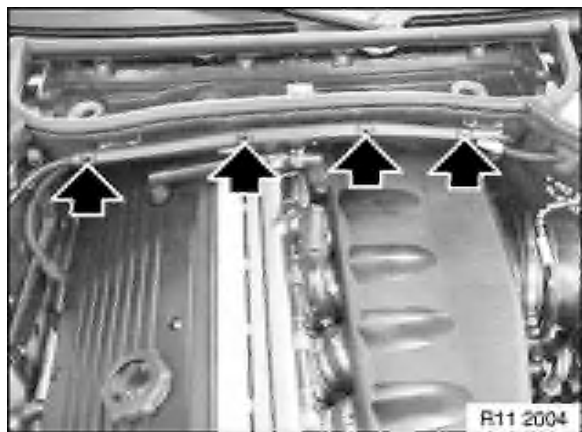
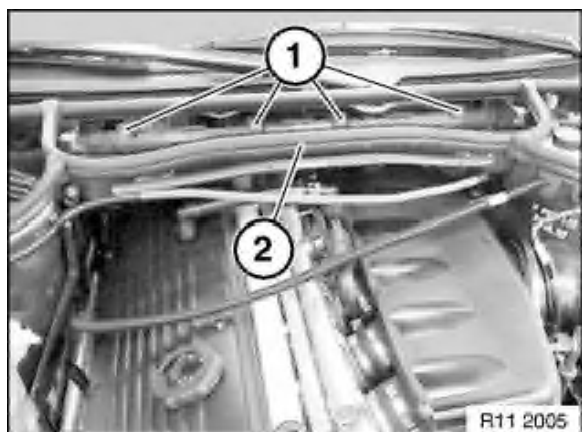


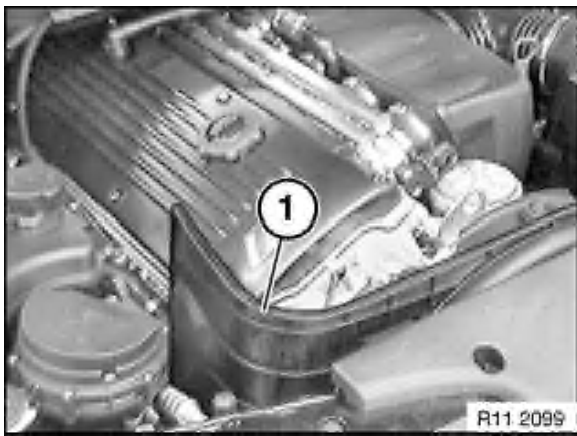
E46 only:  
Remove microfilter.



E46 only:  
Open cable duct on lower section of microfilter housing and feed  
out cable(s).

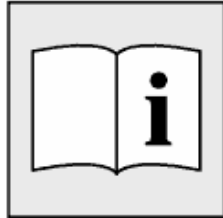


E46 only:  
Release screws (1) and remove lower section of microfilter  
housing (2).



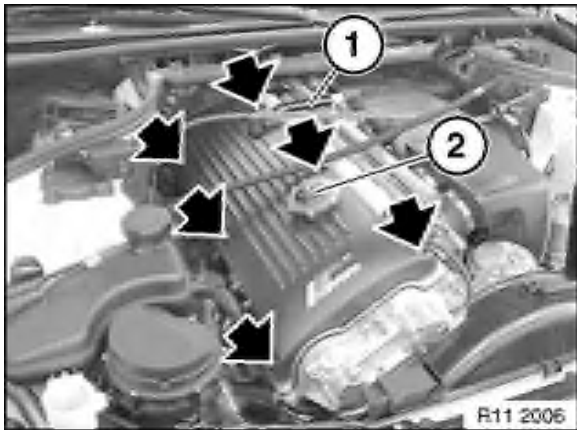
E46 only:

Remove expansion rivets. Remove air duct (1).



Z3:

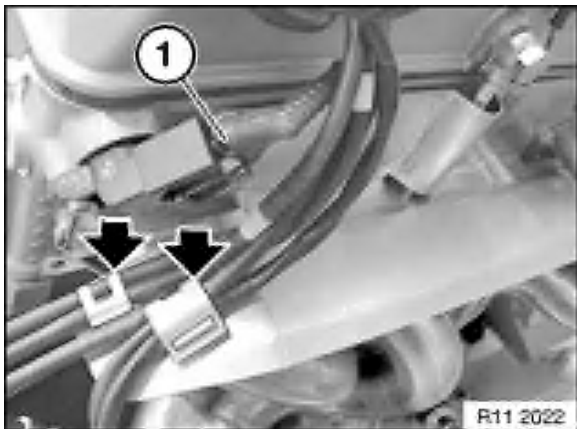
Remove cable duct from bulkhead.



Remove hose (1) for engine vent.

Remove sealing cap (2).

Remove ignition coil cover.



Disconnect plug connection (1) on sensor of exhaust camshaft.

*Note:*

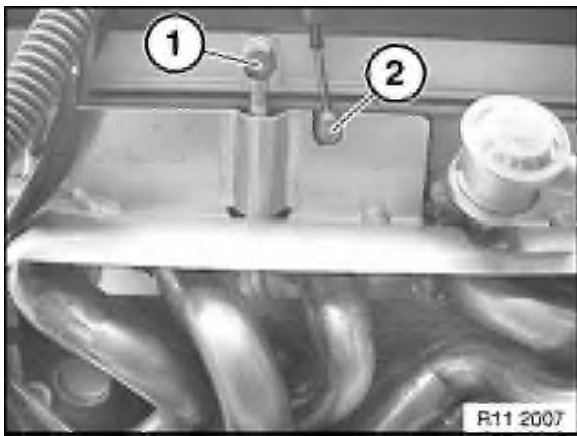
Illustration shows: US version.

*Installation:*

The cables of the oxygen sensors are clipped into mounts on the shield plate of the exhaust manifold.

**Caution!**

Ensure cables are exactly routed.



### Caution!

It is very easy for the sealing ring between the cylinder head cover and the return line to drop into the engine.

Carefully release hollow screw (1) and remove sealing ring between cylinder head cover and return line.

### Installation:

Replace sealing rings.

Tightening torque 25 Nm.

Detach grounding strap (2) for ignition coils from cylinder head.

### Note:

The plug housings of the oxygen sensors for cylinders 1 to 3 and 4 to 6 are different.

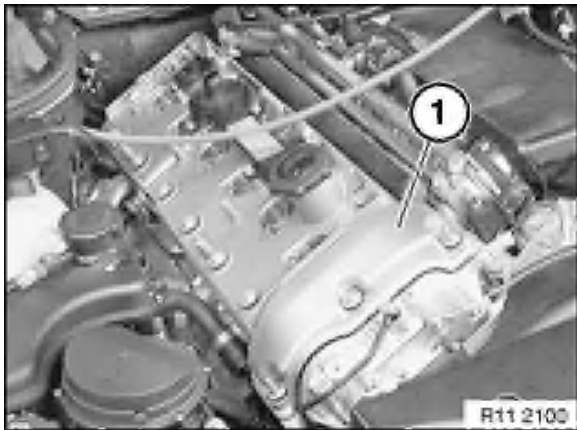
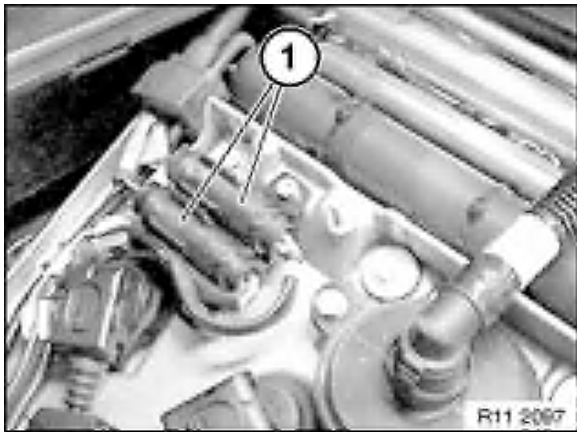
Unclip plug housing (1) from mounting.

Disconnect plug connections of oxygen sensors.

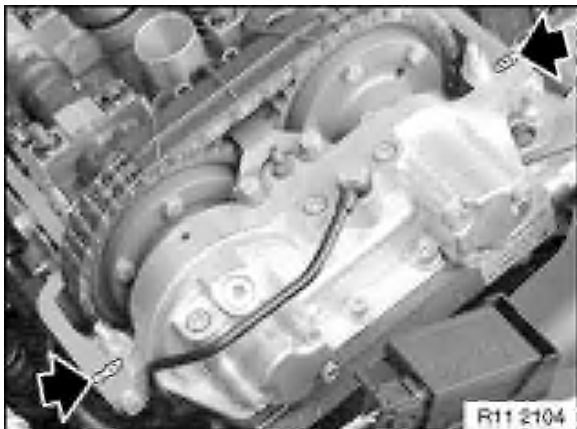
Feed oxygen sensor cables out of cable guide and lay to one side

Remove ignition coils.

Lay ignition coil and oxygen sensor cables to one side.



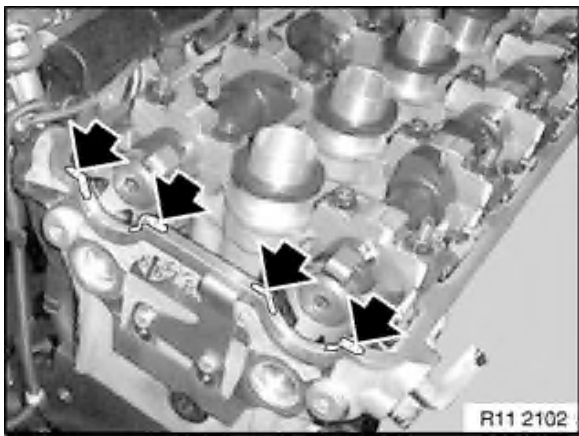
Remove cylinder head cover (1).



### Installation:

Remove sealing debris from sealing faces of cylinder head and cylinder head cover.

Apply a sealing bead of Drei Bond 1209 (refer to BMW Parts Service) on left and right sides at transition between cylinder head and VANOS adjustment unit.

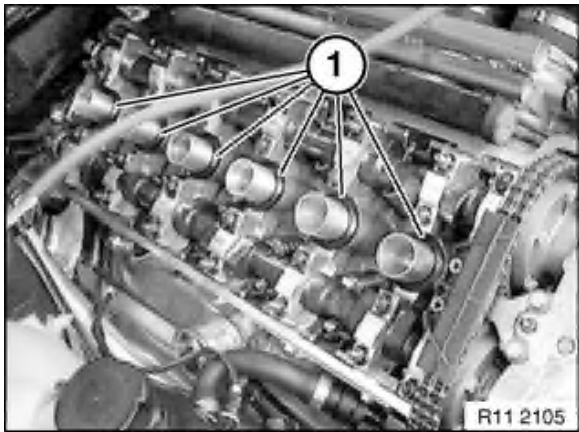


*Note:*

Illustration with engine removed.

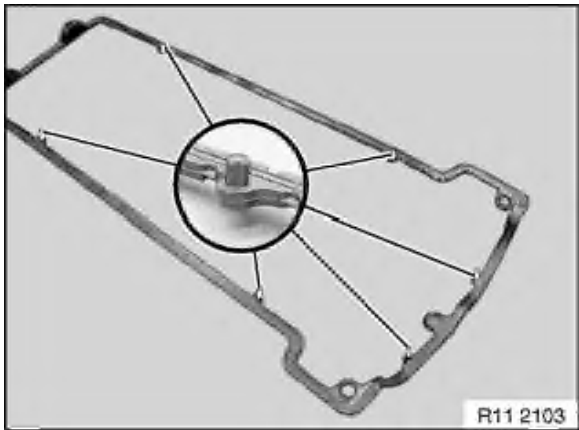
*Installation:*

Apply a thin and even sealing bead of Drei Bond 1209 (refer to BMW Parts Service) at transition to half-moon sections at rear of cylinder head.



*Installation:*

Replace sealing rings (1).



*Note:*

The gasket of the cylinder head cover is secured with guide pins on the cylinder head and on the VANOS adjustment unit.

*Installation:*

Replace gasket of cylinder head cover. Preassemble gasket of cylinder head cover on cylinder head.

**Caution!**

The guide pins may buckle very slightly during installation.  
Make sure that guide pins are exactly fed into bore holes.

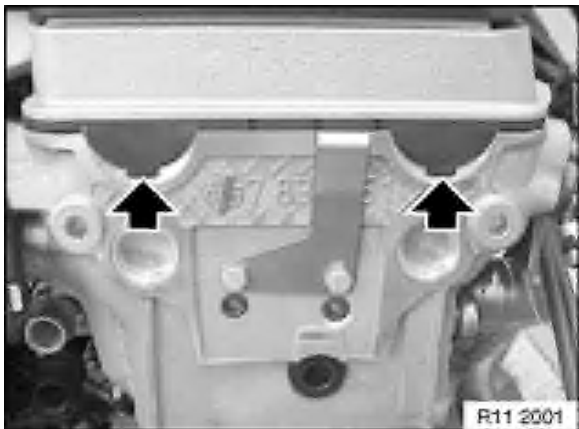
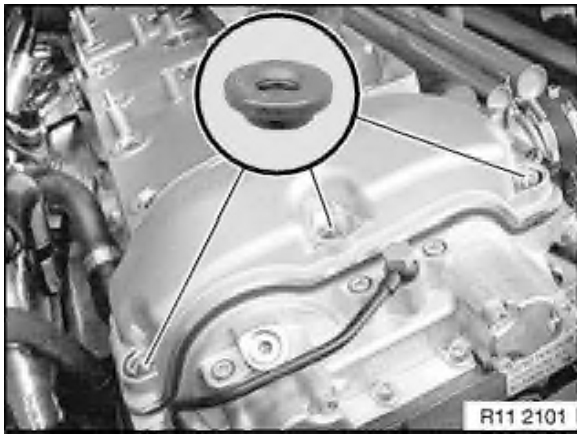


Illustration with engine removed.

*Installation:*

Make sure gasket is correctly seated on rear and front ends of cylinder head.



### **Caution!**

Different rubber gaskets:

Front low version.

### *Installation:*

Replace rubber gaskets.

Install all cap nuts and align cylinder head cover.

Fit all cap nuts without pretension. Tighten down cap nuts in diagonal sequence from inside to outside.