

51 11 993 Additional work: mounting the number plate baseplate/number plate

1 – Install the number plate baseplate for the number plate



WARNING

Malfunction of the sensors of the driver assistance systems.

Incorrect assembly of the number plate leads to a malfunction of the sensors of the driver assistance systems.

- Fix number plate and number plate baseplate only according to the dimensions specified in the repair instructions.
- Secure number plate and number plate baseplate on the bumper panel **without pre-drilling**, otherwise there is a risk of damage to the underlying cables.
- Only use number plate baseplates that have been approved for the vehicle type.



TECHNICAL INFORMATION

The number plate must be precisely mounted on the number plate baseplate and must not protrude on the underside.

The number plate carrier must not be installed on the front bumper.

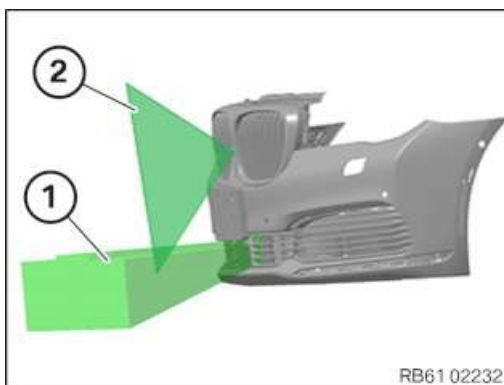


TECHNICAL INFORMATION

In the European version with basic bumper panel, the number plate is installed without number plate baseplate.

► Positioning the number plate

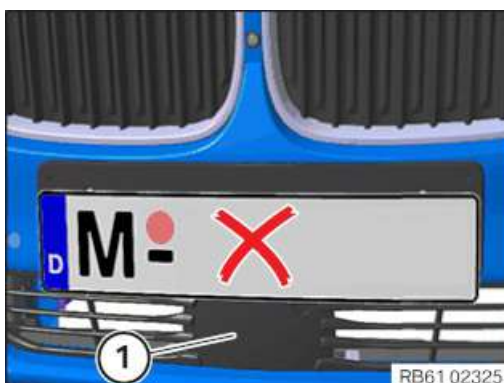
- Position the number plate or number plate baseplate correctly.
- Make sure that the angle of radiation of the ACC sensor (1) is not obstructed.
- Make sure that the angle of radiation of the front camera (2) is not obstructed.

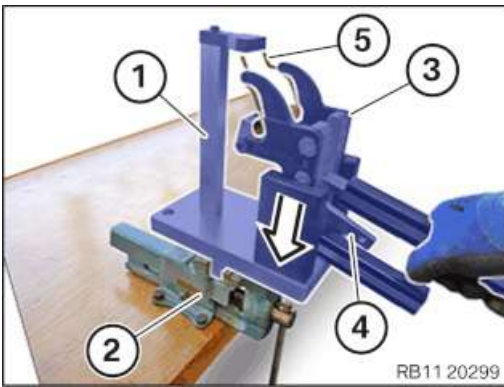


► Detect possible fault pattern due to incorrect assembly and rectify

Check

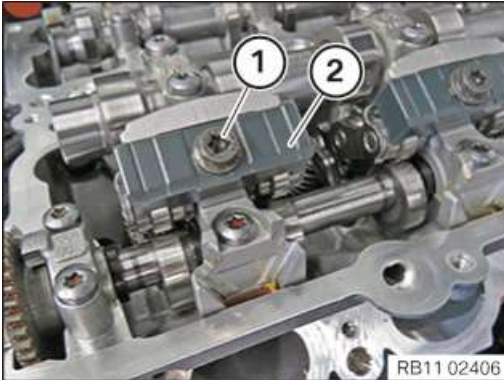
- Check number plate for correct position.





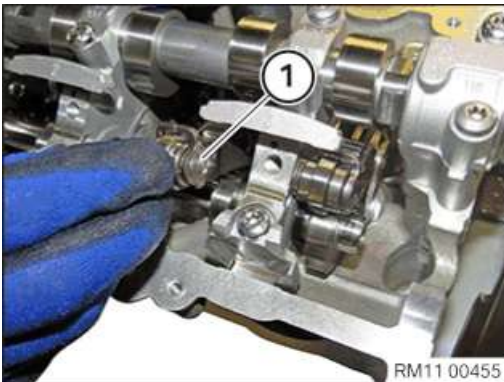
- Clamp fixture (1) of the special tool [2 359 088](#) in the vice (2).
- Position clamping lever (3) of special tool [2 359 088](#) with pre-tensioned torsion spring (5) in direction of arrow in the mounting (1) of the special tool [2 359 088](#).
- Carefully unlock retaining hook (4) of the special tool [2 359 088](#). The torsion spring (5) is relieved.
- Slowly open clamping lever (3) and remove the torsion spring (5).
- Place torsion spring (5) neatly into special tool [0 495 105 \(11 4 480\)](#).
- Repeat the operations for the remaining torsion springs.

6 – Removing all gates



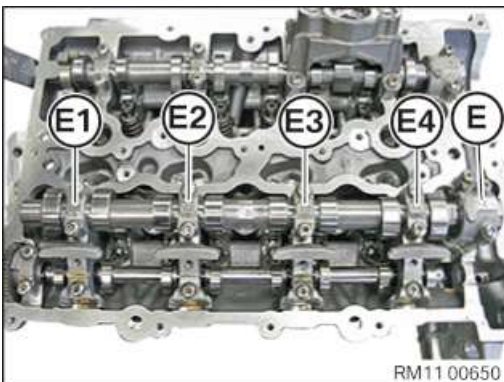
- Loosen screw (1).
- Remove the gate (2) and place it arranged in order into [0 495 105 \(11 4 480\)](#).
- Repeat the step for all the gates.

7 – Removing all intermediate levers



- Remove the intermediate lever (1) and arrange it in the special tool [0 495 105 \(11 4 480\)](#) in order.
- Repeat the step for all intermediate levers (1).

8 – Remove intake camshaft



- Make sure that the exhaust camshaft bearing cap is placed in the correct position in the special tool [0 495 105 \(11 4 480\)](#).
- Note:** The intake camshaft bearing caps are legibly labelled from the intake side with E1, E2, E3, E4 and E.
- Note:** Intake camshaft bearing cap E is a thrust bearing.

2 455 654 Tensioning tool



Common

Used in step 6972

Usage To pretension the timing chain when adjusting the timings. Contour-graphic silhouette foil is included in the delivery specification. Further information on the contour-graphic silhouette foil is included in service information 00 22 13 (969).

Included in the tool or work

Storage location A58

Replaced by

In connection with

SI-Number 01 07 17 (487)

2 452 959 Pliers



Common

Used in step 89

Usage For disassembly of the PTFE sealing rings on the injector HDEV5 & HDEV6. Replaces 0495757 (SWZ number 13 0 191). Contour-graphic silhouette foil is included in delivery specification. Further information on the contour-graphic silhouette foil can be found in service information 00 22 13 (969).

Included in the tool or work

Storage location A5

Replaced by

In connection with

SI-Number 01 07 17 (487)

2 448 401 Fitting aid



Common

Used in step 89

Usage For installation of PTFE rings on injector. Contour-graphic silhouette foil is included in the delivery specification. Further information on the contour-graphic silhouette foil is included in service information 00 22 13 (969).

Included in the tool or work

Storage location C55

Replaced by

In connection with

SI-Number 01 07 17 (487)

2 358 022 Gauge



Common

Used in step 90

Usage To position the injector during installation. Contour-graphic silhouette foil is included in delivery specification. Further information on the contour-graphic silhouette foil can be found in service information 00 22 13 (969).

Included in the tool or work

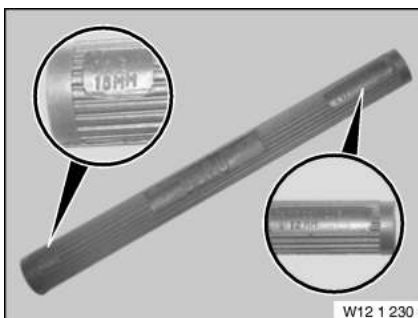
Storage location A56

Replaced by

In connection with

SI-Number 01 13 14 (098)

0 496 065 (12 1 230) Fitting aid



Common

Used in step 94

Usage Fitting aid for spark plug installation. Original BERU ZMH 001 rubber hose 0 890 00 001.

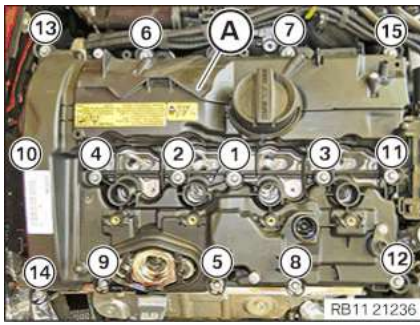
Included in the tool or work

Storage location individual

Replaced by

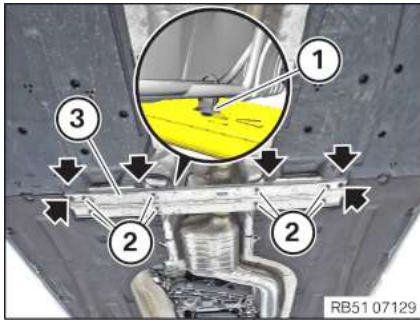
In connection with

SI-Number 01 04 07 (352)



- Loosen screws in the order (15) to (1).
- Guide the cylinder head cover (A) out and remove it.

30 – Remove the connecting support from the tunnel



- Remove screws (arrows).
- **If installed:** Loosen clamp (1).
- Loosen screws (2).
- Guide out and remove connecting support (3) on the tunnel.

31 – Remove complete exhaust system



WARNING

Hot surfaces.

Risk of burning!

- Perform all work only on components that have cooled down.



CAUTION

Component with heavy weight.

Danger of injury!

- Note component's centre of gravity.
- Support component using a jack.
- Secure component against falling off the jack.

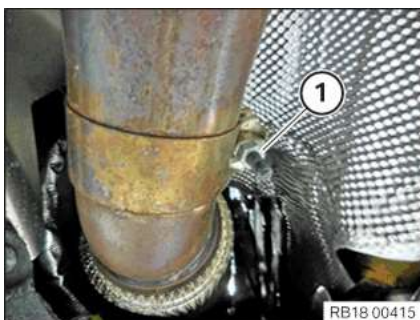


CAUTION

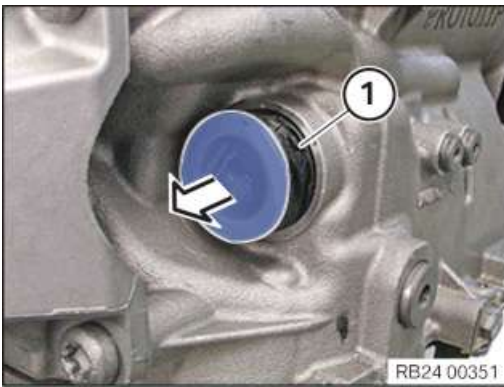
Heavy component.

Heavy components can lead to injury or damage.

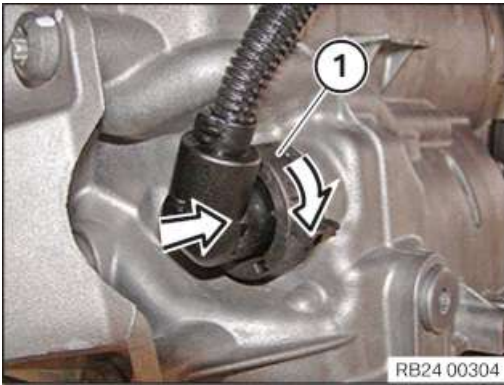
- Remove and install heavy components with the aid of another person/other persons.



- **Equipment specification 1 (ribbon clamp)**
Detach the ribbon clamp (1).



- Remove the special tool [0 494 213 \(24 2 390\)](#) from the sealing sleeve in direction of arrow.



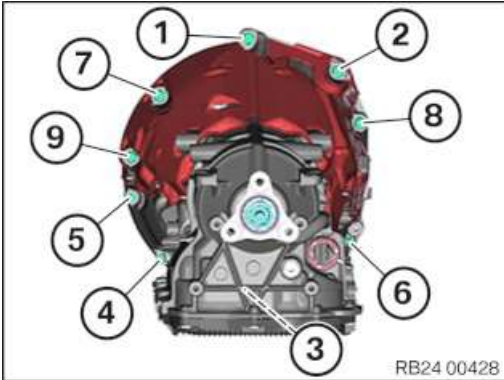
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TECHNICAL INFORMATION

Notes on mechatronics are a fundamental requirement for these repair instructions and must be complied with at all times.

For additional information see: 24 34 ... Notes on mechatronics (GA8HP50Z/GA8HP51Z/GA8HP75Z/GA8HP76Z/GA8HP95Z)

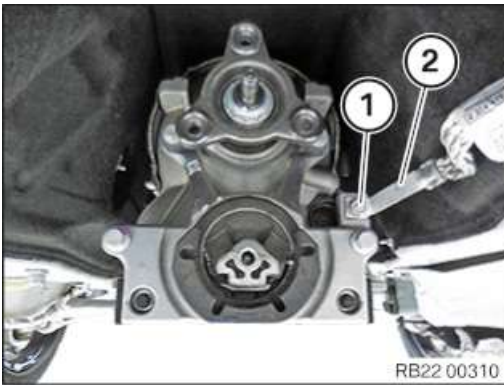
- Slide the connector (1) on and turn it to lock.



- Tighten the transmission bolts in sequence (1) to (9).

Transmission to engine

M8	Tightening torque	19 Nm
M12	Tightening torque	66 Nm



- Install the ground strap (2).
- Tighten down screw (1).

Ground strap to transmission or body

M8	Tightening torque	19 Nm
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24 – Install the exhaust bracket



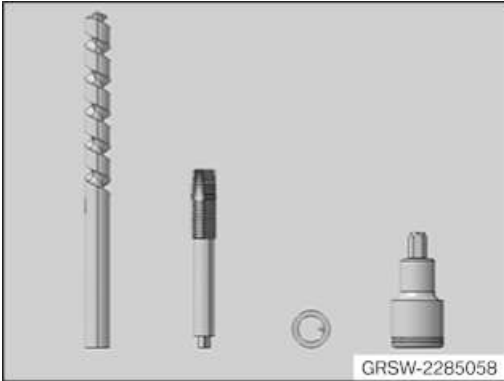
- Install the exhaust bracket (2).
- Tighten the screws (1).

Transmission to engine

M8	Tightening torque	19 Nm
M12	Tightening torque	66 Nm



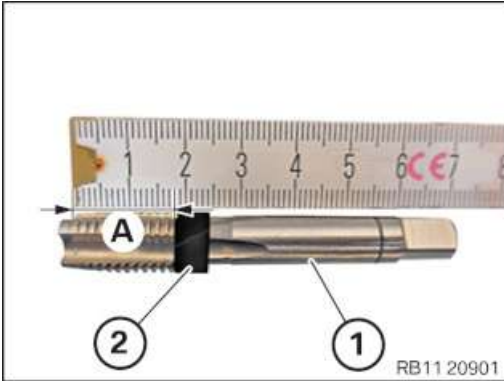
RB11 20544



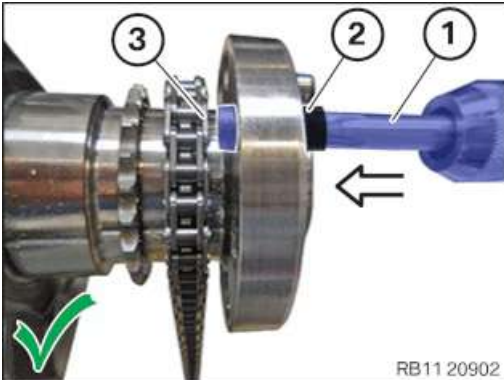
GRSW-2285058



RB11 20900



RB11 20901



RB11 20902



TECHNICAL INFORMATION

Clean all threads with a screw tap.

- Clean all the screw threads (1).
- Use the set of special tools [2 285 058](#).

Description
Twist drill
Thread cutter M12x1.5
Depth
Insertion tool

- Assemble tool set.

Number	Description
1	Tool holder
2	Thread cutter M12X1,5

- Mark the screw-in depth (A) on thread cutter (1) from the set of special tools [2 285 058](#) with a standard tool (2).

Screw-in depth of thread cutter

Screw-in depth	18 mm
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NOTICE

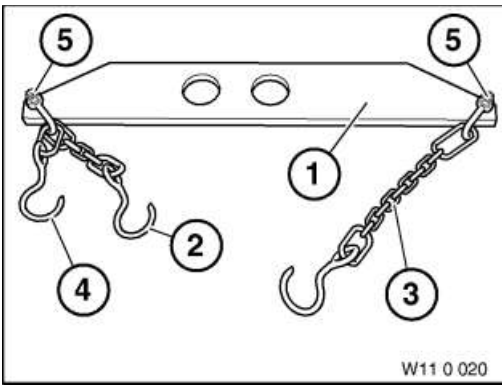
To provide a better overview: Shown with engine removed.

- Screw in the thread cutter (1) from the set of special tools [2 285 058](#) in direction of arrow up to the screw-in depth (2).

Screw-in depth of thread cutter

Screw-in depth	18 mm
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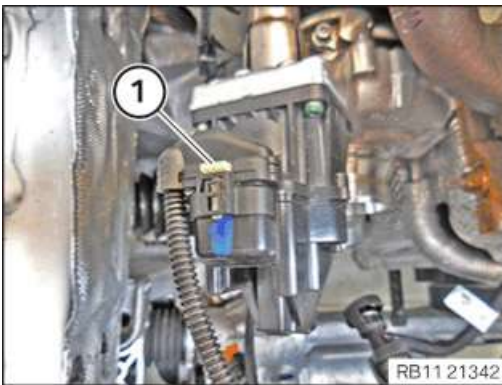
- Make sure that the thread cutter does (1) **not** rest on the timing chain (3).



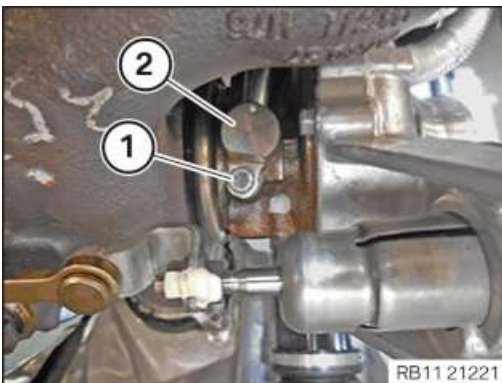
- Prepare special tool .



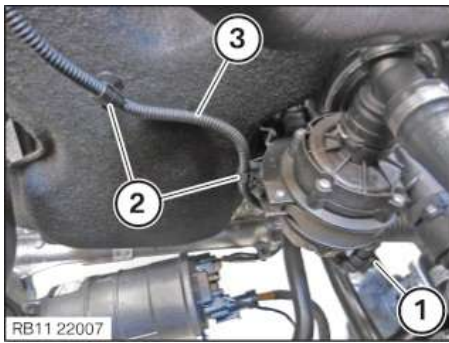
- Prepare the workshop crane [2 220 718](#).



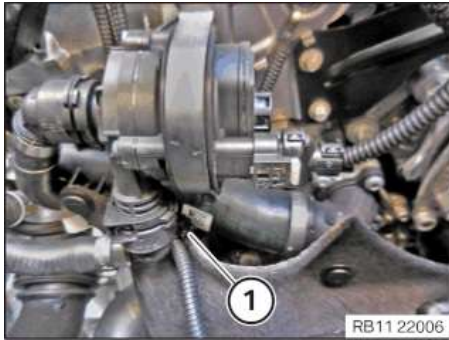
- Unlock plug connection (1) and disconnect.



- Loosen screw (1).
- Release the oil feed line (2) on the exhaust turbocharger.

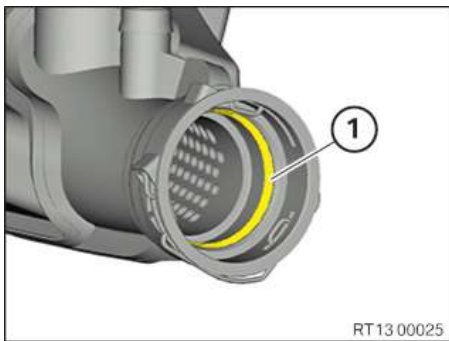


- Feed in and position wiring harness section (3).
- Secure clamps (2).
- Connect connectors (1) and lock.
The connector (1) must engage audibly.



- Secure clamps (1).

57 – Installing the clean air pipe with resonator



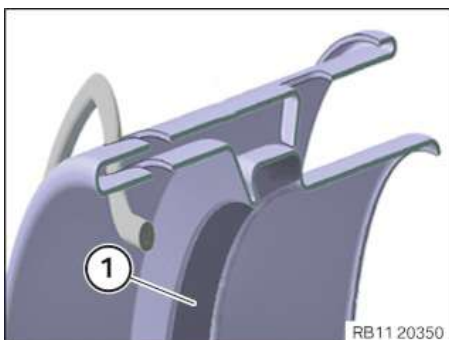
- Check the seal (1) for damages, replace if necessary.

► Replace damaged gasket



TECHNICAL INFORMATION

Do not use pointed or sharp-edged tools for the installation and/or removal.



- Remove damaged seal.
- Clean gasket groove (1) with a dry towel.
The gasket groove (1) must be clean.

Holder underride guard to front axle support

Used in step 26

M10		Tightening torque	56 Nm
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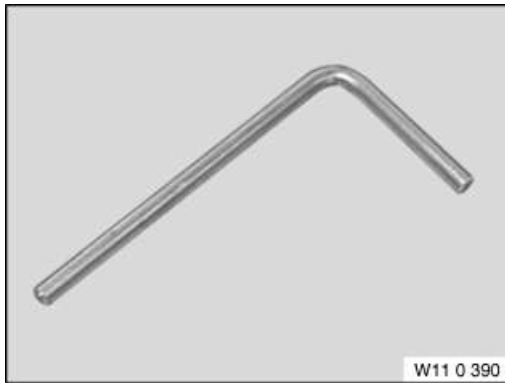
Underbody protection front

Used in step 27

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm
Hexagon screw M6x20		Tightening torque	8 Nm

Overview of Special Tools

0 496 268 (11 0 390) Pin

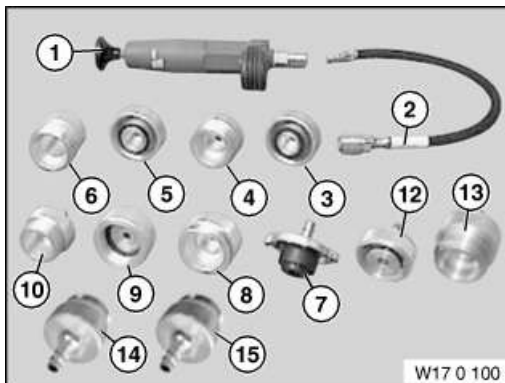


Common

Used in step 781617

Usage	(roll pin) For securing new tensioning pulley (poly-V belt)
Included in the tool or work	
Storage location	B24
Replaced by	
In connection with	
SI-Number	01 15 07 (390)

0 494 417 (17 0 100) Tester



Common

Used in step 22

Usage	For checking engine cooling system on watertightness. For checking radiator cap.
Included in the tool or work	
Storage location	Individual
Replaced by	
In connection with	
SI-Number	01 07 02 (884)

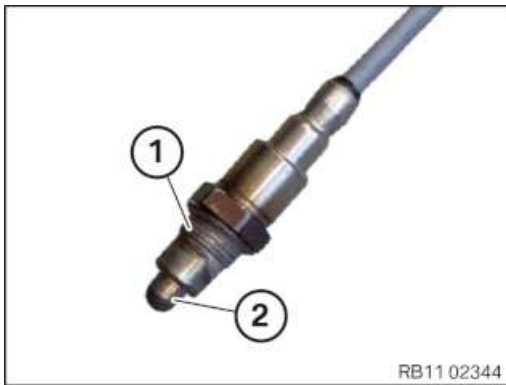
Consisting of

Pos	BMW Order number	Replaced by	Designation	In Connection with
5	0 494 422 (17 0 105)		Adapter For radiator cap (sawtooth thread)	
10	0 494 427 (17 0 111)		Adapter For radiator cap R53/W11, R50/W17 adapter replaced 17 0 052.	
1	0 494 418 (17 0 101)		Pump	
2	0 494 419 (17 0 102)		Hose (hose with quick-release coupling)	
3	0 494 420 (17 0 103)		Adapter For radiator cap (normal thread)	

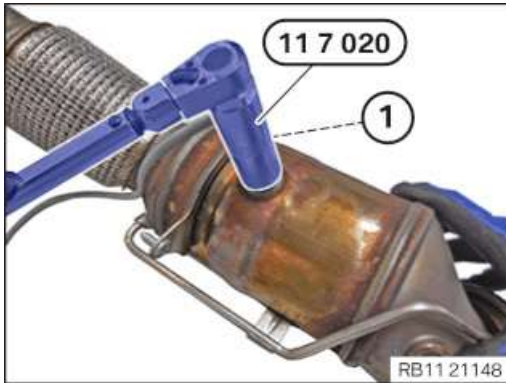


TECHNICAL INFORMATION

For more information see: 11 00 ... Overview of consumables in Electronic Parts Catalogue



- Prepare the oxygen sensor.
Do not damage the sensor ceramics.
(1) = Thread
(2) = Sensor ceramics



- Feed in the monitoring oxygen sensor (1) and install.
- Tighten the monitoring oxygen sensor (1) with special tool [0 491 074 \(11 7 020\)](#).

Monitoring sensor

M18x1.5

50 Nm

10 – Install catalytic converter

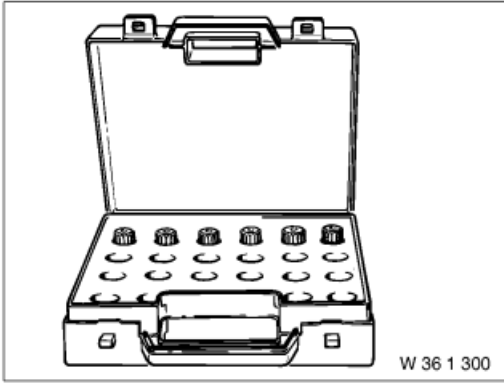


- Renew the V-clip (1).
Parts: V-band clamp



- Renew the gasket (1).
Parts: Gasket

0 495 228 (36 1 331) Wheel stud

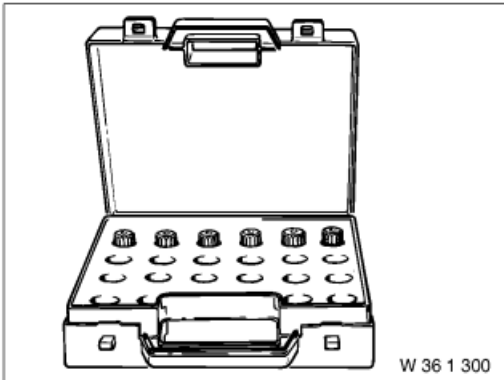


Common

Used in step 1

Usage	(Code 37) With centring bore available separately (see EPC) under 36 13 6 762 342
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

0 495 229 (36 1 332) Wheel stud

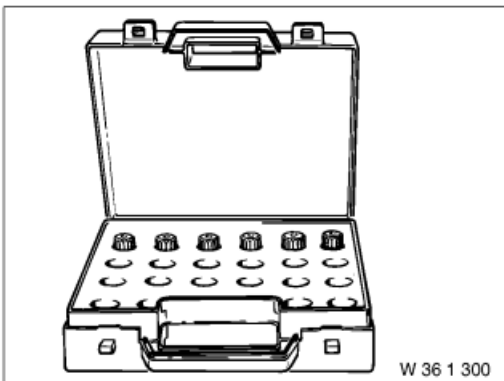


Common

Used in step 1

Usage	(Code 38) With centring bore available separately (see EPC) under 36 13 6 762 343
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

0 495 230 (36 1 333) Wheel stud



Common

Used in step 1

Usage	(Code 40) With centring bore available separately (see EPC) under 36 13 6 762 344
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

Overview Technical Data

Minimum brake disc thickness (nominal dimension 330x24)

Used in step 4

Minimum brake disc thickness (brake disc 330x24)

22,4 mm

Links

61 35 ... Overview of additional work for the removal and installation or replacement of electronic components in the body area/windscreen

Component	Removal and installation Calibration/Initialisation required (diagnosis system must be connected)	Removal and installation Use of the Special tool necessary	Replacement Programming/encoding Calibration/Initialisation required (diagnosis system must be connected)	Replacement Use of the Special tool necessary	Remarks
Front section: (including bumper panel)					
ACC sensor	Yes	Yes	Yes	Yes	
Night vision camera	No	No	Yes	Yes*	*conventional workshop headlight adjusting device
PDC ultrasonic sensor	No	No	No	No	
PMA ultrasonic sensor	No	No	No	No	
Sensor, lane change warning	no*	No	Yes	No	*Required after a body repair in the surrounding area of the sensor. Comply with the regulations for repainting!
Sensor for active pedestrian protection	No	No	No	No	Must be replaced after the active pedestrian protection has been activated! Impact absorber must also be replaced!
Actuator for active pedestrian protection	No	No	No	No	Must be replaced after the active pedestrian protection has been activated!
Front camera	No	No	Yes	No	
Side section:					

51 14 111 Replacing the model inscription, rear

1 – Removing rear model designation

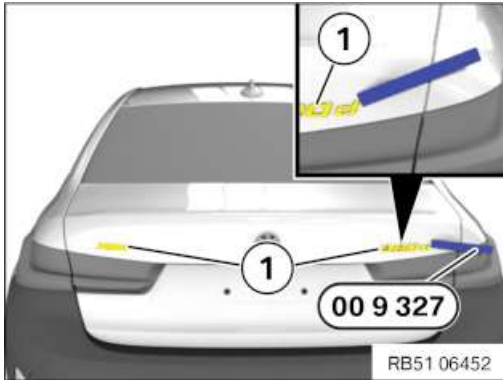


RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.



- Tape off working area with adhesive tape.
- Heat the rear model designations (1) carefully with a hot air blower and release from the tailgate with the special tool [0 496 571 \(00 9 327\)](#).

Heating using hot air blower

Surface temperature	40 °C ... 50 °C
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- Remove the adhesive residue on the tailgate and clean the adhesive area with the cleaning agent [R2](#).

Expendable materials

Cleaning agent R2	500 ml	83190417324
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2 – Fitting rear model designation



CAUTION

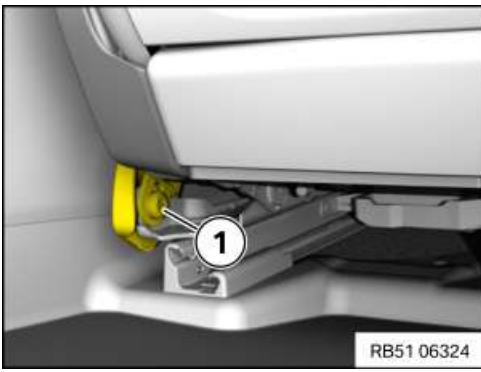
Laser beam.

Danger of injury!

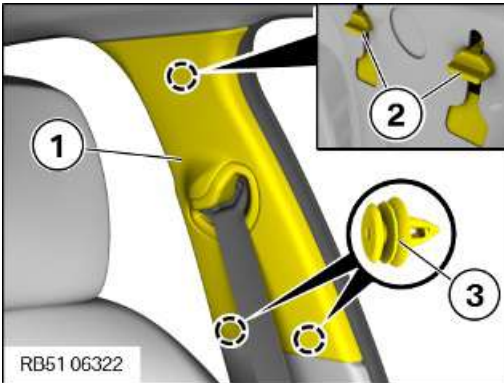
- Do not look into the laser beam.



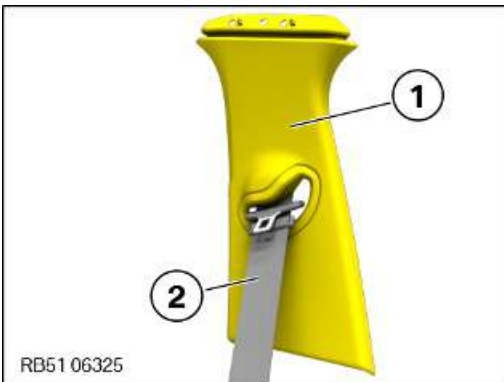
- Park the vehicle and the special tool [2 407 566](#) on a flat and even surface.
- Mount the laser on the tripod.
- Switch on laser (Position without automatic level).
- Activate laser horizontally and vertically.



- Fully position the front seat to the front and top.
- Loosen screw (1).
- Remove end fitting (2).



- Unclip clips (3).
- Feed B-pillar trim panel (1) out of the front and rear lip of edge protections and the guides (2).



- Feed upper seat belt (2) out of B-pillar trim panel (1).

6 – Remove the A-pillar trim panel



WARNING

Airbag unit.

Danger! Life-threatening injuries!

- Before performing any work on the airbag, always disconnect the battery earth lead from the battery.
- Airbag unit may only be set down with the cushion (airbag itself) facing upwards.
- For additional information see: 72 00 ... Safety regulations on handling airbag system components/gas generators

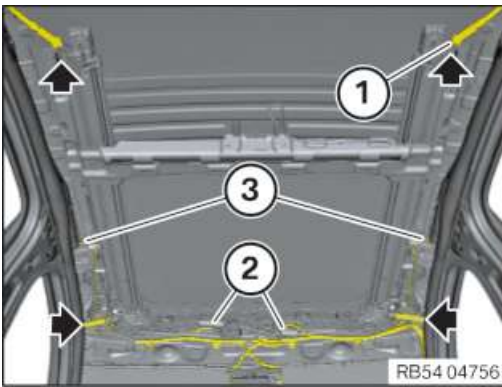


WARNING

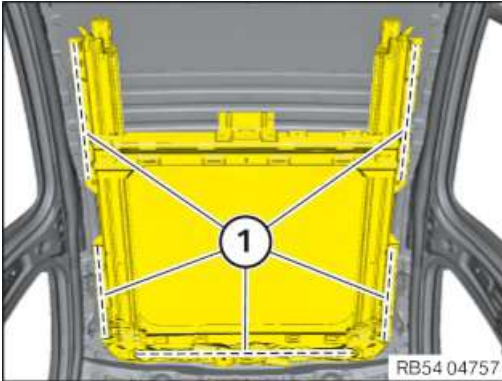
Pyrotechnic components.

Danger! Life-threatening injuries!

- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.



- Pull off all four water drain hoses (1) (arrows).
- Disconnect the plug connections of engine (2) and unclip the corresponding cable.
- Disconnect the plug connections (3) of head airbag and unclip the corresponding cable and tie to the side.



RISK OF DAMAGE

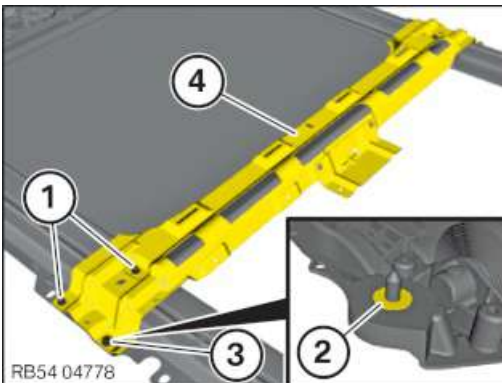
Heavy component.

Heavy components can lead to injury or damage.

- Remove and install heavy components with the aid of another person/other persons.
- Secure slide/tilt sunroof from falling with the help of an auxiliary person.
- Release all screws along the areas (1).
- Lower the slide/tilt sunroof with the assistance of an auxiliary person and remove from the vehicle through the front passenger door.

MAIN WORK

20 – Removing cross member

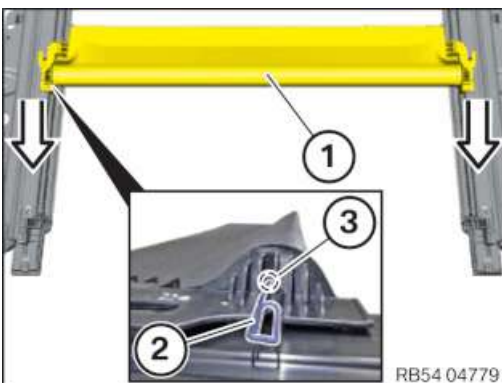


NOTICE

Perform the operations on the left and right side.

- Loosen nuts (1).
- Remove lock washer (2) and withdraw screw (3).
- Remove cross-member (4).

21 – Removing roller sunblind for the panorama glass roof



- Push the roller sunblind back (1) on both sides and thus roll it up a few cm.
- Unroll the roller sunblind (1) until it can be fixed with a suitable tool (2) (e.g. paper clip) over the pegging device (3).