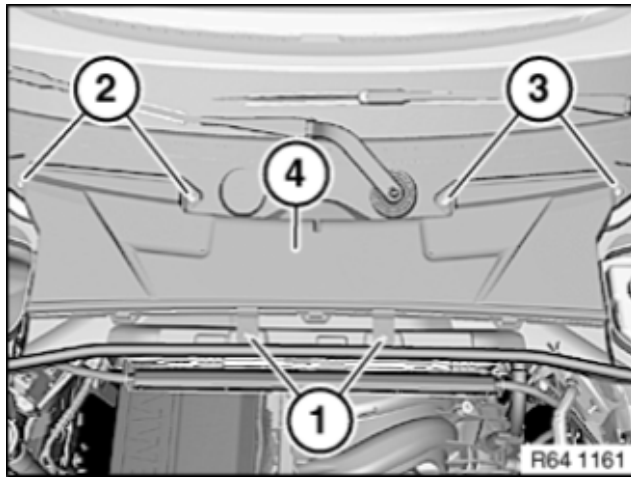


Removal of Intake Manifold



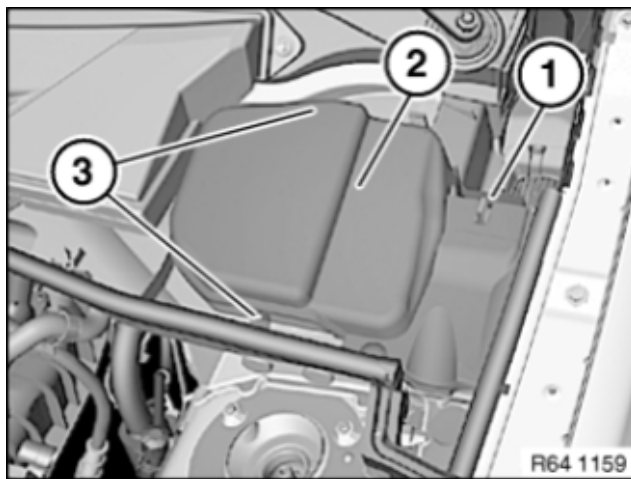
Release the screws (1).

Unfasten the screws (2 and 3).

Remove the upper section of the microfilter housing (4).

Installation note:

Make sure the upper section of the microfilter housing (4) is correctly seated.



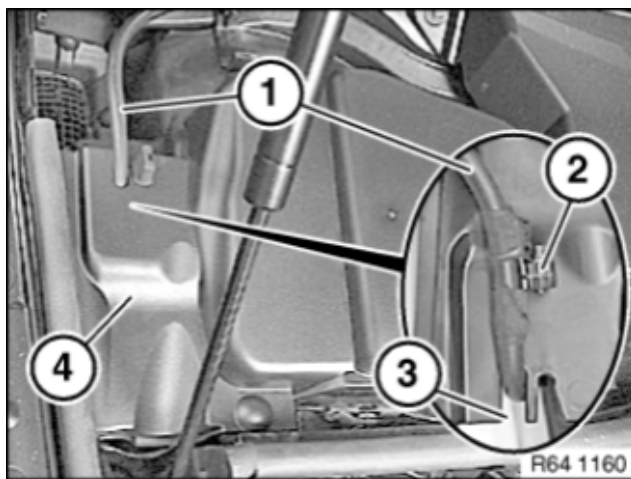
Release the holder (1).

Release the latch mechanisms (3).

Remove the left cover (2).

Installation note:

Make sure the right cover (2) is correctly seated.



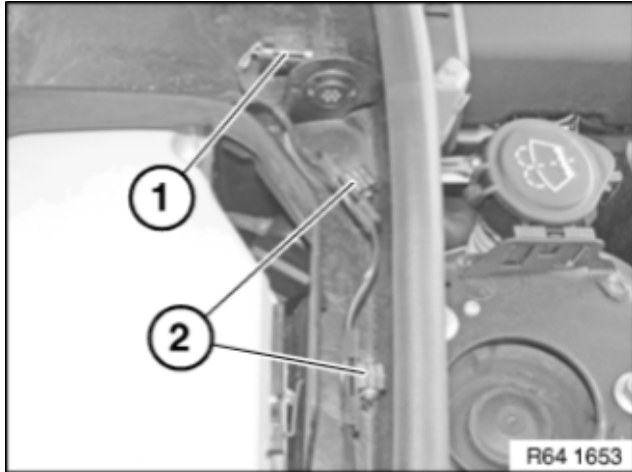
Note:

The right cover (4) is removed in the same way as the left cover.

Release the cable holder (2) and remove the hose (1) from the cover (4).

Installation note:

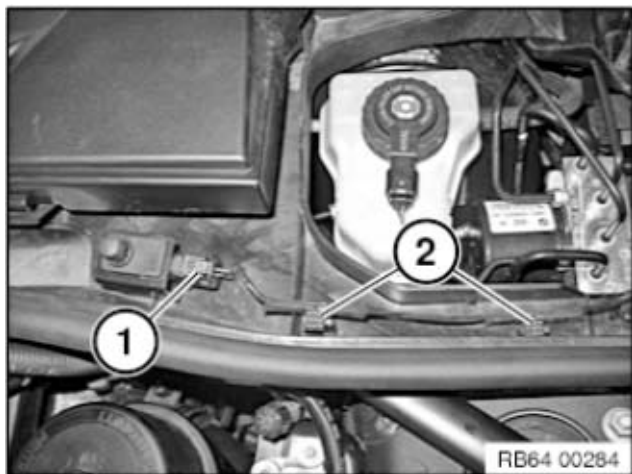
Make sure the cable clip (2) and the hose (1) are correctly seated in the recess (3).



Disconnect the battery.

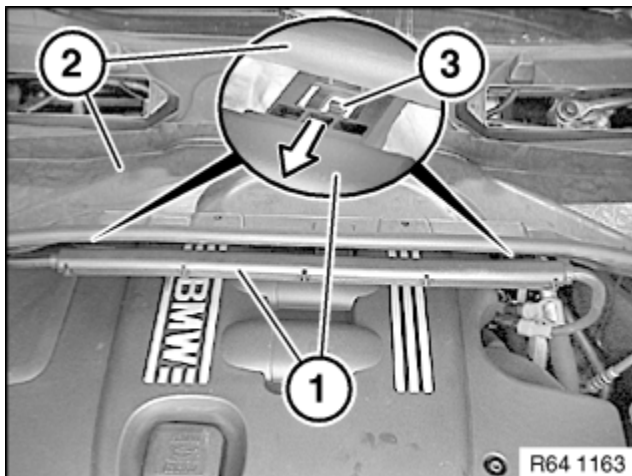
Unfasten the plug connection (1) and disconnect.

Unclamp the cable from the guides (2).



Unfasten the plug connection (1) and disconnect.

Unclamp the cable from the guides (2).



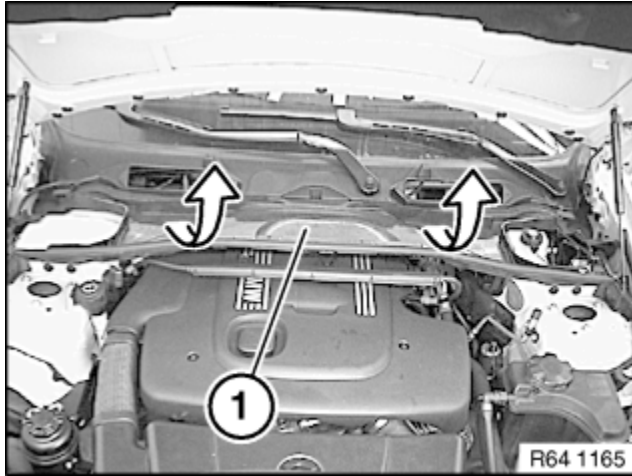
Press the retaining lugs (3).

Release the cable strip (1) in the direction of the arrow from the lower section of the microfilter housing (2).

Installation note:

The retaining lugs (3) must not be damaged or missing.

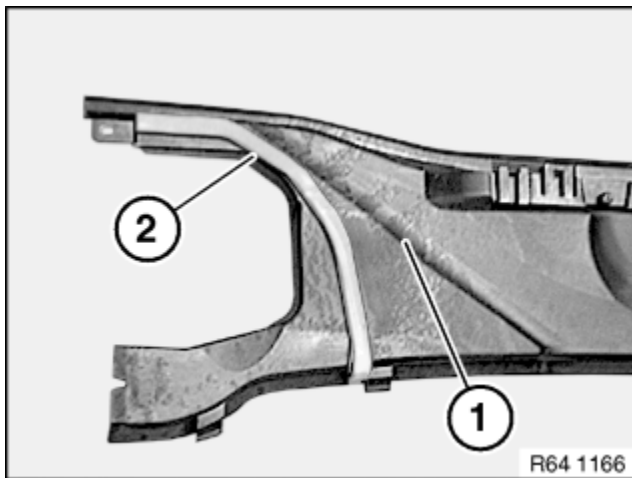
Make sure the cable strip is correctly seated.



Feed out the microfilter housing lower section (1) in the direction of the arrow and remove.

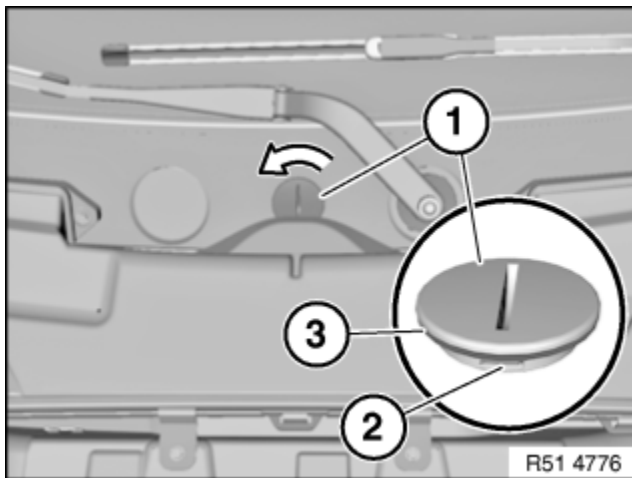
Installation note:

Make sure the microfilter housing lower section (1) is correctly seated.



Installation note:

The seal (2) of the microfilter housing lower section (1) must not be damaged or missing.



Tension strut removal

Remove the cover (1) and release the screw underneath.

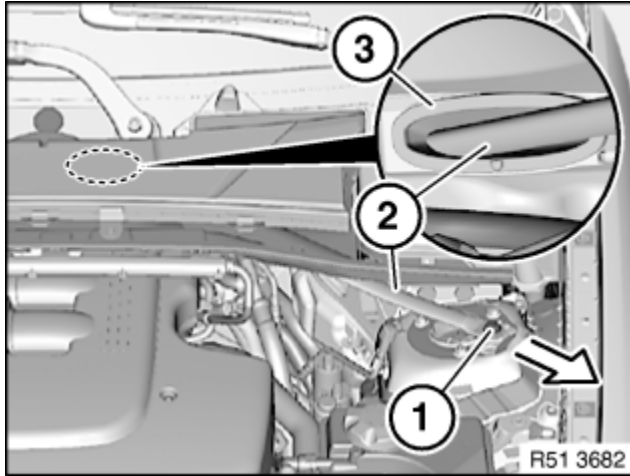
Note:

The cover (1) is available in two versions:

1. Turn the cover (with the notch) approx. 45° to the left.
2. Disengage the cover (without the notch) in an upward direction.

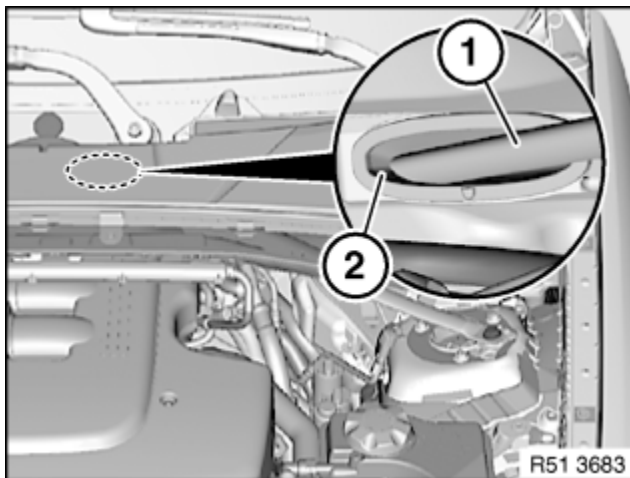
Note:

Once the tension struts are removed, it is no longer permissible to drive the vehicle. The latch mechanism (2) and gasket (3) of the cover (1) must not be damaged. Even minor damage to the cover (1) can lead to water ingress; replace the cover (1) if necessary.



Release the screw (1).
Hold down the grommet (3) and pull out the left and right tension struts (2) in the direction of the arrow.

Note: The grommet (3) must not be pulled out of the bulkhead. Correct feeding in is not possible in the installed state.



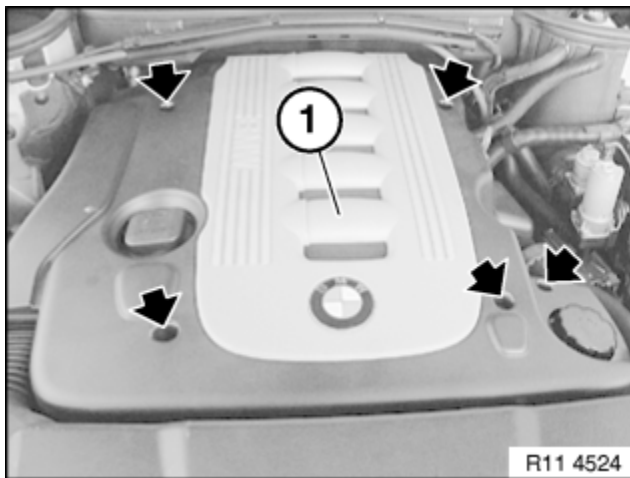
Feed the tension strut (1) carefully into the grommet (2).

Installation note:

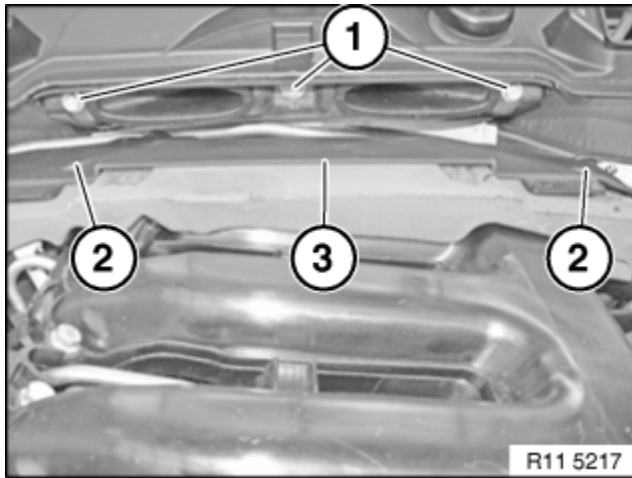
Replace the screws (reference the SIB for the part numbers).

M10 screw – 40 Nm initial torque followed by 60° angle torque

M12x1.5 screw – 100 Nm initial torque followed by 100° angle torque



Release the screws (arrows).
Raise the front acoustic cover (1) and remove.

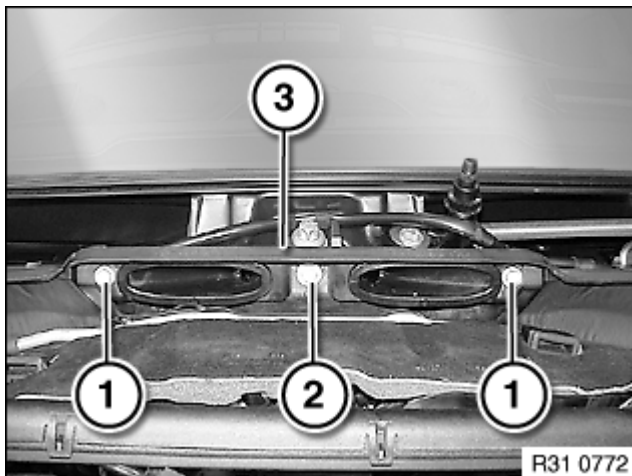


Release the screws (1 and 2).

Remove the acoustic cover (3).

Installation note:

Tightening torque: 8 Nm

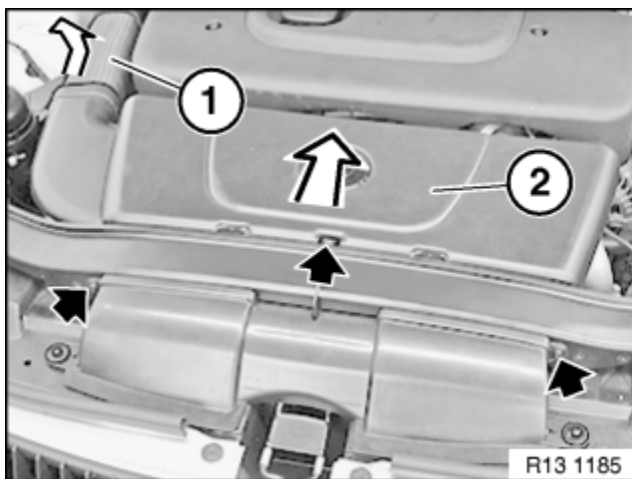


Release the screws (1 and 2).

Remove the heater end panel (3).

Installation note:

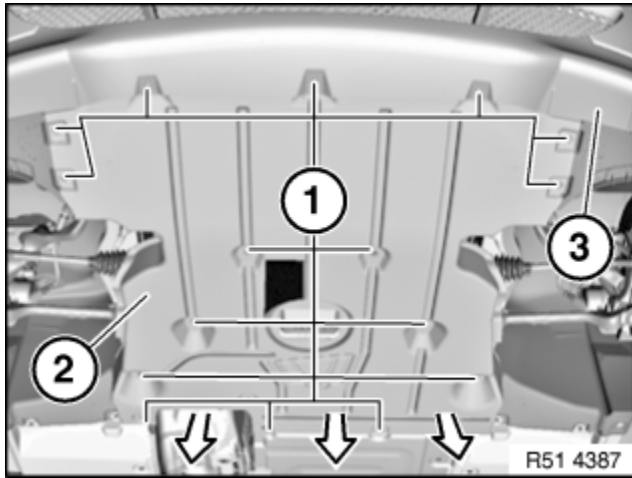
Make sure the heater end panel (3) is correctly fitted.



Release the screws (arrows).

Pull off the hose (1) in the direction of the arrow.

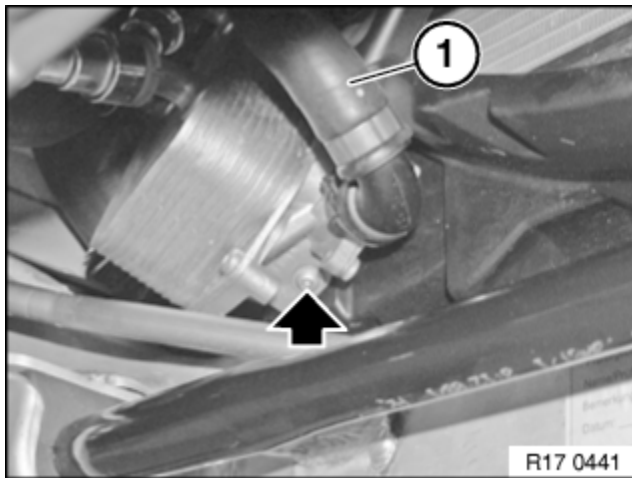
Remove the intake port (2) in the direction of the arrow.



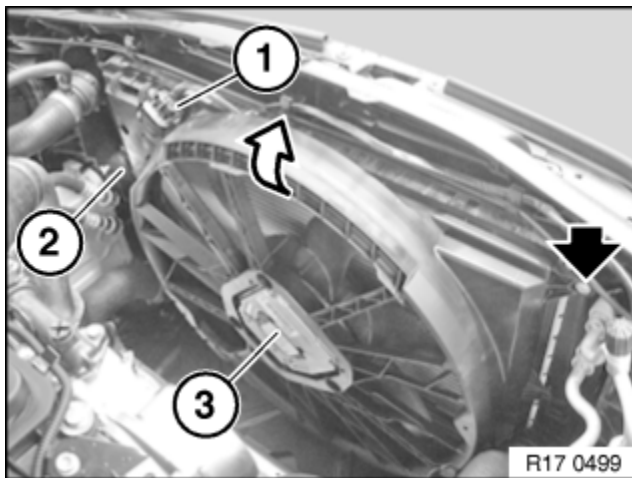
Release the screws (1).
Pull out the underbody protection (2) under the bumper trim panel (3).

Installation note:

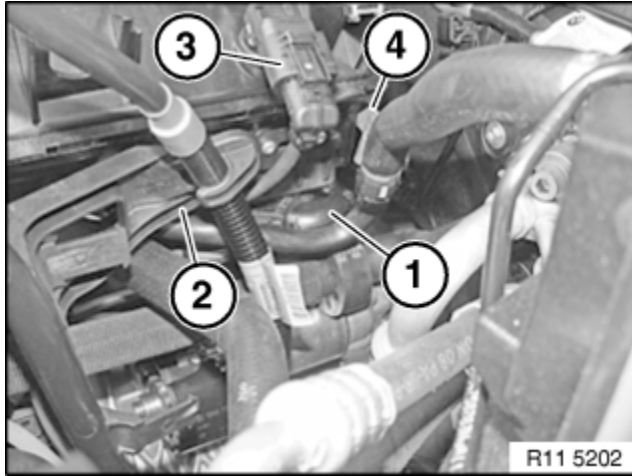
Center the underbody protection (2) and tighten down the screws (1).



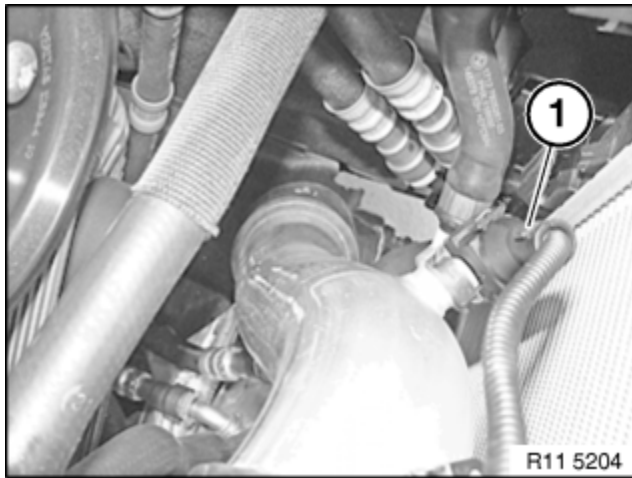
Release the screw (arrow).
Unclamp the hose (1) from the fan cowl.



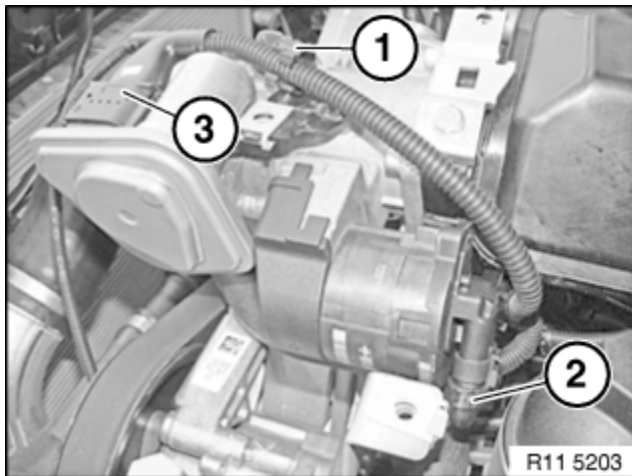
Unlock and disconnect the connector (1).
Release the screw (arrow).
Unlock the latch mechanism (2) and remove the fan cowl (3) towards the top.



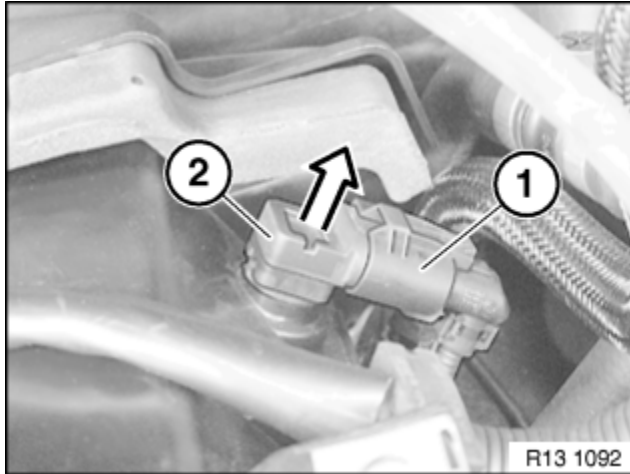
Unlock and disconnect the plug connection (1) on the swirl-flap actuator. Release the screw (2) on the dipstick. Unlock and disconnect the fuel-pressure sensor plug connection (3). Unclip the vacuum line (4) from the holder.



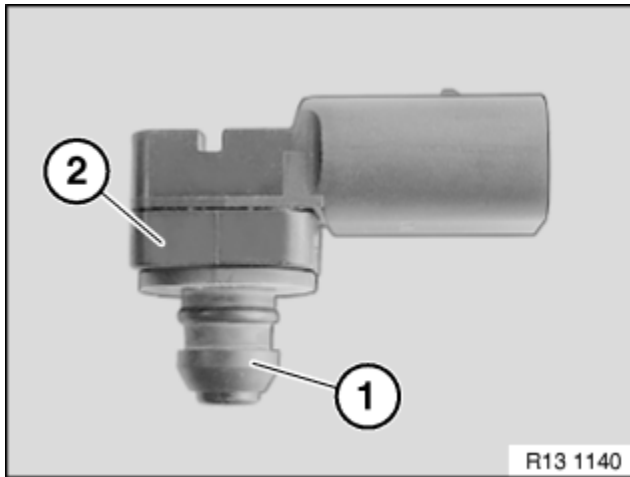
Disconnect the plug connection (1) on the right pressure pipe.



Open the cable clips (1). Unlock and disconnect the plug connection (2) of the exhaust-gas recirculation valve. Unlock and disconnect the plug connection (3) of the electromotive throttle actuator.

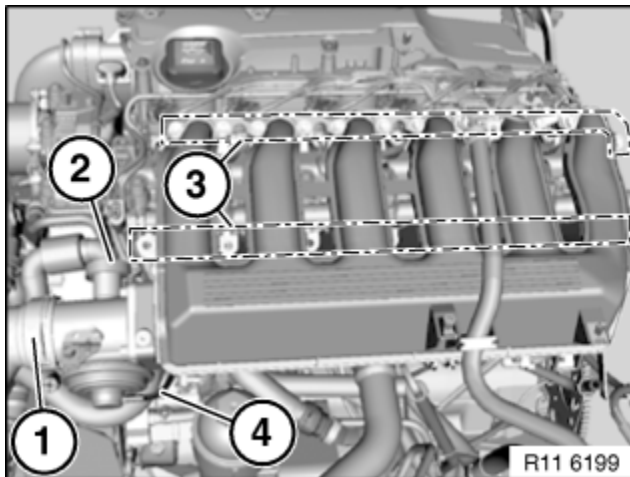


Unlock and disconnect the connector (1). Remove the charging pressure sensor (2) in the direction of the arrow.



Installation note:

Replace the sealing ring (1) of the charging pressure sensor (2).



Unlock and detach the charge air hose (1). Release the profile clamp (2) on the exhaust-gas recirculation line.

Release the screw connection along the lines (3).

Remove the intake manifold.

Release the injector wiring harness from the valve cover.

Installation note:

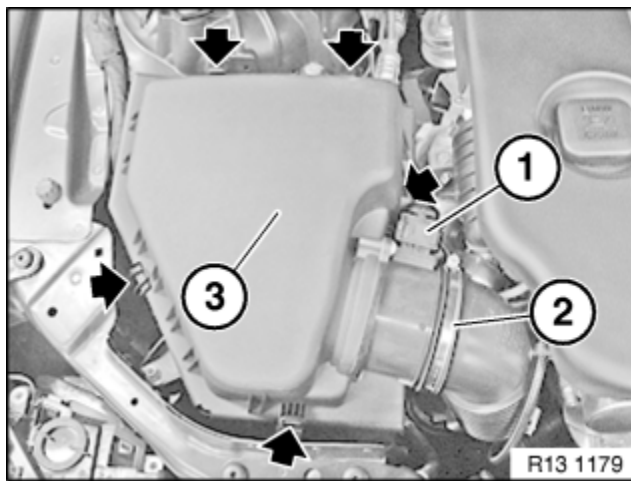
Replace all gaskets (reference the SIB for the part numbers).

Tightening torque of clamp – 5 Nm

Tightening torque of manifold screws – 8 Nm

Note: The picture shows the M57T2 Europe.

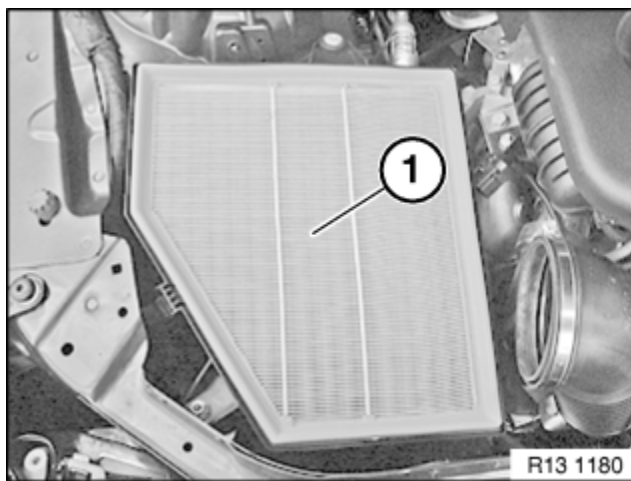
Removing the Valve Cover



Unlock the plug (1) and remove.
 Release the clamp (2).
 Open the retainers (arrows).
 Remove the upper section of the intake filter housing (3) towards the top.

Installation:

Make sure the retainers are correctly locked.

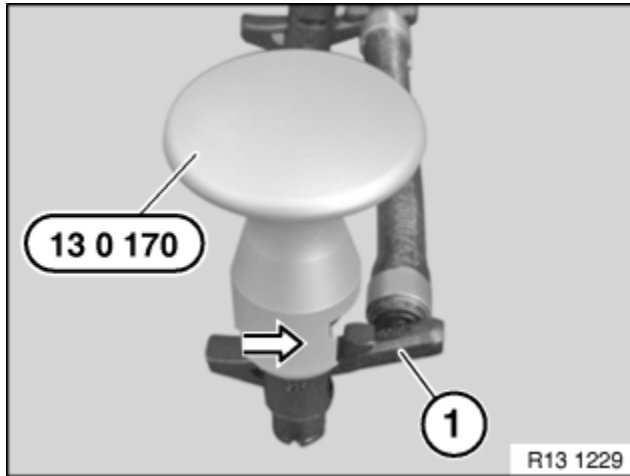


Remove the air filter element (1) from the intake filter housing.

Installation:

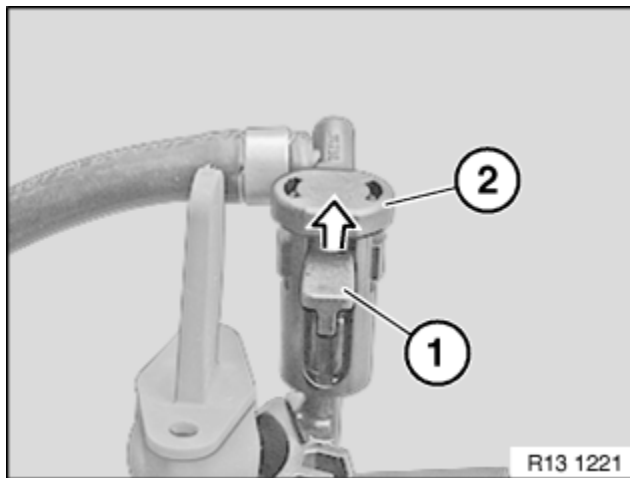
Clean the intake filter housing from the inside.

Inspect the air filter element and replace if necessary.



Leakage Line Removal:

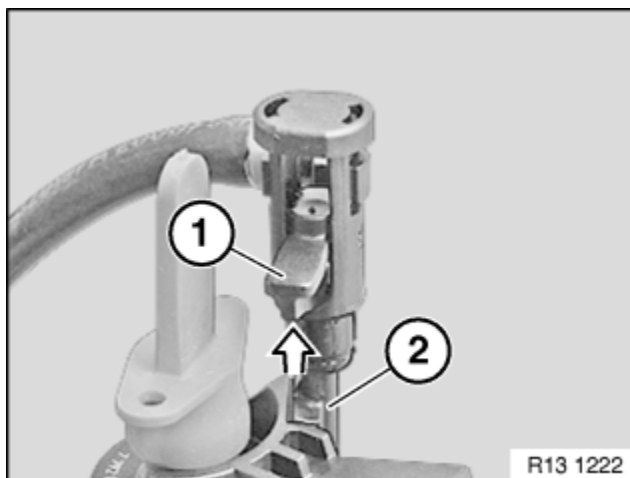
Push special tool 13 0 170 in the direction of the arrow onto the connection (1).



Grip the connection for the leakage oil line (1).
Release the lock (2) with special tool 13 0 170 in the direction of the arrow.

This procedure applies to all cylinders.

(The illustration shows the injector removed.)



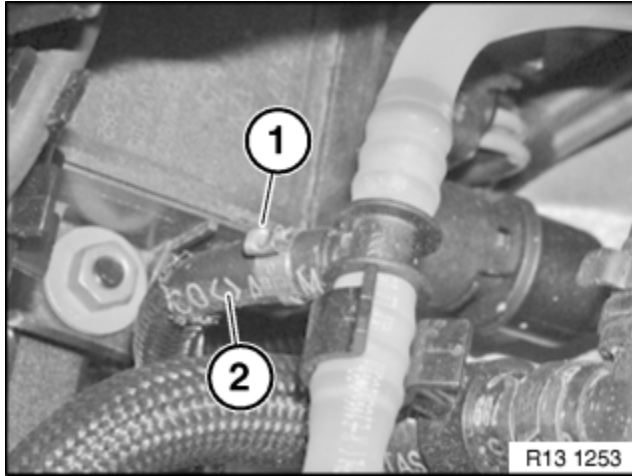
Detach the connection (1) for the leakage oil line in the direction of the arrow from the injector (2).

This procedure applies to all cylinders.

Installation:

Replace the sealing rings on the injector.

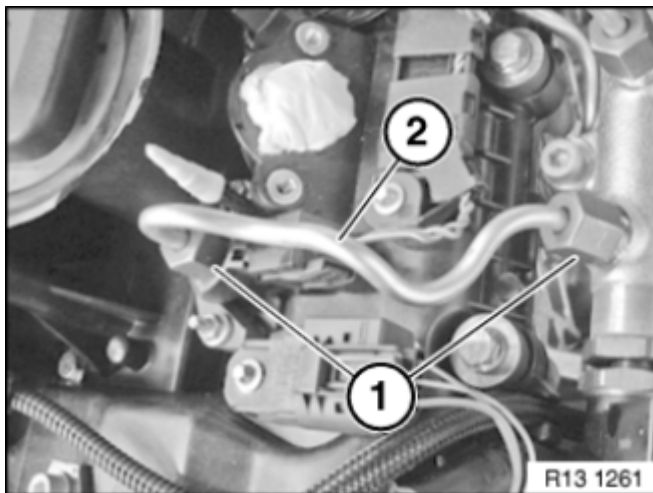
(The illustration shows the injector removed.)



Release the clamp (1).
Carefully detach the leakage oil line (2).



Tool Required:
Fuel line socket 13 5 020



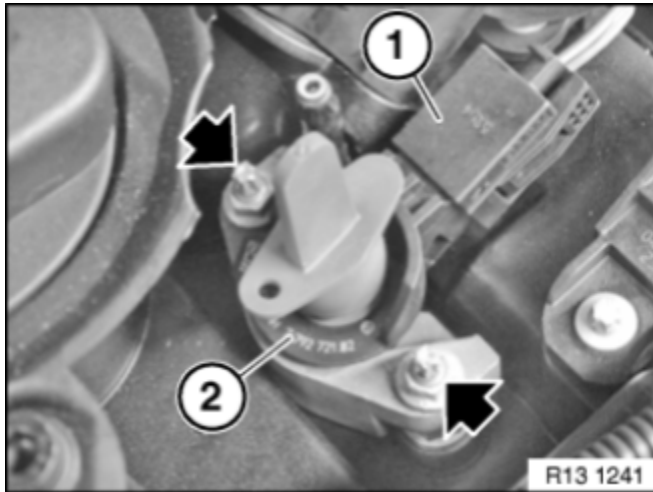
Pressure Line Removal:
Release the union nuts (1) of the pressure line (2) with special tool 13 5 020. Repeat the procedure for all pressure lines. Do not mix up the pressure lines when installing.

Note:
To avoid bending pressure lines, only turn special tool 13 5 020 in short increments.

Installation note:

When replacing:

1. Hand-tighten all union nuts on the pressure lines.
2. Tighten down the union nuts on the injectors to the specified torque (23 Nm).
3. Check all components of the common rail system for tightness.

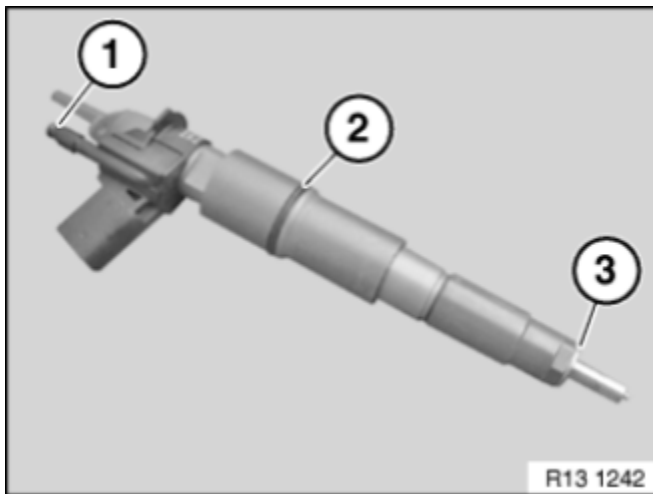
**Injector Removal:**

The following description applies to all injectors.

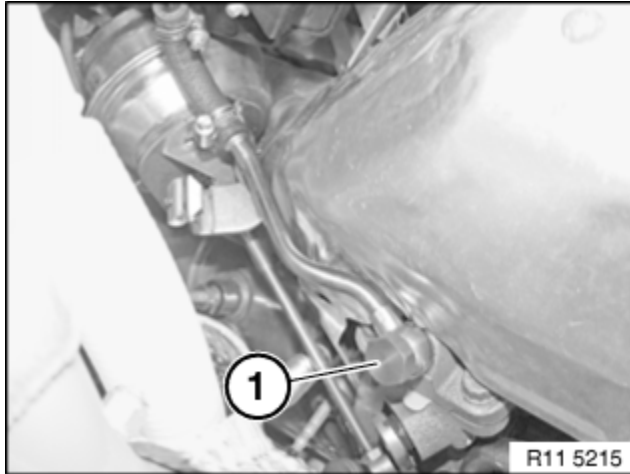
Unlock the connector (1) and remove.
Unscrew the nuts (arrows).
Remove the injector (2).

Installation note:

Tightening torque: 8.8 Nm

**Installation note:**

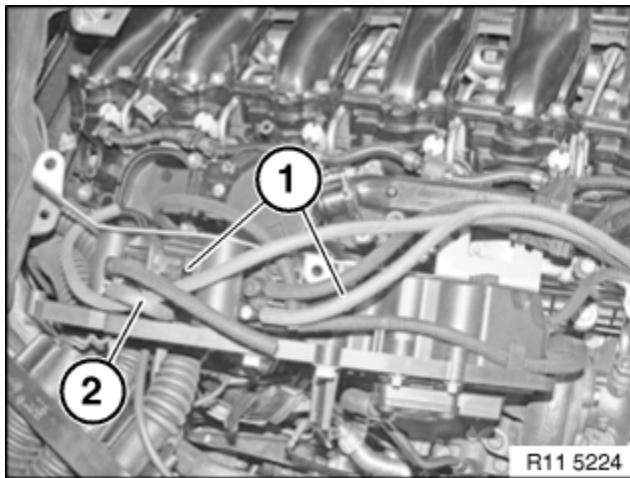
Replace the sealing rings (1 and 2).
Replace the gasket (3).
Lightly lubricate the injector slot with highly heat-resistant grease (P/N 83 23 0 441 070) prior to installation of the injectors.



Release the banjo bolt (1) on the exhaust manifold.

Installation:

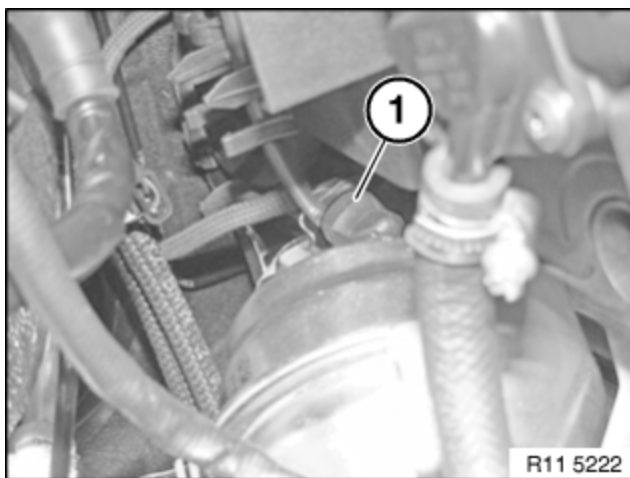
Tightening torque: 35 Nm



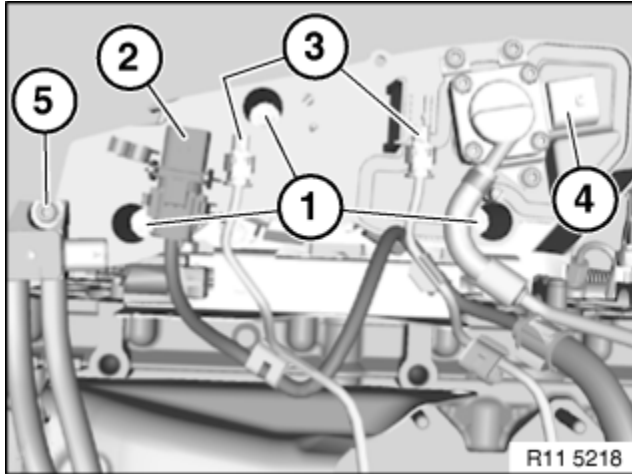
Unlock and disconnect the connector (1) on the electro-pneumatic pressure converter.

Detach the blue vacuum hose (2) from the vacuum unit (turbine control flap).

If necessary, disconnect the red vacuum hose from the vacuum unit (compressor bypass).



Unlock and release the connector (1) under the vacuum reservoir of the EPPT valve.



Release the screws (1) on the vacuum reservoir.

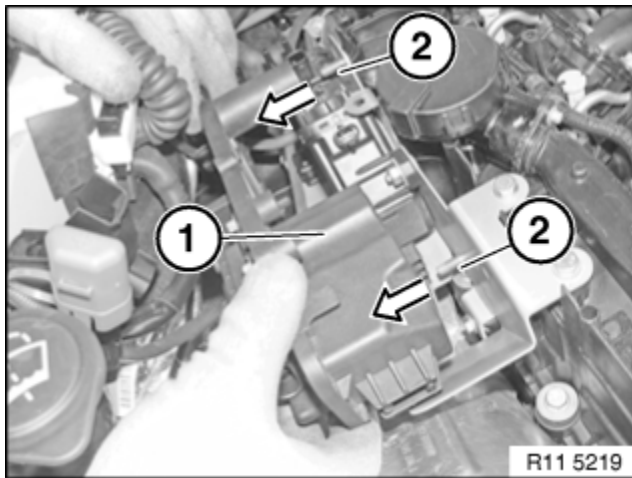
Tightening torque: 8 Nm±1

Unlock, detach and disconnect the connectors (2, 3 and 4).

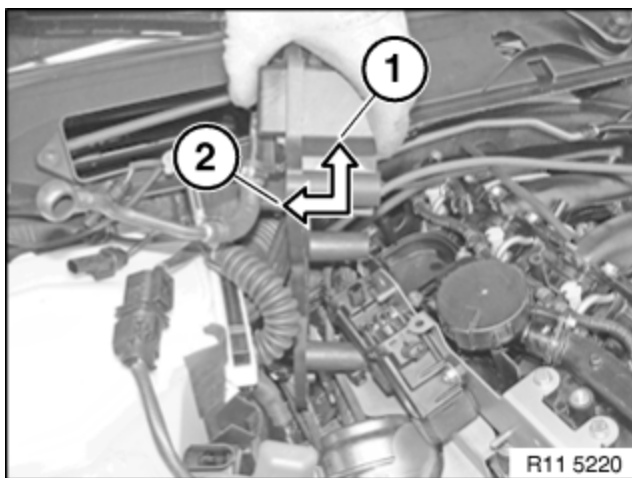
Release the fuel differential-pressure sensor (5) from the vacuum reservoir.

Tightening torque: 4 Nm

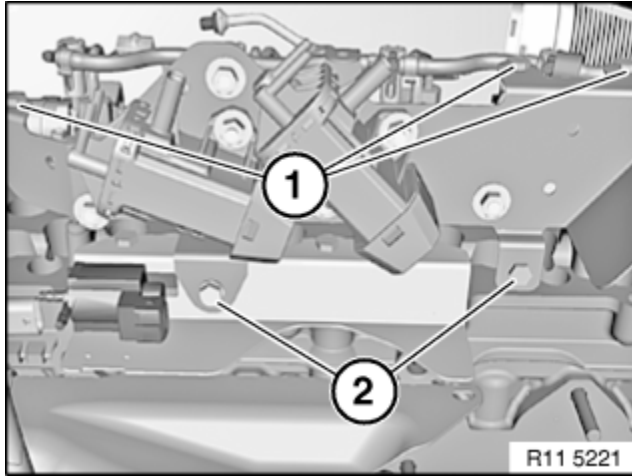
Unlock and detach all connectors.



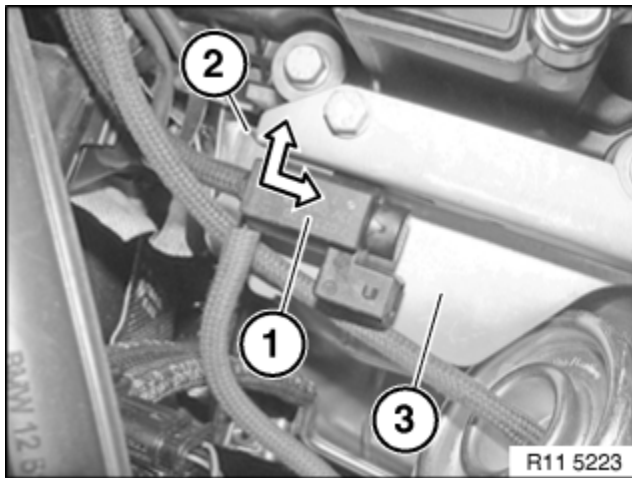
Remove the vacuum reservoir (1) from the stud bolts (2).



Feed out the vacuum reservoir upwards and to the side.

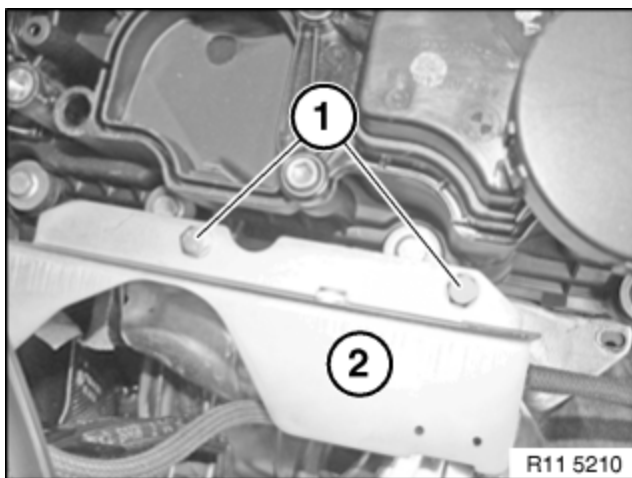


Release the screws (1 and 2) and remove the vacuum reservoir carrier.
Tightening torque: 8 Nm \pm 1



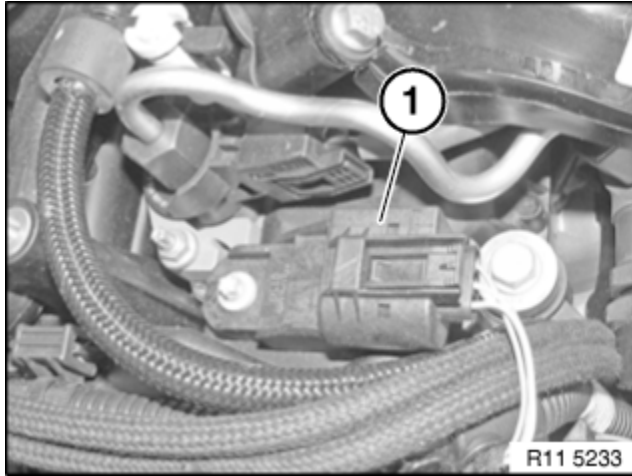
Unlock the EPPT valve (1) from the holder (2), slide forwards and remove from the retaining plate.

Note:
EPPT = pressure converter

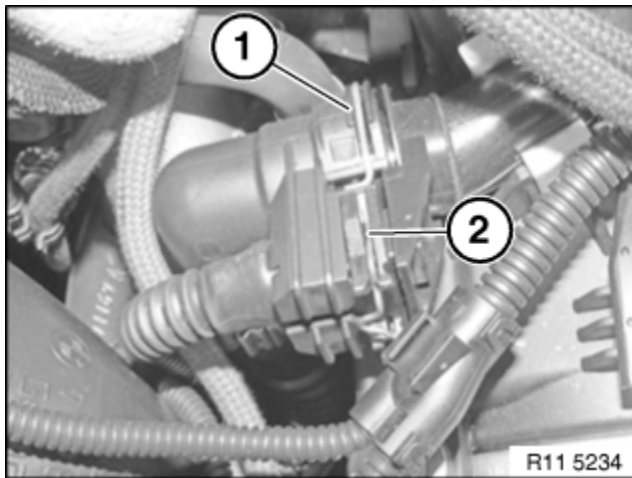


Release the screws (1).
Tightening torque: 8 Nm \pm 1

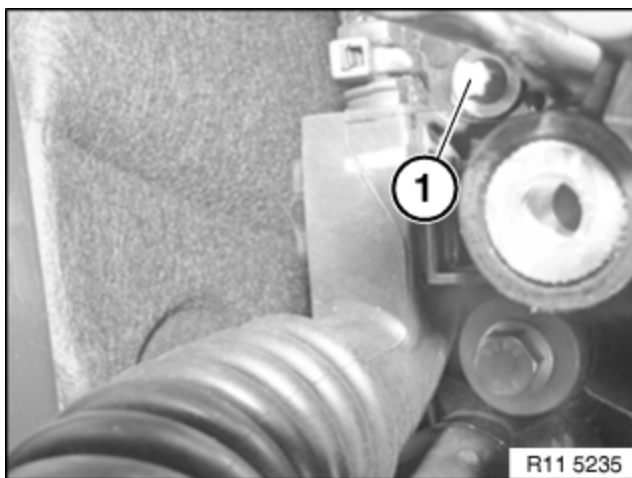
The picture shows the vacuum unit removed (turbine control flap).



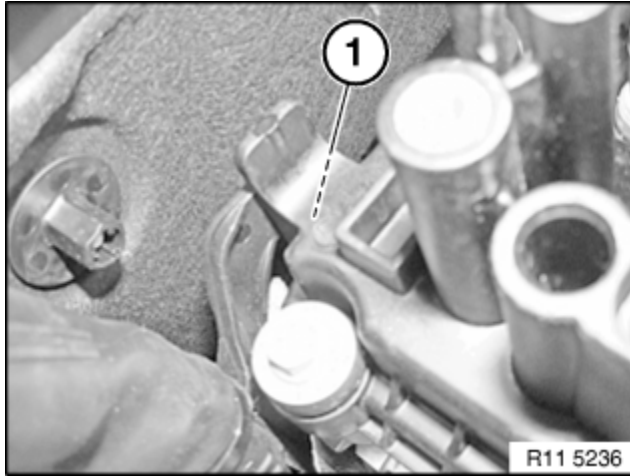
Unlock the connector (1) and remove. Detach the holder (2) from the cylinder head cover.



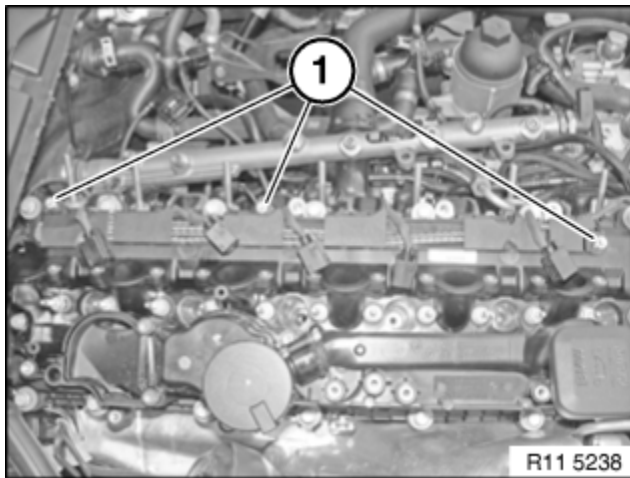
Unlock the connections (1 and 2) from the heating element and detach.



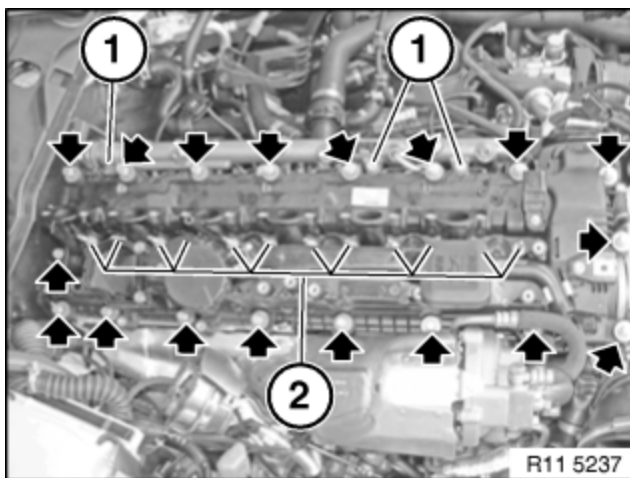
On the reverse side of cylinder head cover, release the screw (1) and detach the wiring harness towards the top.



Release the screw (1) on the reverse side of the cylinder head cover.



Release the screws (1).
Lay the wiring harness for the injection system to one side.



Release the screws (1).
Lay the rail to one side.
Tightening torque: 19 Nm \pm 3

Release all bolts (arrows).
Tightening torque: 8 Nm \pm 1

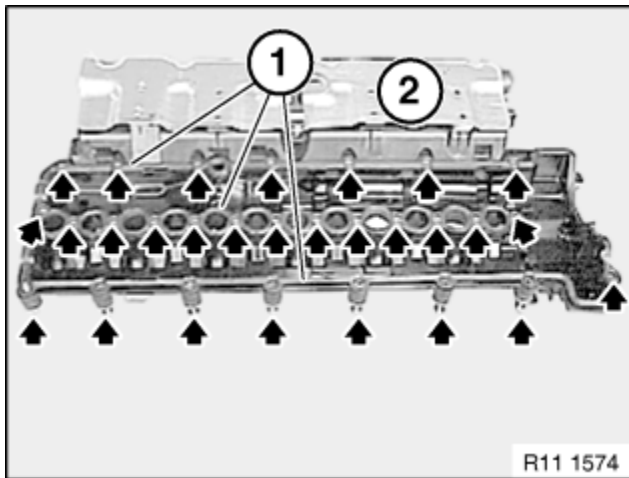
Release the bolts (2) from the inside to the outside.
Tightening torque: 8 Nm \pm 1

Remove the cylinder head cover.

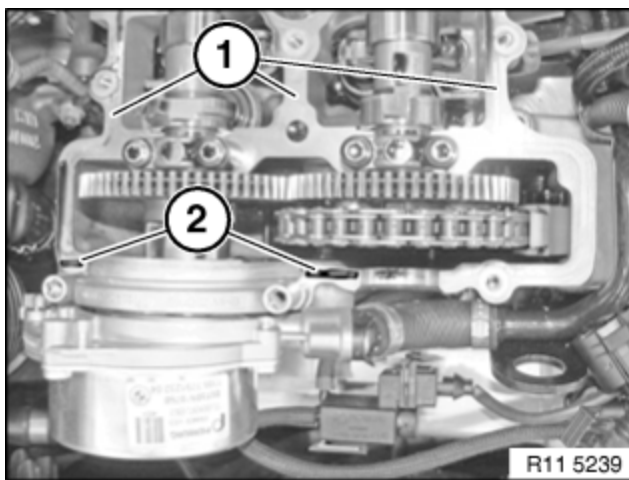
Installation note:

First tighten the bolts (2) from the inside to the outside.

Tighten down the outer bolts diagonally and evenly.



Release the screws (arrows).
 Replace the profile seals (1).
 Keep the sealing surfaces clean and free
 of seal debris.



Remove the gasket debris from the sealing
 surfaces (1) of the cylinder head and clean.

Apply a bead of Drei Bond-1209 sealant
 (P/N 07589062376), approximately 3 mm
 wide and 2 mm high, in the area of the
 joints (2).

Follow the procedure in SI B11 03 14 for cleaning the intake manifold and intake valves.

For correct vacuum hose routing, refer to attachment 1174... Vacuum system arrangement (M57T2TOP_SCR).pdf.