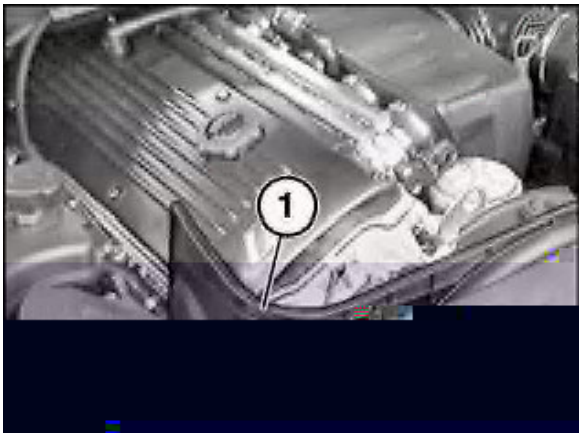
**E46 only**

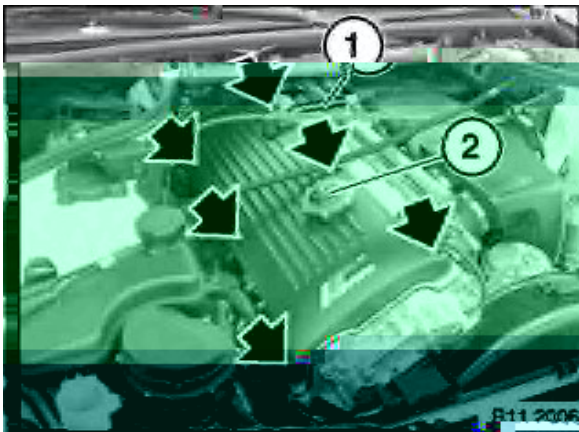
Remove microfilter.

Open cable duct on lower section of microfilter housing (2) and feed out cable(s).

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

**E46 only**

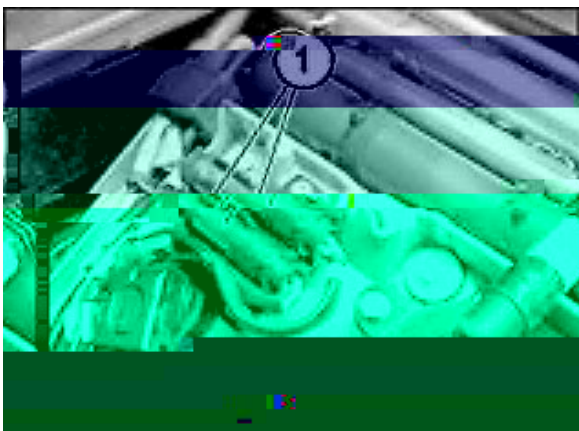
Remove expansion rivets. Remove air duct (1).



Remove hose (1) for engine vent.

Remove sealing cap (2).

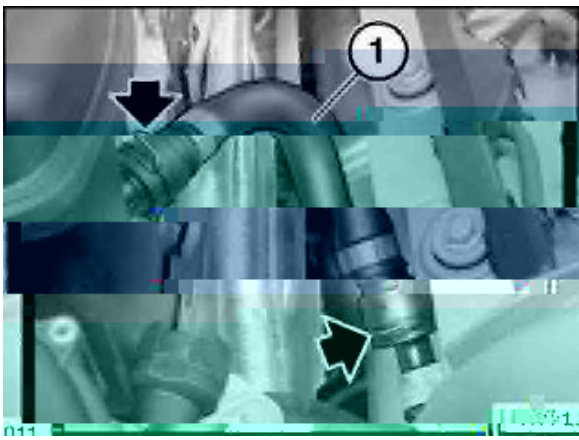
Remove ignition coil cover.

*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.



E46 only

Instructions for working on cooling system.

Drain coolant.

Pull locks.

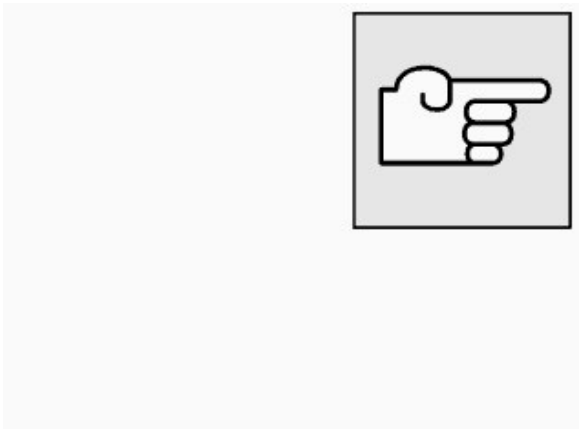
Remove hose (1).



Feed oxygen sensor cables out of shield plate of exhaust manifold.

Note:

Fig. shows US version.



Remove check valve from cylinder head.

Installation:

Replace the seal and nuts.

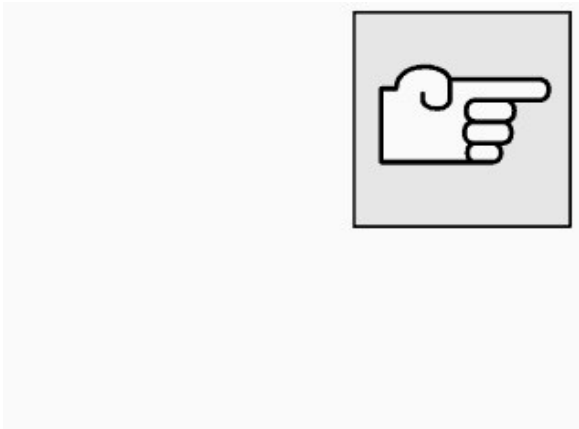
Remove exhaust manifold shield plate and A/C system hoses.

Remove engine splash guard.

E46 only: Remove reinforcement plate.

Caution!

The section "Removing and installing reinforcement plate" contains important installation instructions.



ECE version:

Remove catalytic converter.

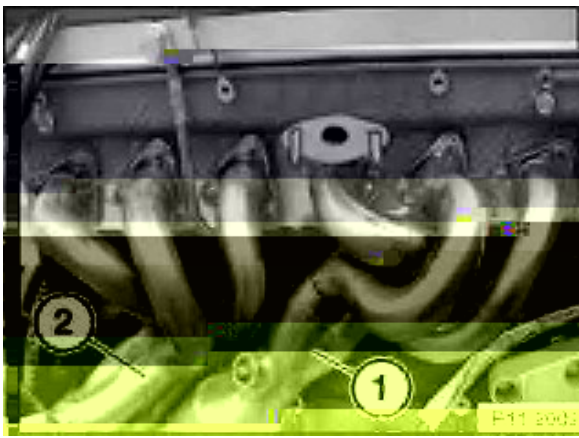
US version:

Remove front exhaust system (front pipes).

Note:

The oxygen sensors are in danger of being damaged when the exhaust manifolds are removed and installed.

Remove oxygen sensors from exhaust manifolds.



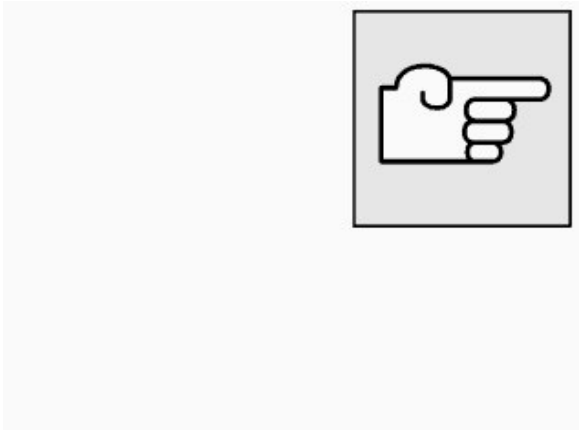
Note:

Exhaust manifolds (1 and 2) cannot be removed individually.

Detach exhaust manifold (1) from cylinder head and place on engine support arm.

Detach exhaust manifold (2) from cylinder head.

Feed out exhaust manifolds (1 and 2) together.



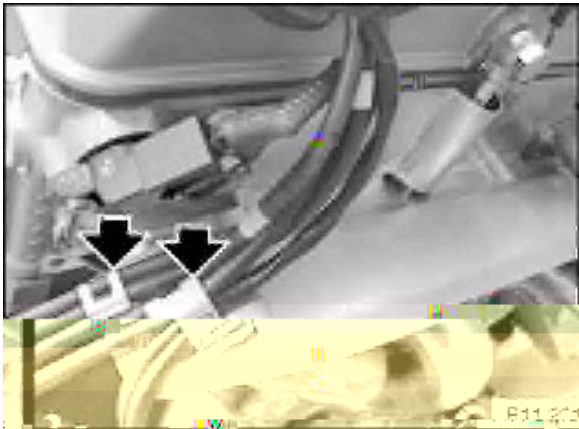
Installation:

Clean sealing faces, replace gaskets.

Coat threads with copper paste.

Replace nuts.

Tightening torque, 11 62 1AZ.



Caution!

Ensure cables are exactly routed.

Installation:

Clip cables of oxygen sensors into mounts on shield plate of exhaust manifold.

Note:

Fig. shows US version.