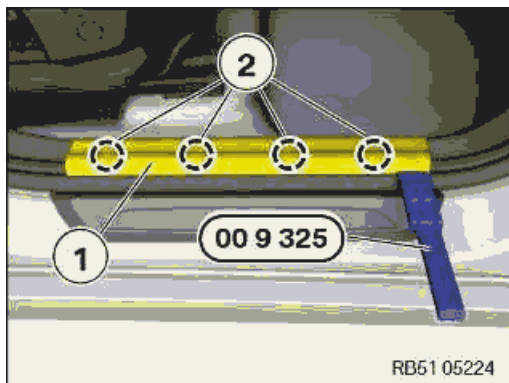


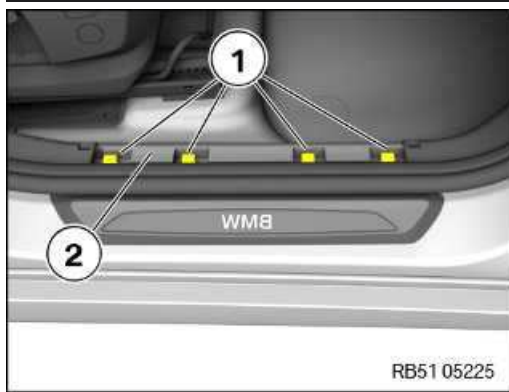
65 12 051 Remove and install / replace the central bass speaker on the driver's side

PRELIMINARY WORK

1 – Remove front entrance cover strip



- Unclip the door sill cover strip (1) at the clips **0 496 569 (00 9 325)** using special tool (2) starting from the rear.

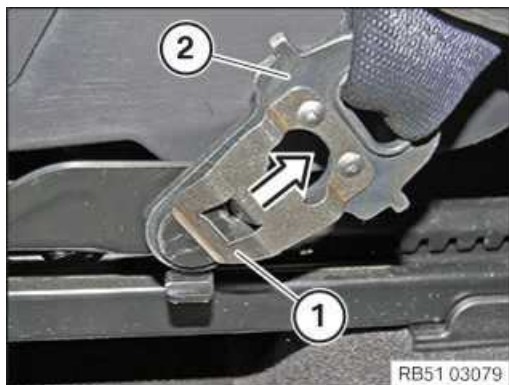


- If applicable, loosen clips (1) from floor panel (2) and mount on the door sill cover strip.

2 – Remove the front end fitting

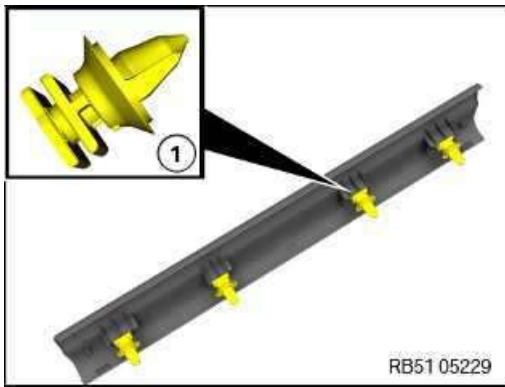


- Slide the cover (1) on the seat belt (2) in an upward direction.

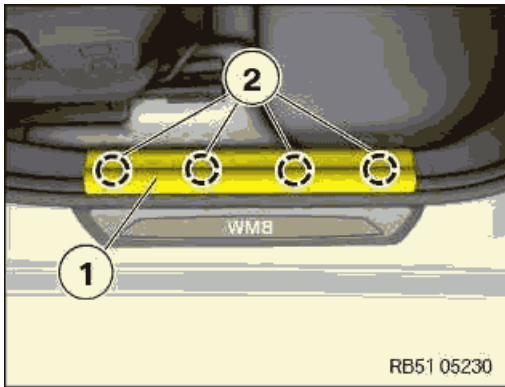


- Turn the end fitting (2) to the rear.
- Carefully pull the lock plate (1) outward and simultaneously feed out the end fitting (2) to the front.
- Remove the end fitting (2) outward.

3 – Remove front seat



- Check the clips (1) for damage and renew where required.



- Clip the door sill cover strip (1) into the floor panel with the clips (2).

Additional Information

Overview of Tightening Torques

Central bass speaker to floor assembly

Used in step 5

Nut		Tightening torque	5 Nm
-----	--	-------------------	------

Central bass speaker trim

Used in step 5

Screw		Tightening torque	2 Nm
-------	--	-------------------	------

Seat to body

Used in step 6

M10	Renew screw.	Tightening torque	42 Nm
-----	--------------	-------------------	-------

Overview of Special Tools

0 496 569 (00 9 325) Wedge

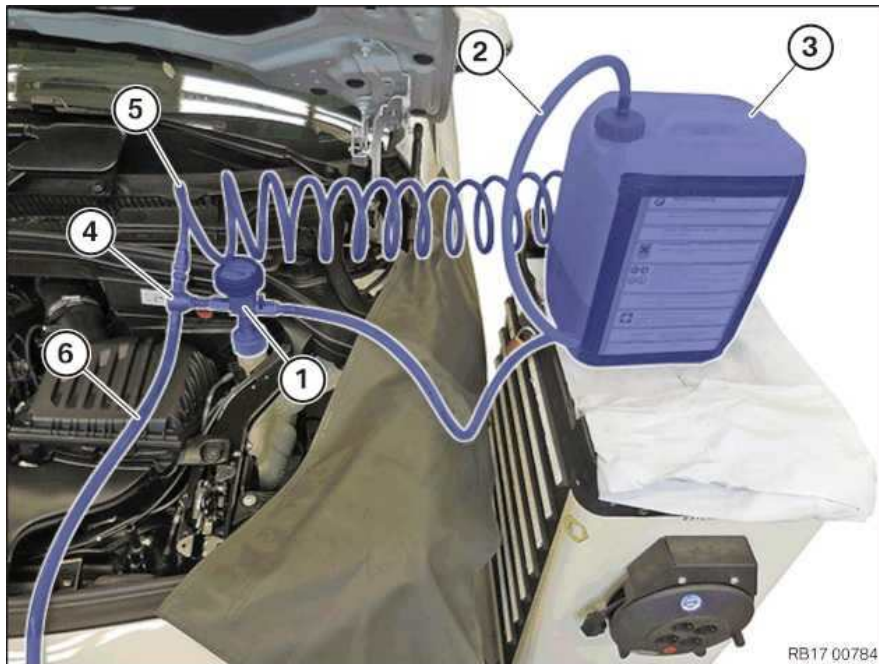


Common

Used in step 1

Usage	(Panel wedge) From 11/2008 this special tool replaces panel wedge 00 9 317 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	41 01 09 (507)

Vacuum filler device



Vacuum filler device - connected to the high-temperature coolant expansion tank

- 1 Vacuum filler device with pressure gauge and shutoff valves
- 2 Filling hose
- 3 Fluid tank with coolant
- 4 Venturi nozzle
- 5 Compressed air connection (maximum 6 bar)
- 6 Out-going hose (lead out-going hose into a collecting vessel)

Prerequisite

The coolant expansion tank for the cooling system must be empty. The fluid tank of the vacuum filler device must have a sufficient quantity of premixed coolant, 1 l to 2 l more than the specified capacity for the vehicle. The fluid tank of the vacuum filler device must be positioned at the same height as the coolant expansion tank. The compressed air connection must have a pressure of 6 bar. Ignition is switched off.



TECHNICAL INFORMATION

Follow notes for repair work on the cooling system.

For additional information see:

Main group 17

17 00 ... Notes for working on the cooling system



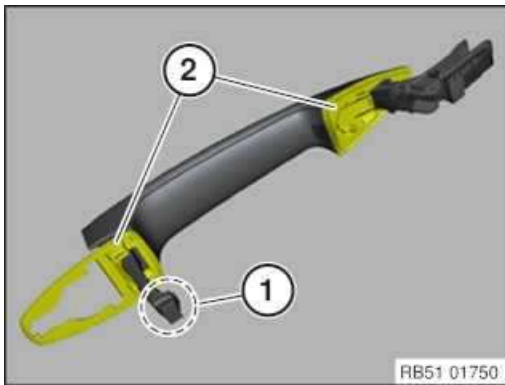
TECHNICAL INFORMATION

Life-long fill of coolant!

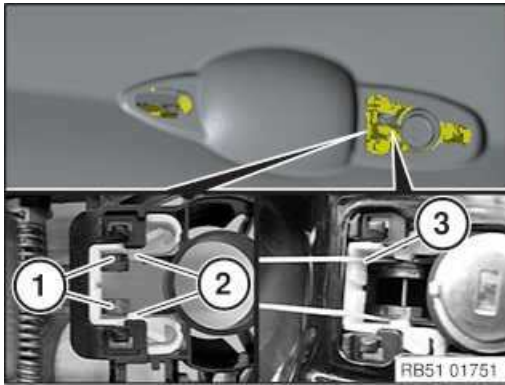
Do not reuse used coolant.

When replacing and removing components which rely on the corrosion protection effect of the coolant, it is essential to change the coolant. The cooling system must therefore be emptied and refilled.

In the case of other removal work involving the draining of part quantities of coolant, the coolant level must be topped up with new coolant.

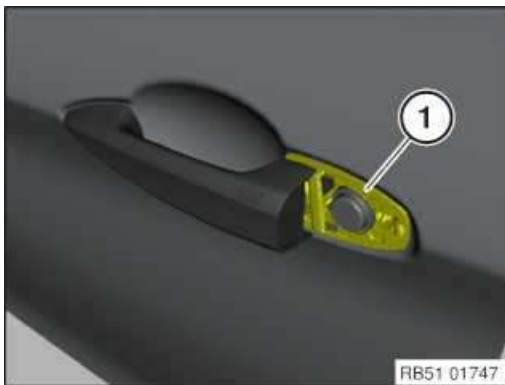


- Check the fixture (1) for damage.
Renew the damaged outside door handle if applicable.
- Check the seals (2); they must not be damaged or missing.

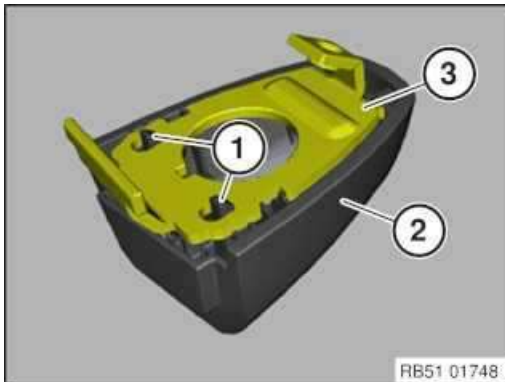


- During the disassembly of the outside door handle, the lock actuation (1) is held in the installation position by the retaining clamps (2).
- If the lock actuation (1) is not in the installation position, pull it outwards with a string (3) and hold it.
- Insert the outside door handle and feed it into the lock actuation (1) correctly.
- Remove the string (3).
- Carry out functional check with door open.

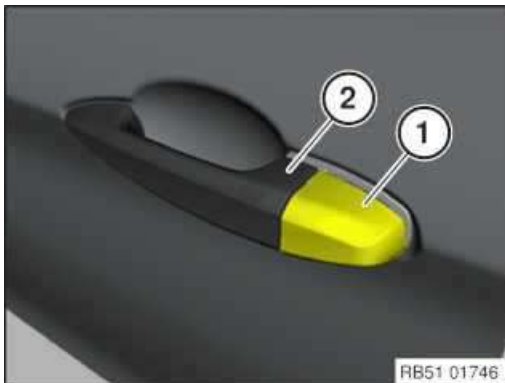
13 – Install the cover on the outside door handle



- Make sure the gasket (1) is fitted correctly.



- Check the latch mechanisms (1) of the cover (2) for damage and renew the cover (2) as needed.
The latch mechanisms (1) must not be damaged or missing.
- **When replacing the cover (2):** Remount retaining plate (3).

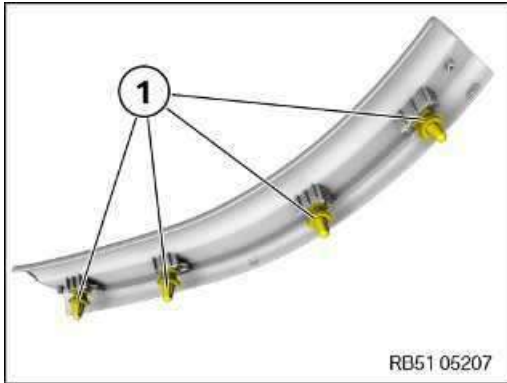


- Install the cover (1) with the outside door handle (2) slightly open.

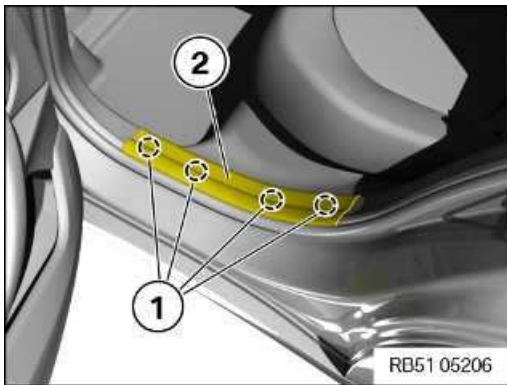


- Position the edge protection (1) correctly in the area of the bottom C-pillar trim.

32 – Installing the rear door sill cover strip

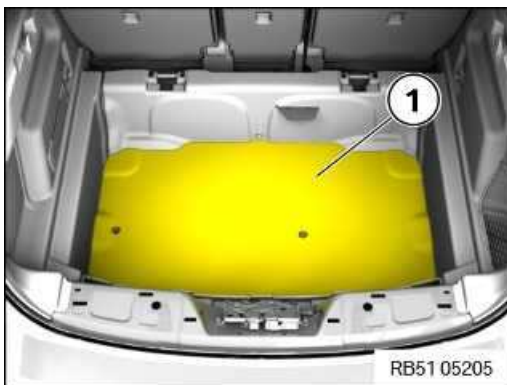


- Check the clips (1) for damage and renew where required.



- Clip in the door sill cover strip (2) with the clips (1).

33 – Installing the luggage compartment floor trim panel



- Position the luggage compartment floor trim panel (1).

34 – Inserting the Velcro fastener for the toolkit



- If several wheels are removed simultaneously: Use a piece of chalk to mark on each tyre the axle and side on which the corresponding wheel is fitted.
- Unscrew the wheel bolts (arrows) and remove the wheel.

Use the matching adapter from tool set (wheel bolt adapter set) to loosen and tighten down the wheel bolt with security code.

3 – Remove the front wheel arch trim



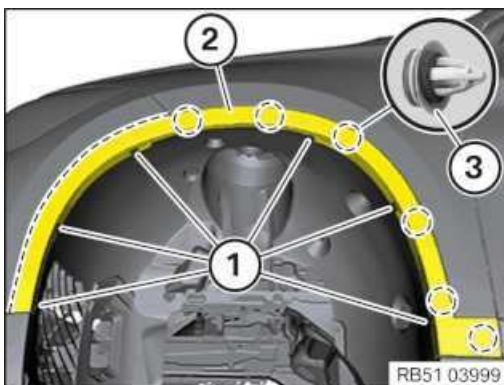
NOTICE

To provide a better overview: Schematic diagram with partially hidden components.



NOTICE

Description is for left component only. Procedure on the right side is identical.



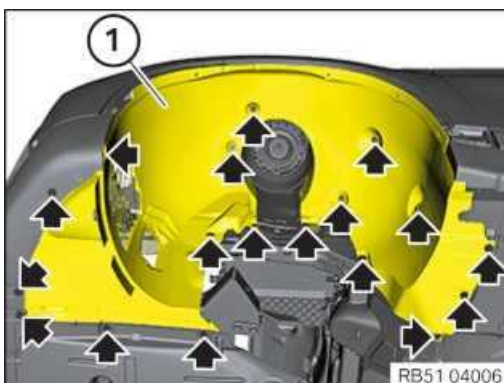
- Remove the blind rivets (1).
- Release the wheel arch trim (2) in the area of the side panel from the clips (3).
- Release the wheel arch trim (2) from the latch mechanisms on the bumper and remove.

4 – Removing the front right wheel arch cover



NOTICE

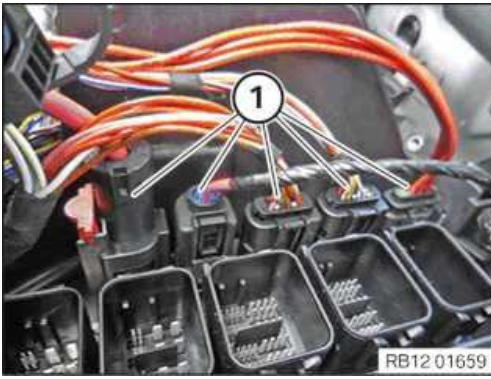
Description is for left component only. Procedure on the right side is identical.



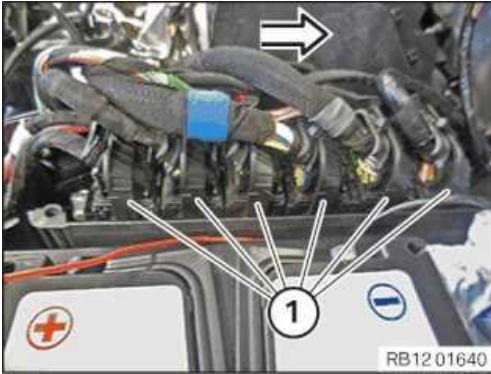
► Remove front wheel arch cover

- Unscrew all bolts and nuts (arrows).
- Guide the wheel arch cover (1) out.

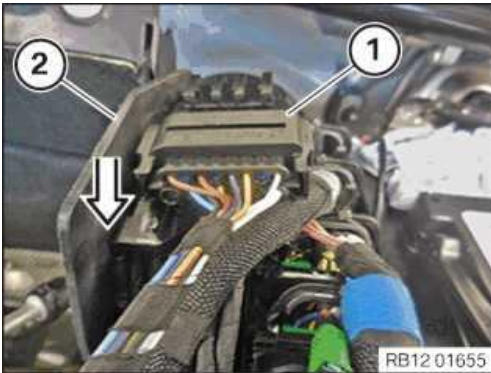
5 – Removing side panel sealing



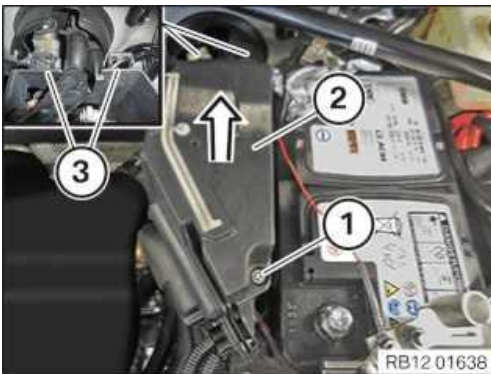
- Connect and lock the connector (1).
- Make sure the connectors (1) engage audibly.



- Connect connector (1) in direction of arrow and lock.
- Make sure the connectors (1) engage audibly.



- Connect and lock the connector (1).
- Make sure the connector (1) engages audibly.
- Insert the connector (1) in the direction of arrow at the electronics box (2) and install.



- Insert and install the cover (2) into the guides (3) in the direction of the arrow.
- Make sure the cover audibly engages (2) in the guides (3).
- Tighten down screw (1).

Cover to electronics box

RF5x26.5		Tightening torque	2,5 Nm
----------	--	-------------------	--------



- Thread in positive battery cable (2) on holder (3) and install.
- Feed in and install positive battery terminal (1).
- Tighten positive battery terminal (1).

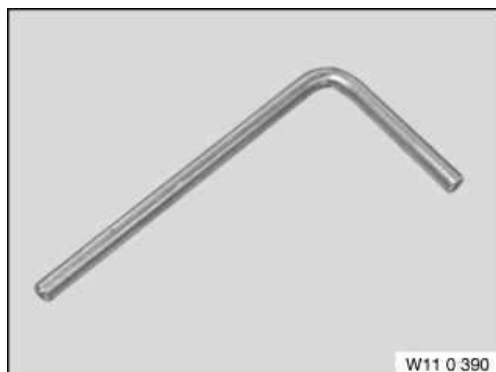
Positive battery terminal to battery

NutM6		Tightening torque	5 Nm
-------	--	-------------------	------

Alternator to component carrier			Used in step 76
M10x75 / M10x125		Tightening torque	38 Nm
Positive battery cable to alternator			Used in step 76
M8		Tightening torque	19 Nm
Air conditioning compressor in component carrier			Used in step 76
M10		Tightening torque	38 Nm
Ground cable to cylinder head			Used in step 76
M6x12		Tightening torque	8 Nm
Wiring harness to cylinder head cover			Used in step 76
TS5x20		Tightening torque	3,5 Nm
Fuel line to intake plenum			Used in step 76
TS6x20		Tightening torque	5 Nm
Differential pressure sensor to holder			Used in step 77
Screw		Tightening torque	4 Nm
Clamp for the pressure hose on the differential pressure sensor			Used in step 77
Clamp 15–19mm		Tightening torque	3 Nm
Clean air pipe to cylinder head cover			Used in step 78
Oval-head screw	Renew screw.	Tightening torque	8 Nm
Clean air pipe to intake silencer housing			Used in step 78
Clamp		Tightening torque	3 Nm
Resonator to manifold and clean air pipe			Used in step 80
Screw TS6	Renew screw.	Tightening torque	5 Nm

Overview of Special Tools

0 496 268 (11 0 390) Pin



Common	Used in step 7 76
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)

Oil filler plug on transfer box (VTG)			Used in step 65
M18x1.5		Tightening torque	35 Nm
Intermediate shaft to transfer box			Used in step 66
M8x35		Tightening torque	19 Nm
Exhaust-gas recirculation cooler to exhaust manifold			Used in step 67 69
M8x28	Replace screws	Tightening torque	32 Nm
Oil return line to turbocharger			Used in step 67 68
M6x12		Tightening torque	8 Nm
Holder to exhaust turbocharger and crankcase			Used in step 67
M8x16		Tightening torque	22 Nm
Exhaust turbocharger to exhaust manifold			Used in step 68
V-band clamp		Tightening torque	19 Nm
Oil feed line to bracket			Used in step 68
Torx screw M6x12		Tightening torque	8 Nm
Holder to exhaust turbocharger and crankcase			Used in step 68
M8x16		Tightening torque	22 Nm
Exhaust-gas recirculation cooler to cylinder head			Used in step 69
M8x20		Tightening torque	5 Nm
		Release angle	90 °
Intake plenum to exhaust-gas recirculation cooler			Used in step 69
M6		Tightening torque	11 Nm
Exhaust-gas recirculation cooler to cylinder head			Used in step 69
M8x20		Tightening torque	19 Nm
Heat shield for exhaust turbocharger			Used in step 69
Torx screw BM 6x12		Tightening torque	10 Nm
Banjo bolt for exhaust pressure pipe to exhaust manifold			Used in step 69
Hollow bolt	Renew sealing rings.	Tightening torque	30 Nm
Diesel particulate filter V-clip to exhaust turbocharger			Used in step 69
V-band clamp	Renew V-band clamp.	Tightening torque	15 Nm
Diesel particle filter to holder			Used in step 69
M8 hexagon nut		Tightening torque	19 Nm
Diesel particulate filter holder to gearbox			Used in step 69
M12x75		Tightening torque	66 Nm
Diesel particulate filter bracket to crankcase			Used in step 69
M10x35		Tightening torque	38 Nm



- Feed leakage oil line into injector and install.
- Lock the lock in direction of arrow (1).
The lock (1) must audibly engage.

48 – Installing high pressure lines between rail and injectors



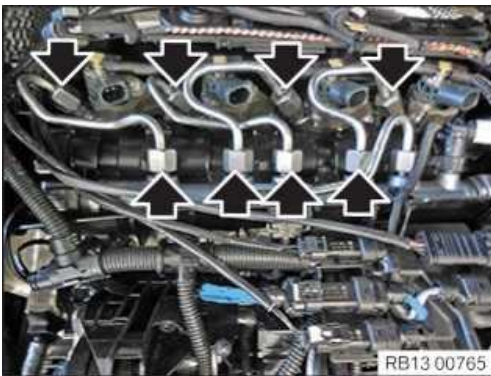
TECHNICAL INFORMATION

If several high pressure lines are removed, ensure that each high pressure line is re-installed in its original installation location. Mark high pressure lines.



TECHNICAL INFORMATION

Reset special tool in early to avoid bending pressure lines.



- Remove special tool .
- Feed in and install the high pressure lines (arrows).
- Hand-tighten the high pressure lines (arrows).



TECHNICAL INFORMATION

Renew high pressure lines when the tightening torque exceeds the maximum of 30 Nm.

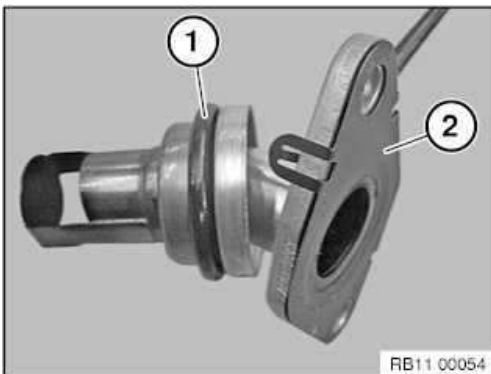
- Tighten the high pressure lines (arrows) with the special tool .

High pressure lines between injector and rail

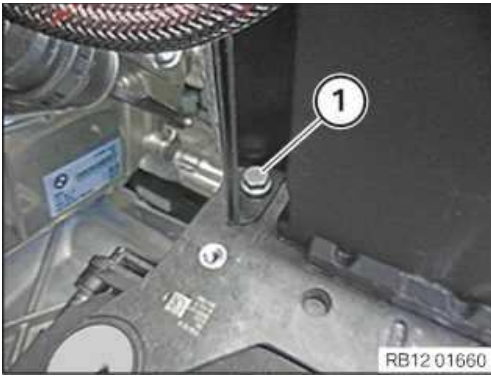
High pressure lines	Tightening torque	28 Nm

- Check the high pressure lines for tightness (**visual inspection**).

49 – Installing the intake plenum



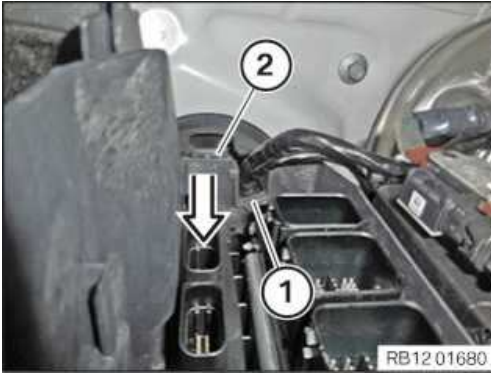
- Renew O-ring (1).
Parts: O-ring
- Unclip the seal (2).
- Renew gasket.
Parts: Gasket
- Position the seal (2) and clip it in.



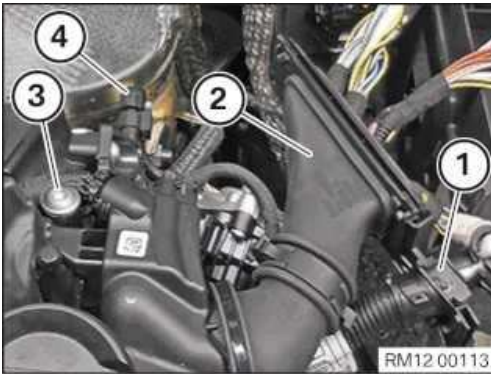
- Tighten down screw (1).

Electronics box to battery tray

M8X16	Tightening torque	15 Nm
-------	-------------------	-------



- Guide in and install the holder (1) in the electronics box (2) in direction of arrow.
- Make sure the bracket (1) engages audibly.

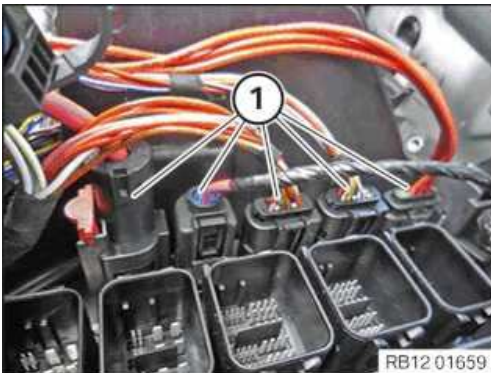


- Lay vehicle wiring harnesses (1) and (2) and mount on electronics box.
- Tighten down screw (3).

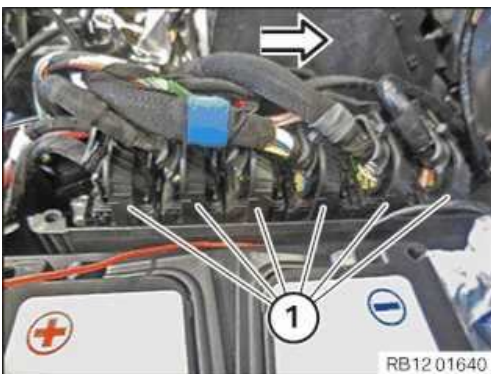
Wiring harness to cylinder head cover

TS5x20	Tightening torque	3,5 Nm
--------	-------------------	--------

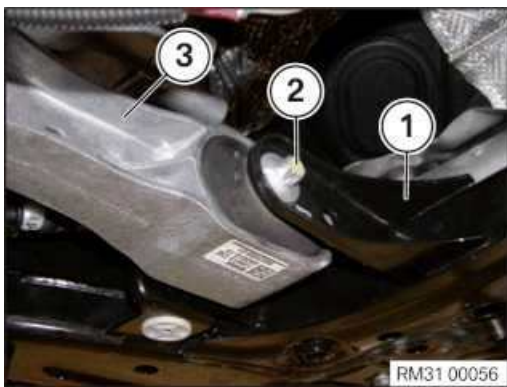
- Attach connector (4) to the differential pressure sensor and lock it audibly.



- Connect and lock the connector (1).
- Make sure the connectors (1) engage audibly.



- Connect connector (1) in direction of arrow and lock.
- Make sure the connectors (1) engage audibly.

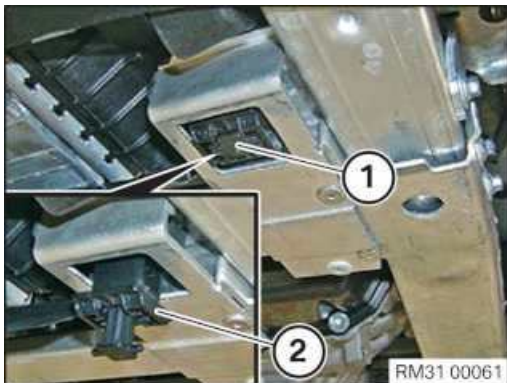


- Position the engine support (3) on the front axle support (1).
- Tighten down screw (2).

Holder with rubber mount to front axle support

M12 screw

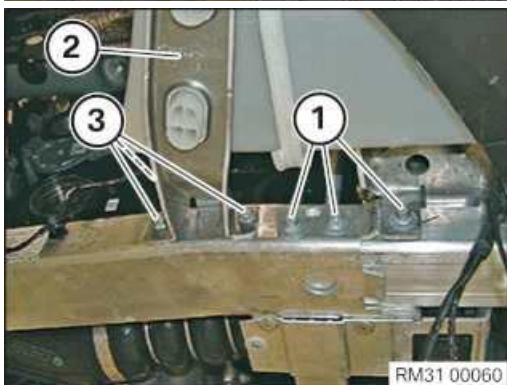
100 Nm



NOTICE

Perform the operations on the left and right side.

- Position the lock (2).
- Lock the bracket (1) of the lock (2) of the holder for the charge air cooler.



- **Only on right side:** Position the holder for the washer fluid reservoir (2).
- Tighten down screws (3).

Washer fluid reservoir holder to front axle support adapter plate

Tightening
torque

10 Nm



NOTICE

Perform the operations on the left and right side.

- Tighten the screws (1).

Deformation element, bottom, to adapter plate, front axle carrier

Tightening
torque

11,8 Nm

74 – Attaching connector at steering gear



- To connect the connector (see the following step): Connect the connector with the right hand.

The connectors can be accessed via the left output shaft.

13 32 051 Replacing the fuel filter

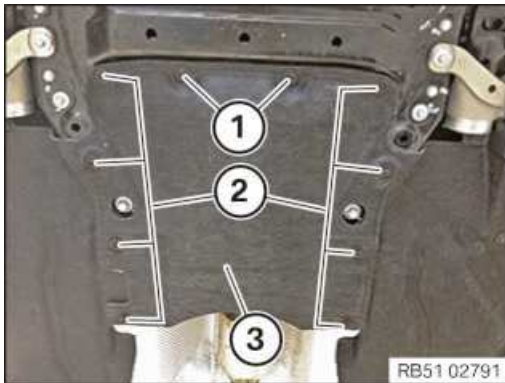


NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.

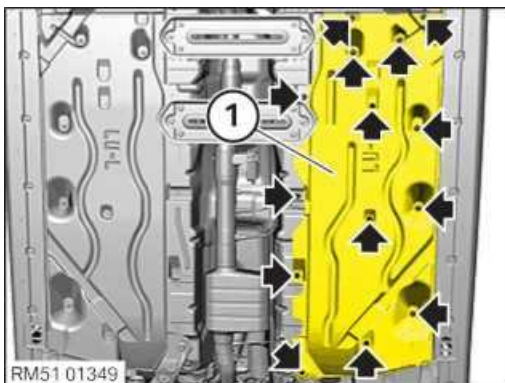
PRELIMINARY WORK

1 – If installed: Removing rear underbody protection



- Loosen screws (1) and (2).
- Remove underbody protection (3).

2 – Removing right underbody panelling



- Unscrew all bolts and nuts (arrows).
- Remove the underbody panelling (1).

MAIN WORK

3 – Removing the fuel filter

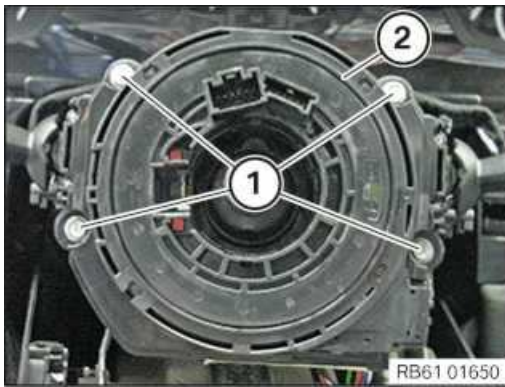


WARNING

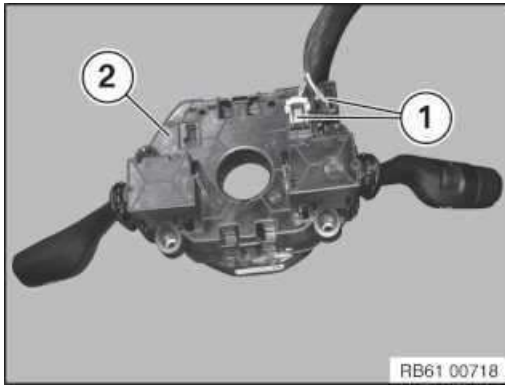
Working on fuel system.

Risk of fire! Danger of explosion!

- When working on the fuel system, make sure that the workbay is sufficiently ventilated, e.g. using extraction unit.
- Tightly seal off open lines and connections; collect any escaping fuel directly at the point of exit.
- No fire, sparks, open flames or smoking.

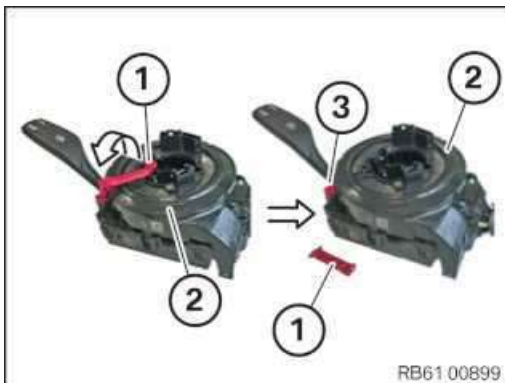


- Loosen screws (1).
- Remove the steering column switch cluster (SZL) (2).

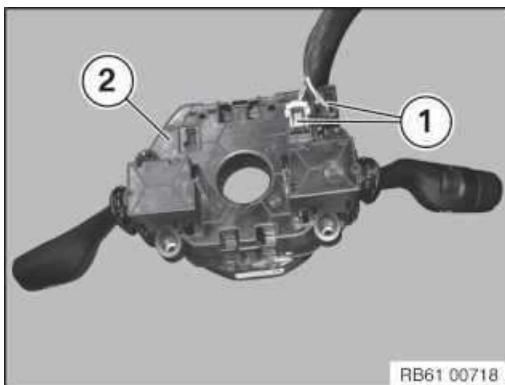


- Unlock and disconnect the connector (1) on the steering column switch cluster (SZL) (2).

7 – Installing the steering column switch cluster (SZL)



- **Replacement:** Break off the transportation retainer (1) on the steering column switch cluster (SZL) (2) in direction of arrow.
The broken-off piece of (3) the transportation retainer (1) remains in the steering column switch cluster (SZL) (2).



- Connect the connector (1) with the steering column switch cluster (SZL) (2).

► Check the neutral position of the clock spring

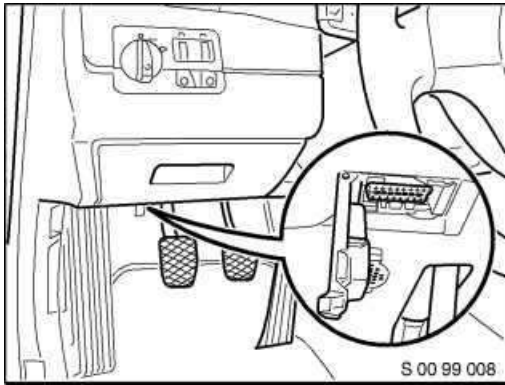


TECHNICAL INFORMATION

Different variants may be installed depending on the vehicle equipment.

Check

- Please refer to Enclosure 2: ScanTool read out and results to diesel vehicle



OBD diagnosis connection in the vehicle

1.3.2 Malfunction indicator lamp check (MIL = malfunction indicator lamp)

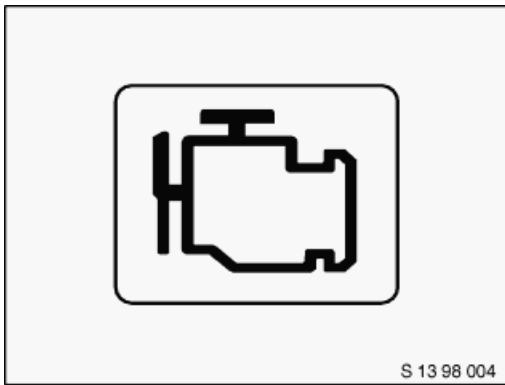


Figure of the malfunction indicator lamp (MIL)

- **Visual inspection of the function of malfunction indicator lamp (MIL)**
 - Ignition on – engine off - MIL lit = OK
 - Ignition on – engine off - MIL not lit = not OK
 - Ignition on – engine running - MIL off = OK
 - Ignition on – engine running - MIL lit = not OK
- **Reading the status of the MIL from the ScanTool in Mode 1-**
 - If the ScanTool output is "MIL Off": = OK
 - If the ScanTool output is "MIL On": = not OK

1.3.3 Status and evaluation of OBD readiness test (Readiness codes) in the ScanTool mode 1

Read out and evaluate individual readiness test codes in the two OBD categories:

- **Group B: Continuous monitoring**
- **Group C: Non-continuous monitoring**

Note: In the ScanTool, following selection is necessarily applicable:

"Delete readiness test for fault code"!

Here, the Readiness tests from several driving cycles are displayed and the probability is highest that all supported RCs are set to positive. When selecting "Readiness test of this cycle", the supported RCs are usually not set to positive.

Generally, immediately before the exhaust-gas test without a wilful occasion, for example, if no drivability complaints have been made by the customers, **the fault memory should not be deleted**, because this will also delete all readiness test codes, in addition to the error codes.

Only within the scope of service review or for customer complaints, the fault memory should be viewed in mode 3 with regard to possible repeatedly confirmed errors shortly before the exhaust-gas test. If errors exist that would lead to a failure of the exhaust-gas test, carry out a repair and then delete the fault memory. Then 2-