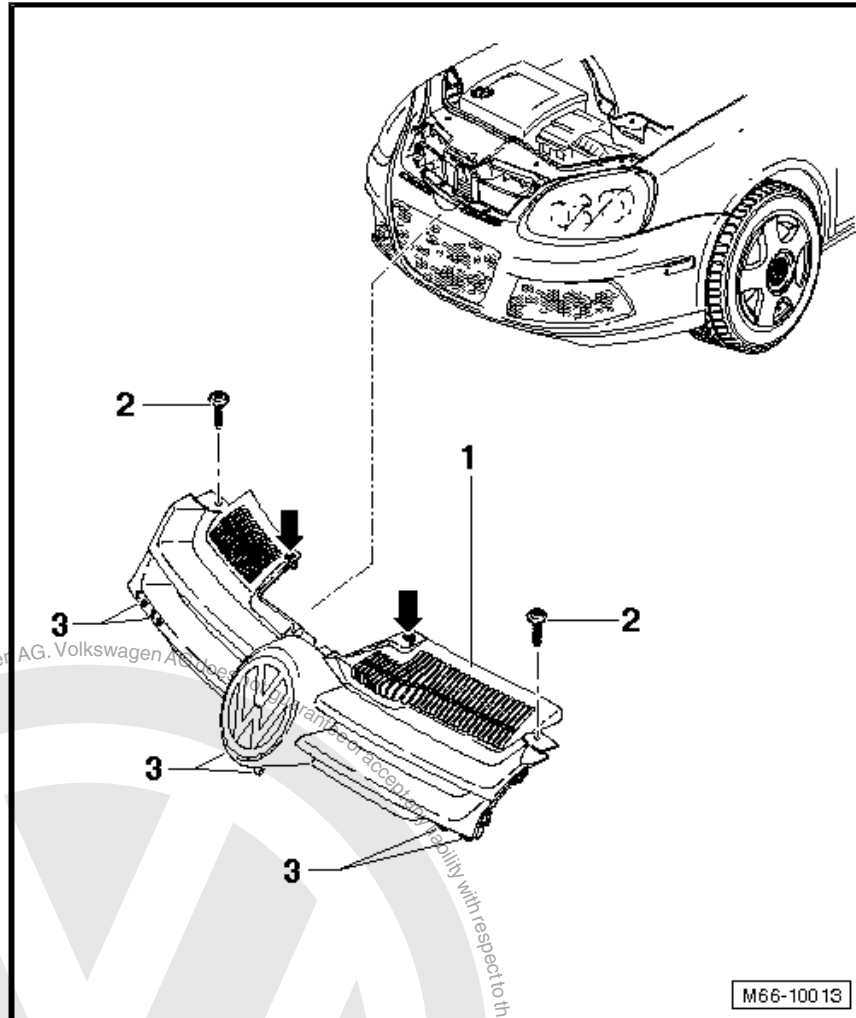
- Removing ⇒ [page 341](#)
- Installing ⇒ [page 342](#)

2 - Bolt

- Qty. 2.
- Specified torque: 2 Nm

3 - Locking lug

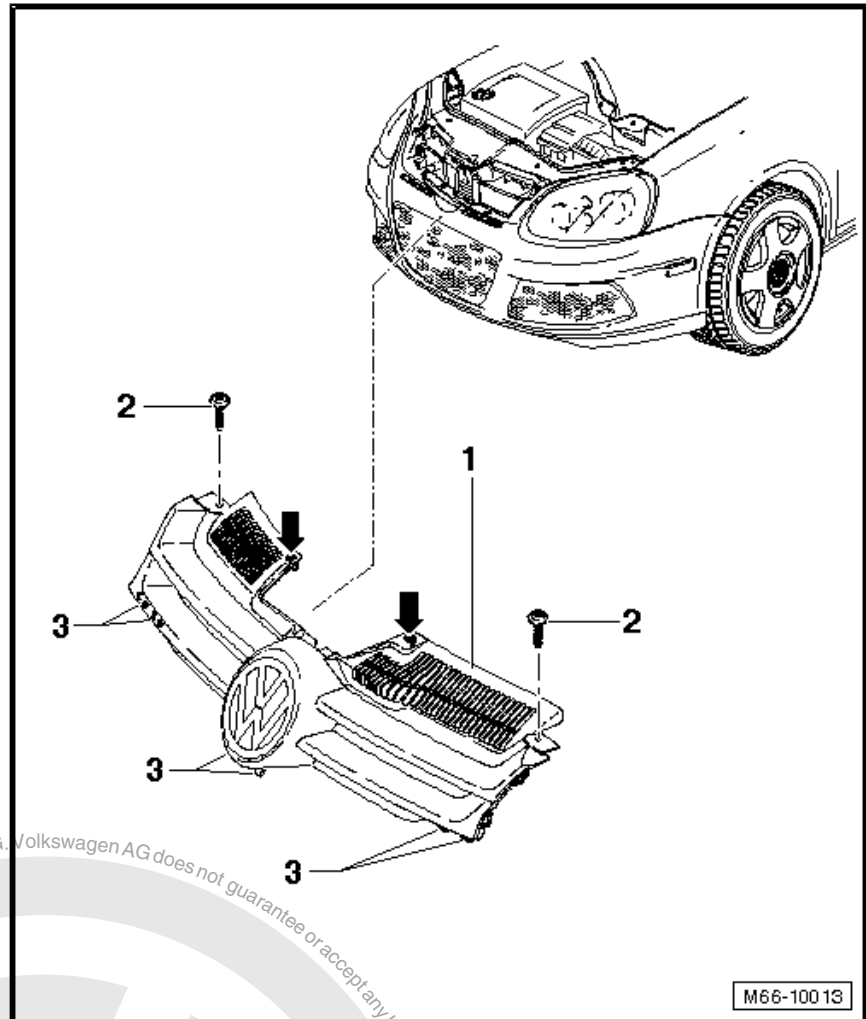
- Qty. 6.



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4.3.2 Removing

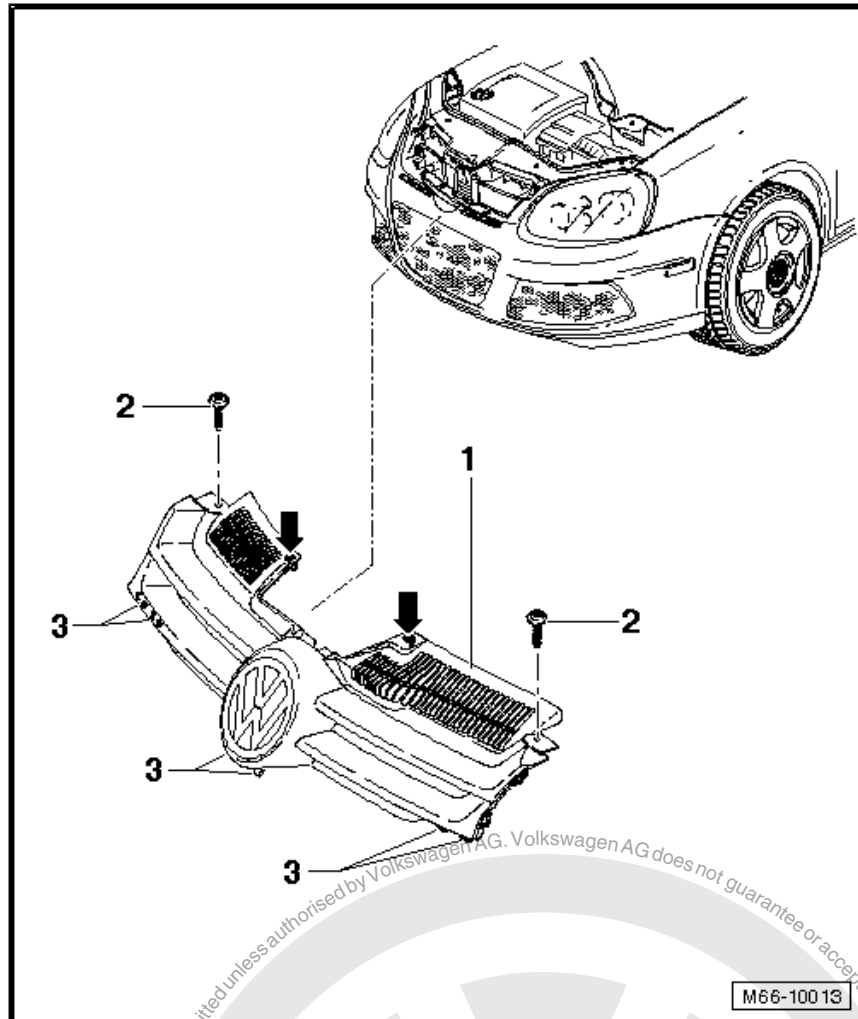


Remove bolts -2-.

- Release clips -arrows- from lock carrier using a small screwdriver.
- Tilt radiator grille -1- backwards slightly and pull locking hooks -3- upwards out of front bumper cover.



4.3.3 Installing



- With radiator grille -1- tilted forward slightly place locking hooks -3- in front bumper cover.
- Tilt radiator grille -1- towards lock carrier and locate clips -arrows- in lock carrier.
- Install bolts -2-.



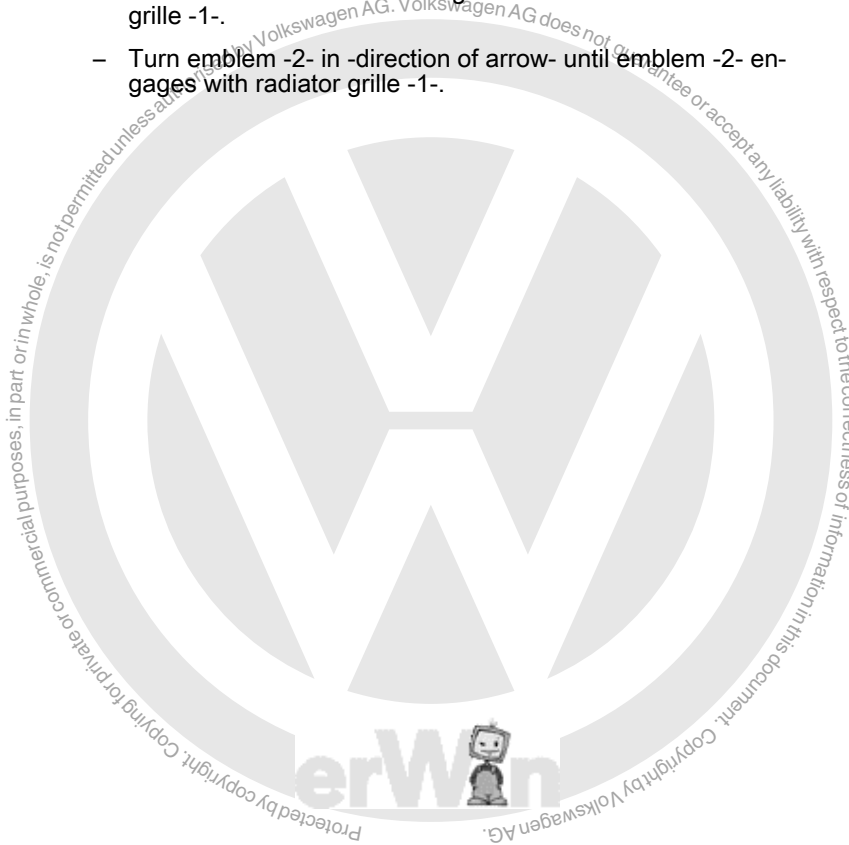
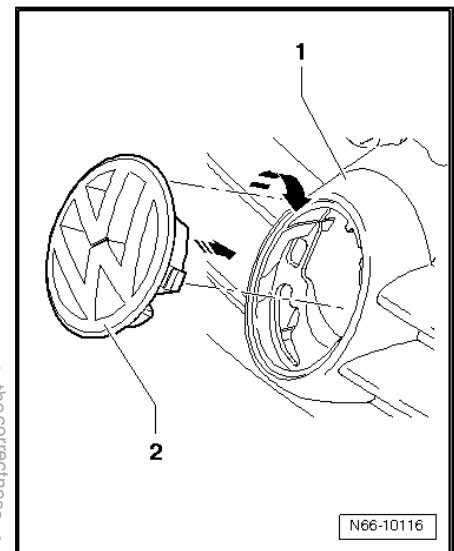
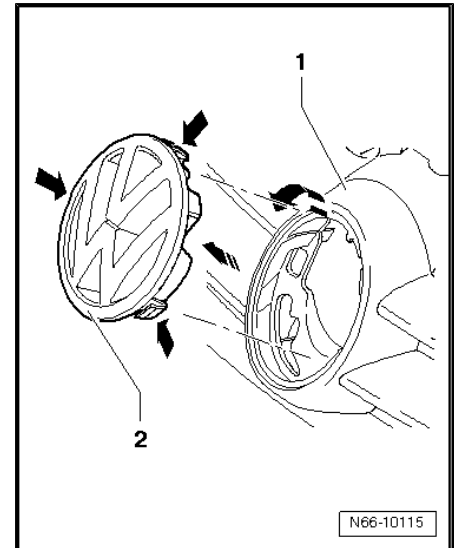
4.3.4 Removing and installing emblem

Removing

- Release locking hooks -arrows- on rear of emblem -2- with radiator grille removed -1-.
- Turn emblem -2- in -direction of arrow- slightly and pull emblem forwards out of radiator grille -1-.

Installing

- Guide emblem -2- with locking hooks in recesses of radiator grille -1-.
- Turn emblem -2- in -direction of arrow- until emblem -2- engages with radiator grille -1-.



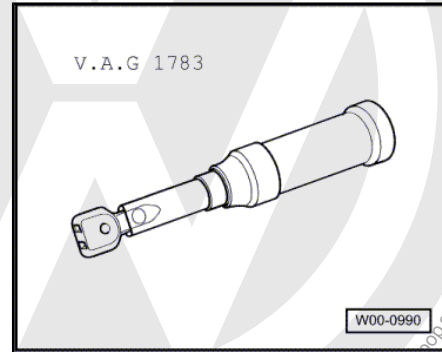


5 Mouldings and trims

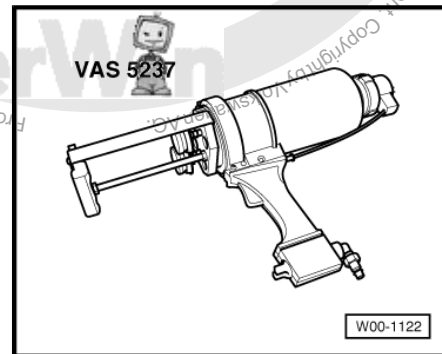
5.1 Tools

Special tools and workshop equipment required

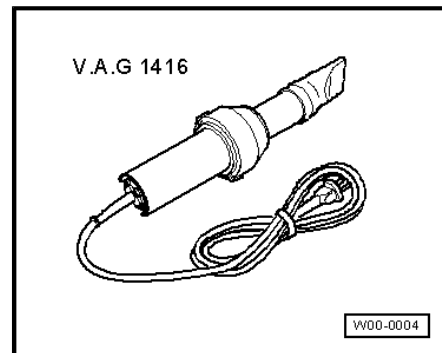
- ◆ Torque wrench -V.A.G 1783-



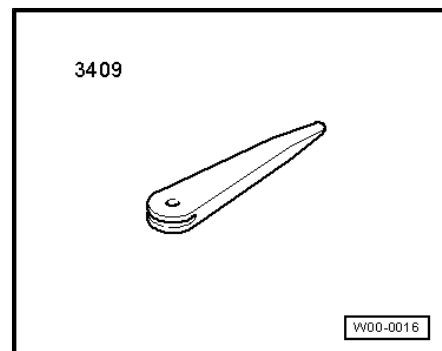
- ◆ Double cartridge gun -VAS 5237-



- ◆ Hot air blower -V.A.G 1416-



- ◆ Removal wedge -3409-



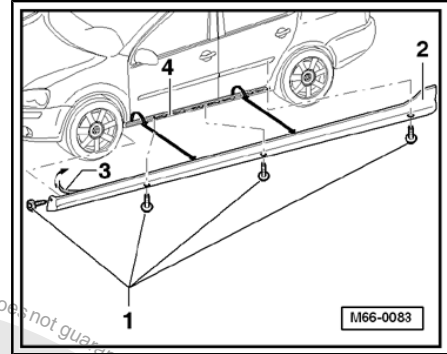


5.2 Removing and installing side panel trim strips on GLI vehicles

5.2.1 Removing

- Remove bolts -1- (Torx T25) from body.
- Remove side panel trim strip -2- in direction of -arrow-.

As necessary

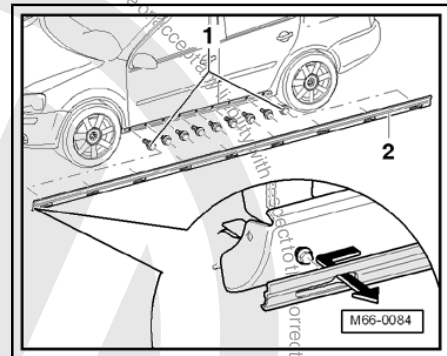


- Slide retainer -2- forwards and release it as described -arrow-.
- Remove damaged bolts -1-.



Note

The part number for bolts -1- deviates from the production number. Refer to parts department.



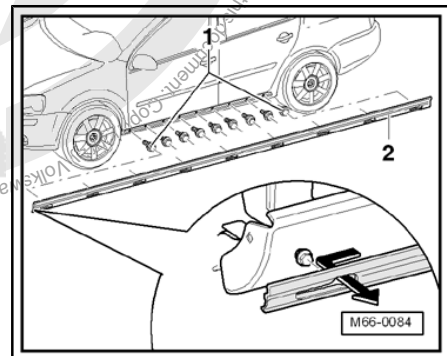
5.2.2 Installing

- Clean side panel and retainer to remove adhesive remains, we recommend isopropyl alcohol.

As necessary

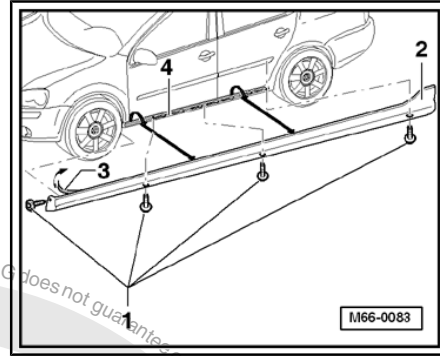
- Install bolts -1-. Specified torque: 1.2 ± 0.1 Nm
- Install retainer -2-, by checking that all bolts fit in their respective holes then slide retainer forwards.

Continuation for all cases





- Starting at rear of retainer, position side panel trim strip -2- over retainer -4-.
- Secure front of side panel trim strip -2- using a bolt -1-. Specified torque: 2 ± 0.5 Nm.
- Remove protective backing -3- from double-sided tape of side panel trim strip -2- using a wedge.
- Secure side panel trim strip -2- by pressing it onto body.
- Install remaining bolts -1- (Qty. 3). Specified torque: 2 ± 0.5 Nm.



5.3 Side member extension, Jetta Cup Edition



Note

The removal and installation sequence is for the left side member (sill) extension. The removal and installation of the right side member (sill) extension is similar.



5.3.1 Assembly overview

1 - Side member extension

- Removing ⇒ [page 348](#)
- Installing ⇒ [page 349](#)

2 - PUR adhesive sealant

- Lower adhesive surface
- Bead cross section:
width = 8 mm; height = 8 mm
- Minimum curing period

3 - Bolt

- Specified torque: 2 ± 0.5 Nm

4 - PUR adhesive sealant

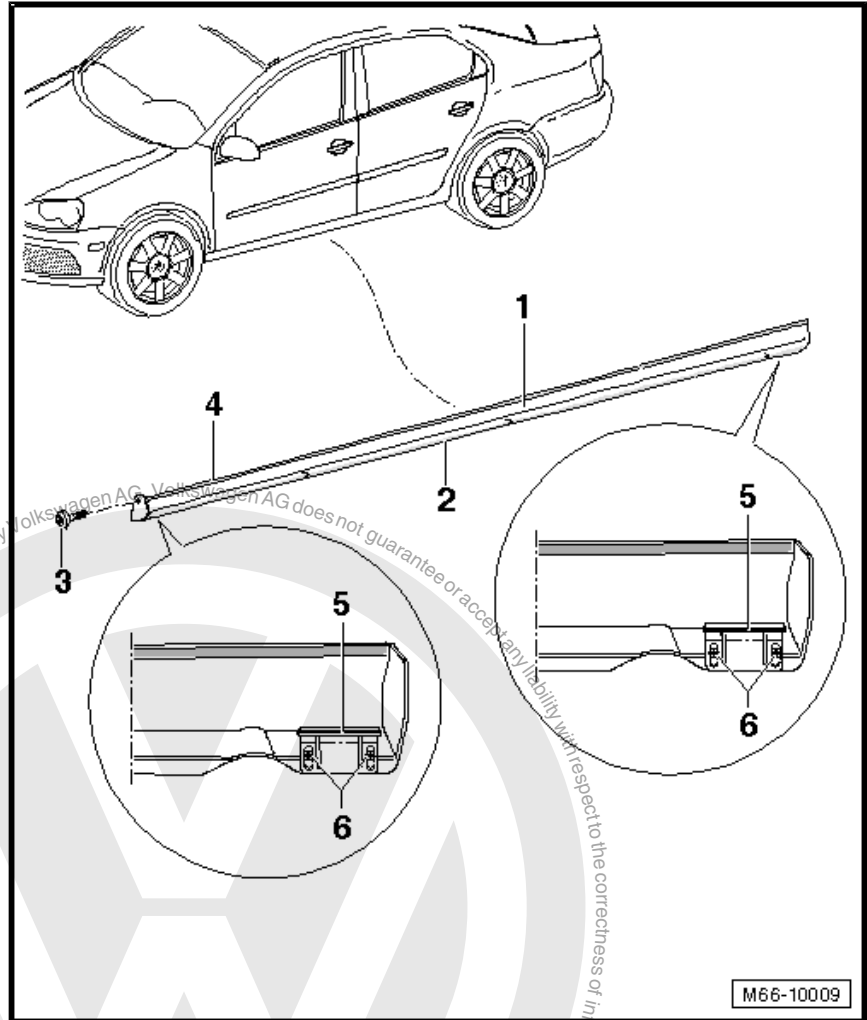
- Upper adhesive surface
- Bead cross section:
width = 8 mm; height = 8 mm
- Minimum curing period

5 - Spacer

- At front and rear.
- Qty. 2 on each side

6 - Bolt

- Qty. 2 per spacer
- Specified torque: 2 Nm



M66-10009

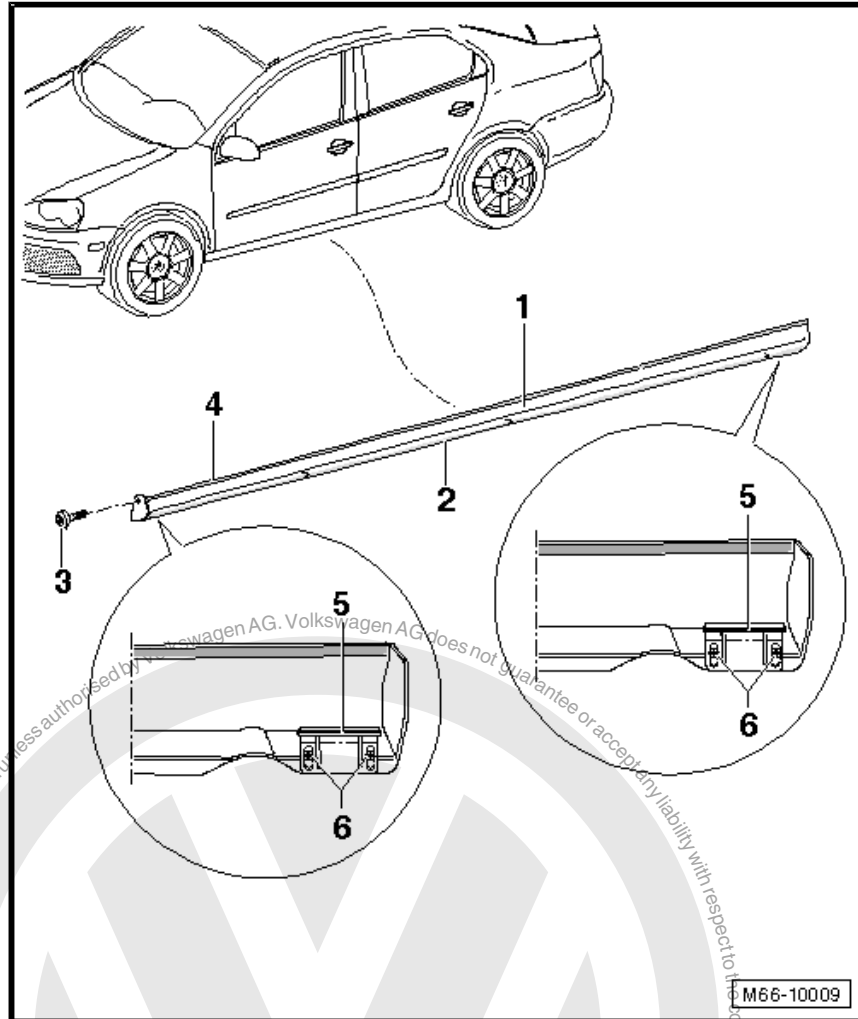


5.3.2 Removing



Note

The side member extension cannot be removed without being damaged.



WARNING

Clean all surrounding parts before beginning work and mask them with tape.

Do not use cutting wire to remove side member extension -1-.

- Remove bolt -3-.
- From below, remove bolts -6- from front and rear spacers -5-.
- Before removing, heat side member extension -1- in bonding surface areas -2- and -4- with hot air blower -V.A.G 1416- .

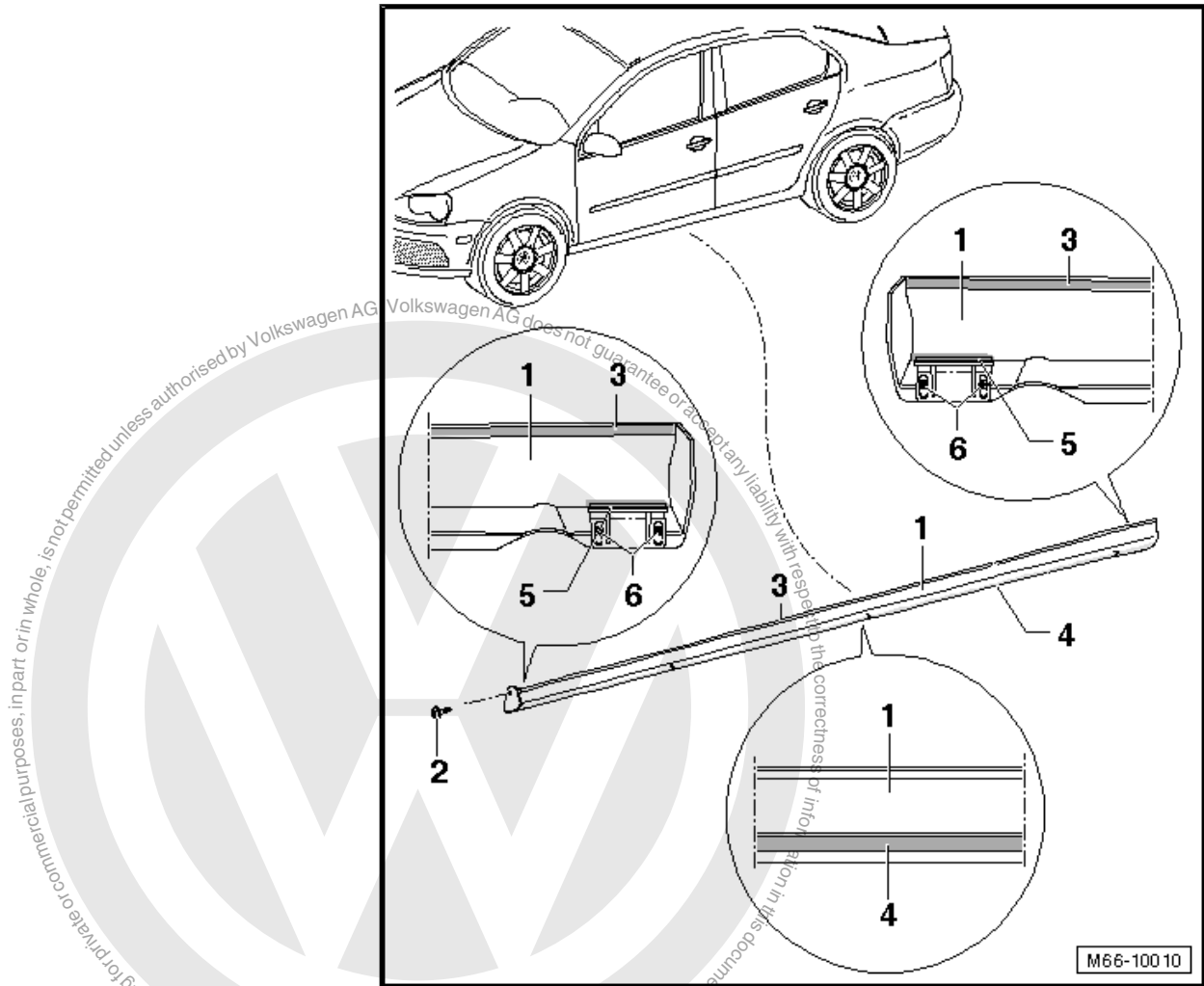


- Lift a corner of side member extension -1- using wedge -3409- .
- Firmly holding corner, forcefully pull side member extension -1- from side panel.

i Note

Cut bonding using suitable equipment, if required.

5.3.3 Installing



- Installation instructions ⇒ [page 353](#)
- Preparing body component for bonding ⇒ [page 352](#)
- Preparing new add-on part for bonding ⇒ [page 353](#)
- Apply 2K glass adhesive -DA 004 600 A2- to sealing surfaces -3- and -4- evenly along the complete length of the side member extension -1- using double cartridge gun -VAS 5237- .
- Apply 2K glass adhesive -DA 004 600 A2- to front and rear spacers -5-.



- Install side member extension -1- on side member, start at rear wheel housing and use assistance of a second mechanic.
- Then tighten bolt -2-.
- Press side member extension -1- on firmly and secure it with textile adhesive tape.
- Loosen bolts -6- on front and rear spacers -5-.
- Move front and rear spacers -5- so that they are in full contact with side member.
- Then tighten bolts -6- on spacer -5-.

 **Note**

The side member extension -1- must lie evenly on the side member over the complete length, otherwise a perfect bond cannot be guaranteed.

- Minimum curing period ⇒ [page 354](#)



6 Special add-on parts

6.1 Safety requirements



Caution

When removing special add-on parts, use suitable gloves and protective eyewear.

Special add-on parts must cure at least 3 hours after being bonded before work on the vehicle is continued.



Note

- ◆ *The following special add-on parts have been developed to fulfil the technical requirements of the respective models. These special add-on parts should always be replaced with the corresponding genuine parts.*
- ◆ *Without these special add-on parts, the vehicle will not comply with the traffic regulations.*

6.2 Fitting notes for extensions



Note

- ◆ *The side member extension are applied with adhesive at the factory.*
- ◆ *The side member extensions are supplied primed by the supplier.*
- ◆ *Ensure the side member extension adhesive surfaces remain free of paint and paint mist when painting extensions.*

6.3 Materials

- ◆ 2K glass adhesive -DA 004 600 A2-
- ◆ Static mixer with tapered nozzle -D 002 001-
- ◆ Primer -D 009 200 02-
- ◆ Cleaning solution -D 009 401 04-
- ◆ Primer applicator -D 009 500 25-
- ◆ Adhesive remover -D 002 000 10-
- ◆ Activator -D 181 801 A1-



Note

Observe instructions for use on the information sheet provided by the manufacturer.



Heat 1-K glass adhesive according to manufacturer's instructions, using cartridge heater -V.A.G 1939A- .

6.4 Special add-on parts, Jetta Cup Edition

1 - Radiator grille

- Removing ⇒ [page 341](#)
- Installing ⇒ [page 342](#)

2 - Front bumper cover

- Removing ⇒ [page 231](#)
- Installing ⇒ [page 232](#)

3 - Scuff protection film

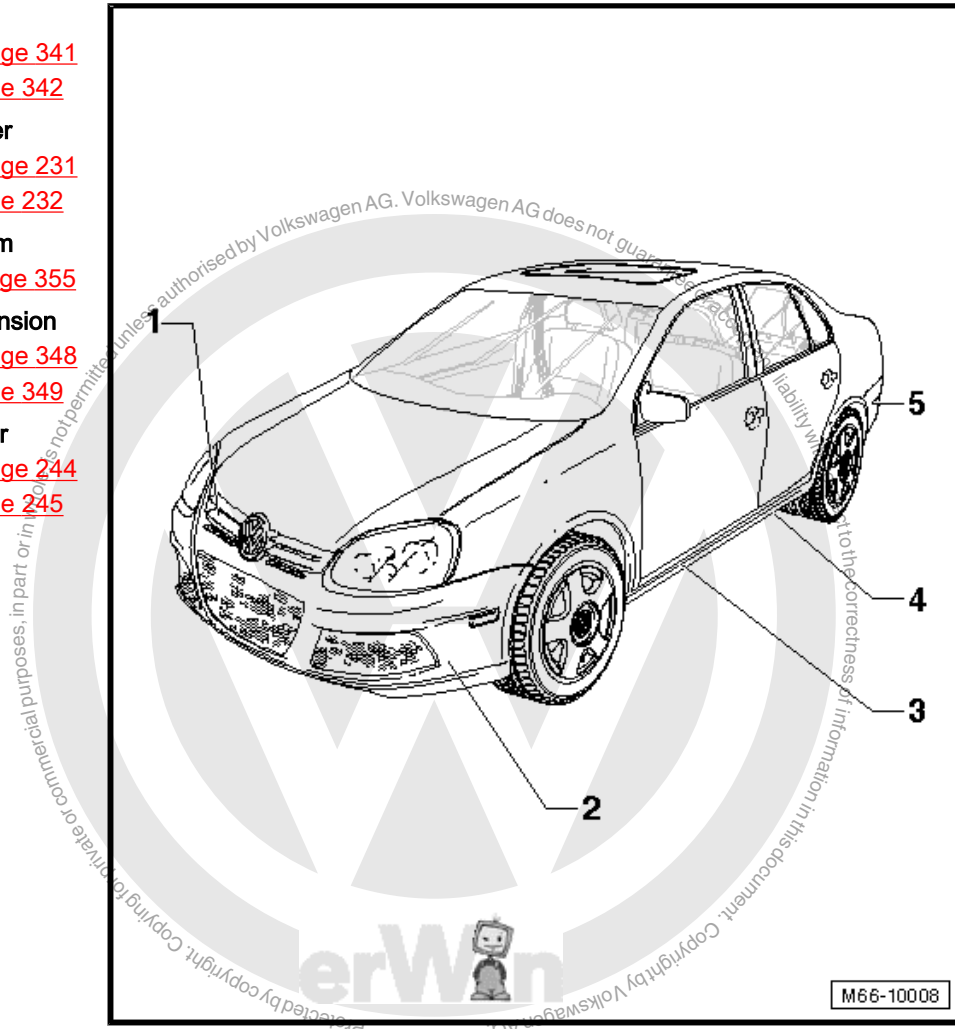
- Renewing ⇒ [page 355](#)

4 - Side member extension

- Removing ⇒ [page 348](#)
- Installing ⇒ [page 349](#)

5 - Rear bumper cover

- Removing ⇒ [page 244](#)
- Installing ⇒ [page 245](#)



6.5 Preparing body kit component for bonding



Note

Remaining material serves as adhesion base for newly applied adhesive sealing compound. Keep dirt and grease off of bonding surfaces.

Exception: If bonding is not performed immediately after cutting back, the remaining residual material must be activated with activator -D 181 801 A1- .



WARNING

Activator must not have contact with paint or the paintwork will be damaged.



Note

If the body kit part has been repaired or partially renewed, the area concerned must be cleaned and primed again after painting.

6.6 Preparing new add-on part for bonding



WARNING

Mask off primed and bonding surfaces properly before painting.

- Immediately before bonding add-on parts, clean bonding surface thoroughly with adhesive remover -D 002 000 10- .
- Bonding surfaces must be free of dust and grease and there should be no adhesive residues.
- Now apply plastic primer -D 009 600- using applicator -D 009 500 25- equally in one stroke.
- Drying time approx. 10 minutes
- The body component must be prepared for bonding.
- A thin coat of 2K glass adhesive -DA 004 600 A2- must be applied evenly to the primed surfaces of the add-on parts with the double cartridge gun -VAS 5237- .

6.7 Installation instructions

The surfaces to be primed for the body kit parts should be completely clean.

- Remove adhesive residue using adhesive remover -D 002 000 10- .
- Soak cloth in silicon remover -LSE 020 100 A3- .
- Clean area of application for adhesive bead twice thoroughly using cloth soaked with solution and allow to dry.
- Now apply glass/paint primer using applicator -D 009 500 25- evenly in one stroke.
- ◆ Drying time approx. 10 minutes
- Adhesive sealant must be applied to the primed areas of the add-on parts.



WARNING

Body kit parts should be installed within 10 minutes, or bonding properties of adhesive will be impaired.

- ◆ Gap dimensions should be kept to an absolute minimum, up to approx. 1 mm.



- ◆ Use adhesive tape to secure add-on parts in position during minimum curing time.

6.8 Minimum curing period

The minimum curing period for newly bonded attaching parts is 3 hours.

The minimum curing time is the time from bonding the add-on parts until the vehicle may be used. During this time, the vehicle must stand on a level surface at room temperature (at least 15 °C).



WARNING

Vehicle is safe to use only after the curing period is completed.

6.9 Touching up paint damage

Paint structure must be restored according to specifications in the "Paint" workshop manual.

6.10 Cleaning off excess adhesive sealing material

- Use adhesive remover -D 002 000 10- as a cleaning solution. Observe the appropriate safety precautions when performing this work.
- First clean painted surface as well as possible using a dry cloth. Remove residue using adhesive remover -D 002 000 10- .



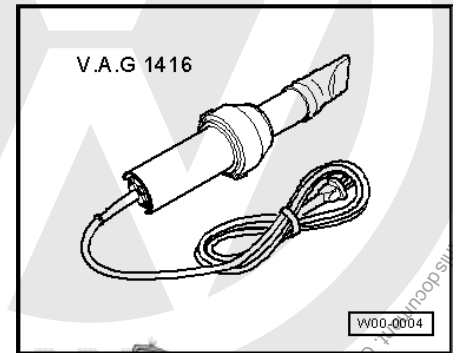
7 Protective backing

7.1 Scuff protection film

7.1.1 Tools

Special tools and workshop equipment required

- ◆ Hot air blower -V.A.G 1416-



7.1.2 Fitting notes



Note

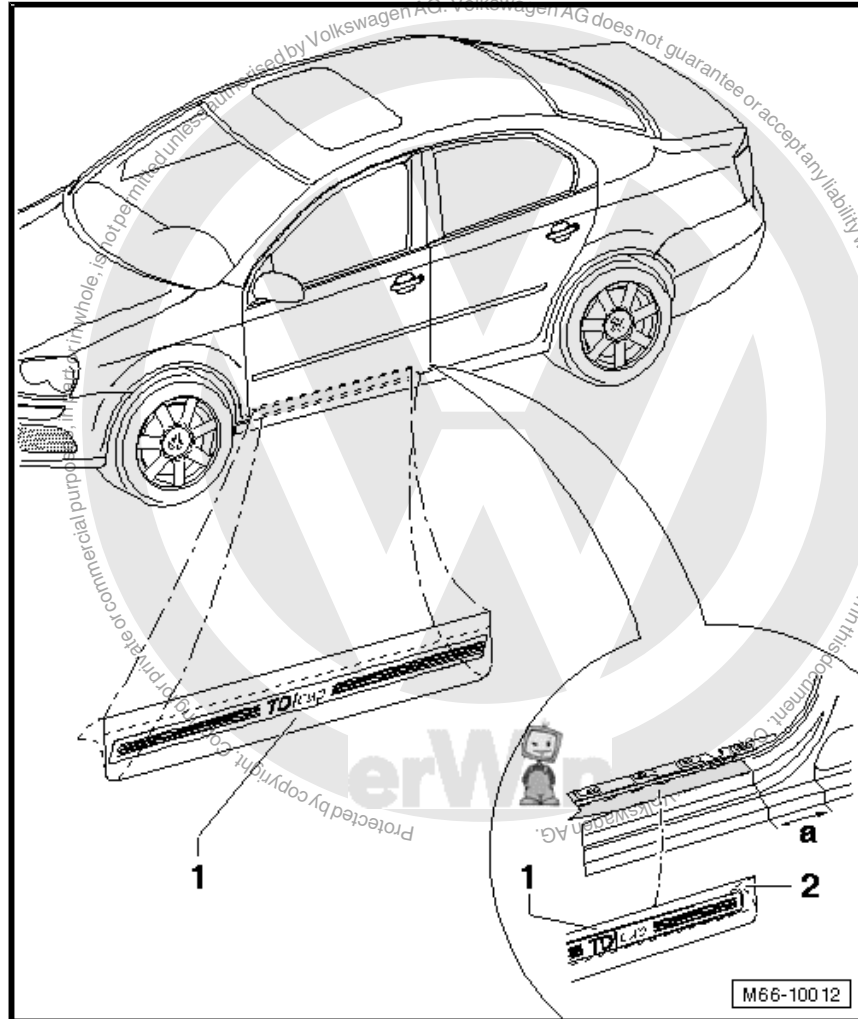
- ◆ *Before removal, heat the scuff protection film with a hot air blower -V.A.G 1416- .*
- ◆ *If the scuff protection film is installed for the first time on a new vehicle and newly painted surfaces, the procedure in ⇒ Workshop manual "Paint"; ⇒Paintwork repairs; ⇒Paint finish; ⇒Mouldings & Film should be observed.*
- ◆ *If the scuff protection film is removed and reinstalled, only use adhesive remover -D 002 000 10- to remove the adhesive remains.*
- ◆ *Ensure that the adhesive surfaces are free of dust and grease.*
- ◆ *Bond scuff protection film immediately after cleaning.*
- ◆ *Pull protective backing off only directly prior to installation.*
- ◆ *The working temperature is approx. 21 °C.*
- ◆ *The scuff protection film cannot be removed without damage.*



7.1.3 Renewing scuff protection film



Renewing scuff protection films is described only for the left side. The right side is similar.



Removing

- Remove inner seal for front door in area of side member
⇒ [page 93](#) .
- Heat front scuff protection film -1- using a hot air blower -V.A.G 1416- and pull scuff protection film -1- from sill.

Installing

- Clean installation area with adhesive remover -D 002 00 10- .
- Pull off protective backing -2-.
- Position front scuff protection film -1- on the references points -a- = 155 mm and press it smooth using a plastic blade wrapped in a soft paper towel.

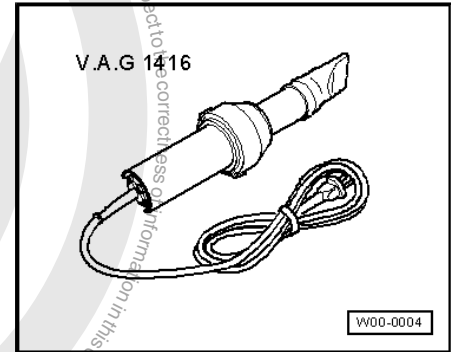


8 Lettering

8.1 Tools

Special tools and workshop equipment required

- ◆ Hot air blower -V.A.G 1416-



8.2 Installation instructions for lettering and emblems



Note

- ◆ *Before removal, heat lettering or emblem with a hot air blower -V.A.G 1416- .*
- ◆ *If the lettering or emblem is installed for the first time on a new vehicle and newly painted surfaces, the procedure in ⇒ Workshop manual "Paint"; ⇒Paintwork repairs; ⇒Paint finish; ⇒Mouldings & Film should be observed.*
- ◆ *If the lettering or emblem is removed and reinstalled, only use adhesive remover -D 002 000 10- to remove the adhesive remains.*
- ◆ *Ensure that bonding surfaces are free of dust and grease.*
- ◆ *Bond lettering or emblem immediately after cleaning.*
- ◆ *Pull protective backing off only directly prior to installation.*
- ◆ *The working temperature is approx. 21 °C.*



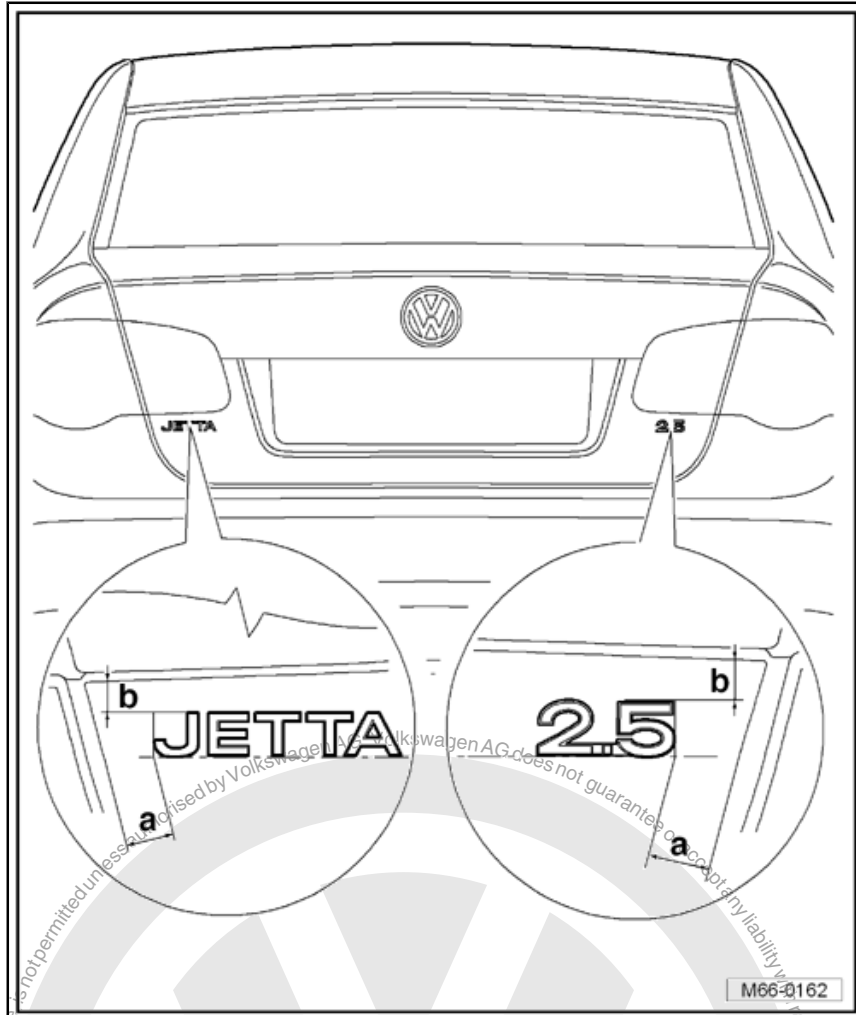
8.3 Rear lettering dimensions (saloon)

1 - Dimension -a- = 25 mm

- From outer edge of rear lid to lettering

2 - Dimension -b- = 15 mm

- From lower edge of tail light aperture in rear lid to upper edge of lettering



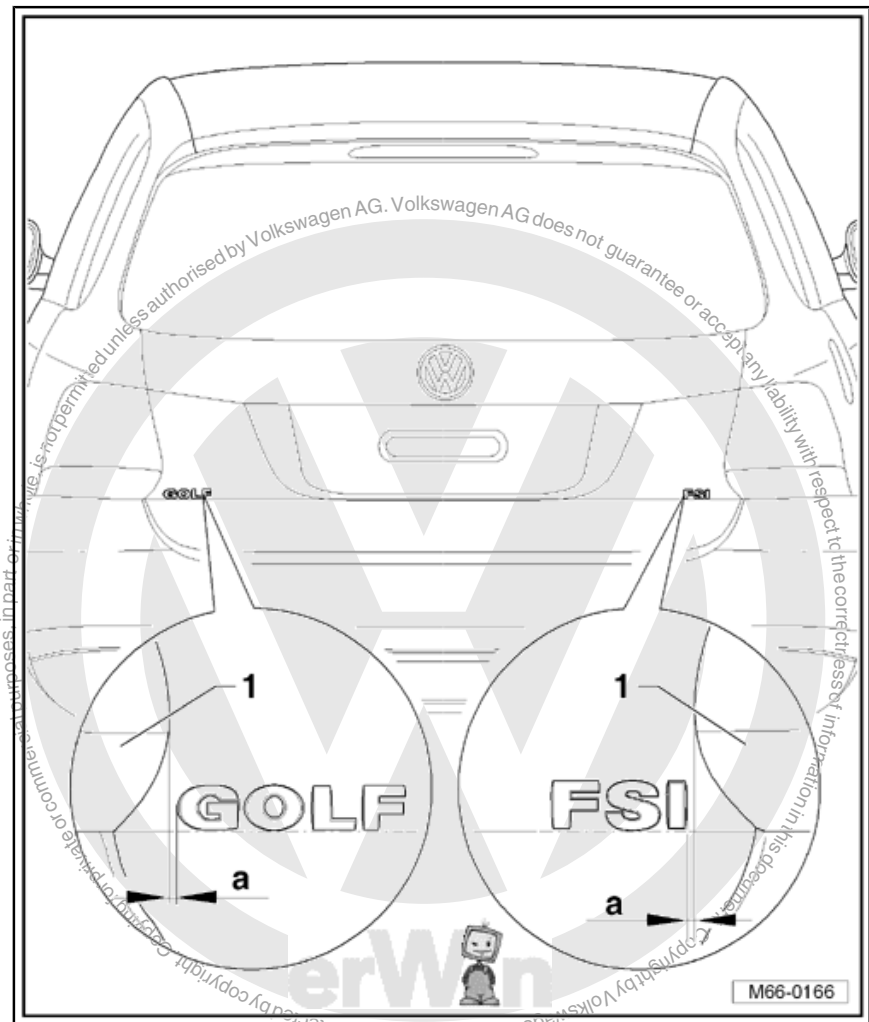


8.4 Rear lettering dimensions (Variant)

8.4.1 Lettering (Golf Variant)

1 - Dimension -a- = 5 mm

- ❑ Lower edge of lettering to height of lower edge of rear light -1-
- ❑ Transfer -dimension a- from outer edge of rear lid to lettering.

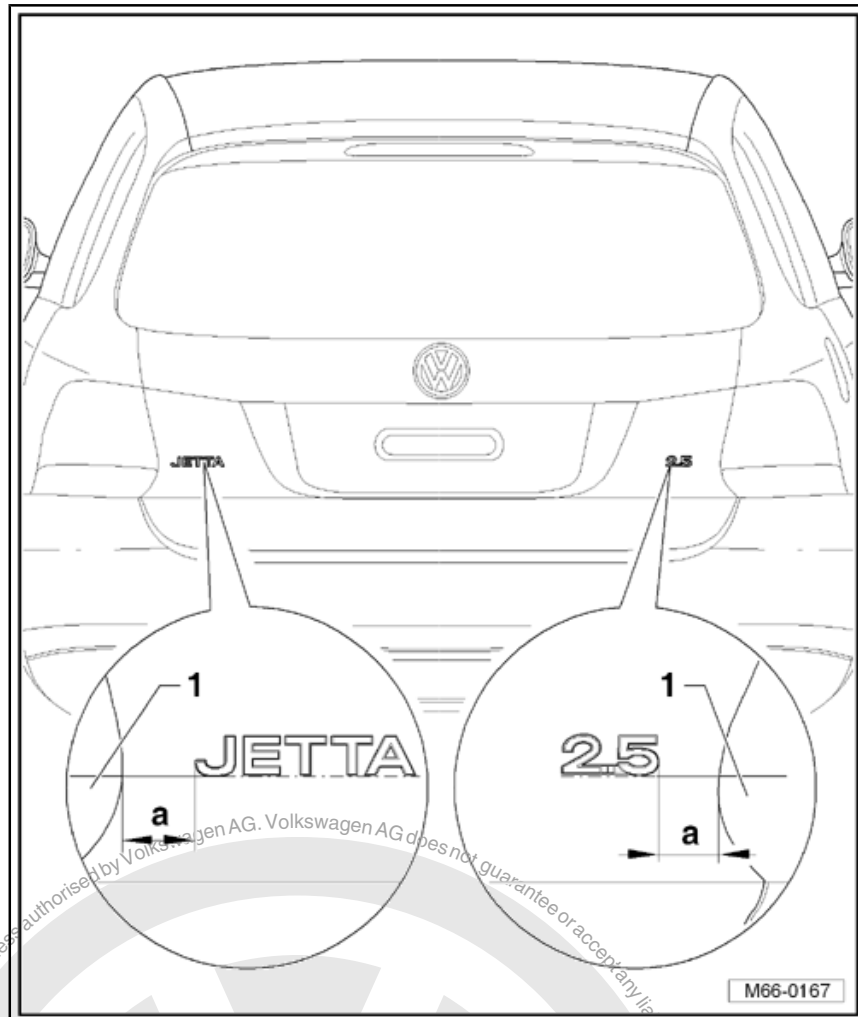




8.4.2 Lettering (Jetta Variant)

1 - Dimension -a- = 25 mm

- ❑ Transfer -dimension a- from outer edge of rear lid to lettering.
- ❑ Lower edge of lettering to height of upper edge of rear light -1-





8.5 Side lettering dimensions - Individual

8.5.1 Dimensions for emblem on left wing

1 - Dimension -a- = 551 mm

- ❑ Transfer -dimension a - from lower edge of wing to wing.

2 - Dimension -b- = 14 mm

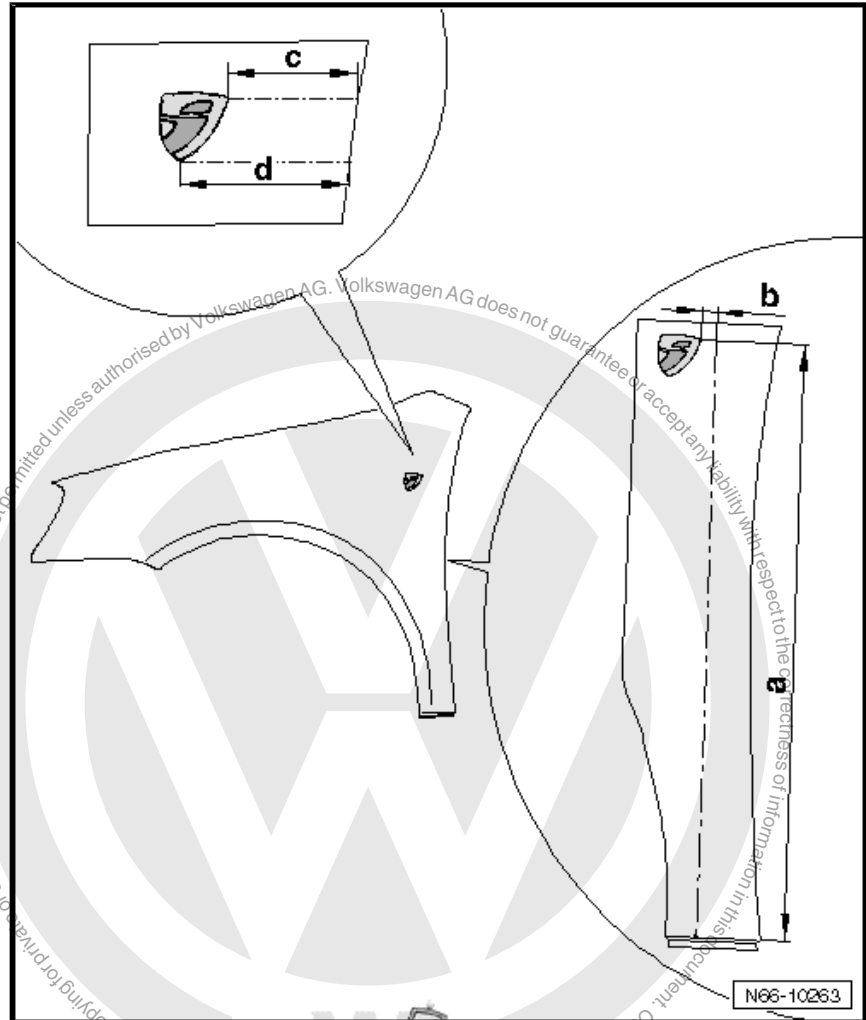
- ❑ Transfer -dimension b- from end point of dimension a to corner of emblem.

3 - Dimension -c- = 70 mm

- ❑ Use -dimension c- to check distance from upper edge of emblem to edge of wing.

4 - Dimension -d- = 92 mm

- ❑ Use -dimension d- to check distance from lower edge of emblem to edge of wing.





8.5.2 Dimensions for emblem on right wing

- 1 - Dimension -a- = 550 mm
 - ❑ Transfer -dimension a - from lower edge of wing to wing.
- 2 - Dimension -b- = 30 mm
 - ❑ Transfer -dimension b- from end point of -dimension a- to corner of emblem.
- 3 - Dimension -c- = 86 mm
 - ❑ Use -dimension c- to check distance from upper edge of emblem to edge of wing.
- 4 - Dimension -d- = 92 mm
 - ❑ Use -dimension d- to check distance from lower edge of emblem to edge of wing.

