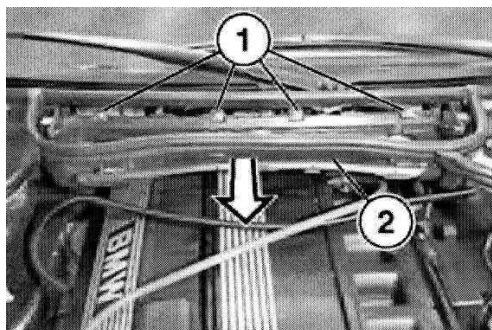


Intake Manifold: Service and Repair

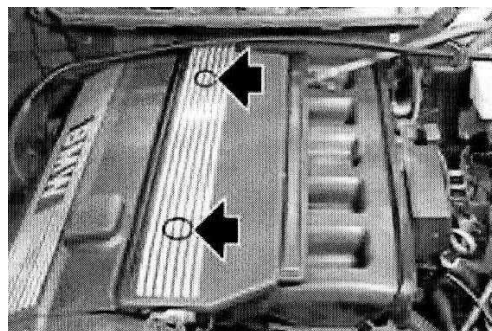
Removing and Installing Intake Air Manifold

Refer to Instructions For Disconnecting And Connecting Battery.
Disconnect negative battery lead.



E46 Only

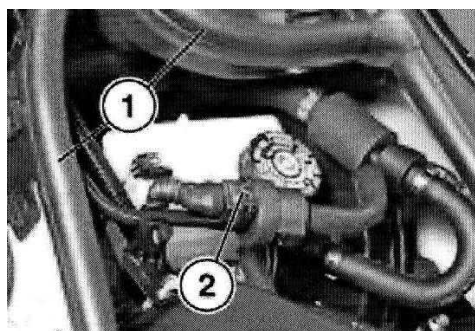
Disconnect battery positive lead from battery connection point.
Remove microfilter.
Open cable duct on lower section of microfilter housing (2) and feed out cable(s).
Release screws (1) and remove lower section of microfilter housing (2).



Remove cover from fuel injectors.

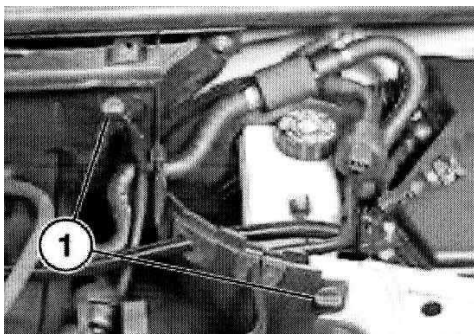
Caution: Do not mix up oxygen monitor sensors for cylinders 1 to 3 and 4 to 6 at plug connection to wiring harness. Mark plug connections.

Unclip plug connections (1) from holder.
Detach retainer (2) from battery positive lead.



E46 Only

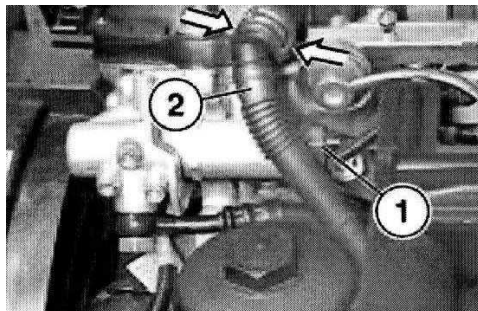
Pull off complete rubber strip (1).
Disconnect plug connection (2) on solenoid valve.

**E46 Only**

Unclip cable penetrations from side trim panel.

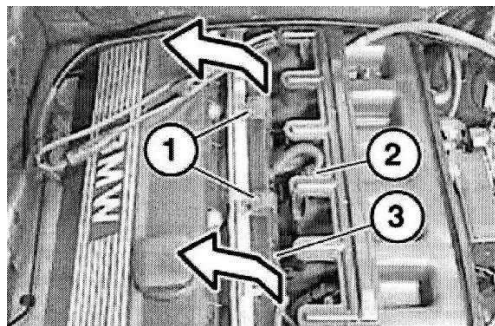
Release locks (1) on side panel.

Pull out side trim panel towards top.



Disconnect plug connection (1) on VANOS solenoid valve.

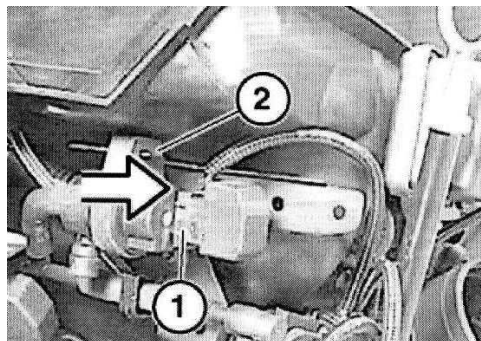
Detach vent hose (2) from cylinder head cover.



Detach retainer (1).

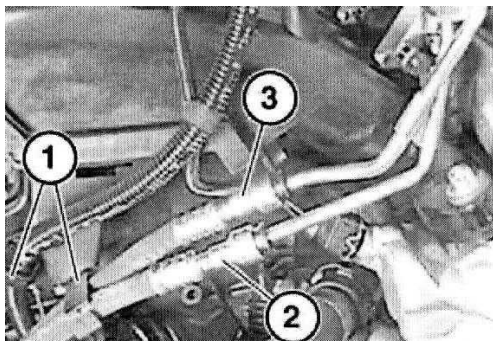
Disconnect plug connection (2) for intake air temperature sensor.

Detach terminal strip (3) from fuel injectors and lay to one side.



Disconnect plug connection (1) on tank venting valve.

Detach tank venting valve from holder (2) on manifold.



Unclip fuel hoses and cable for terminal strip from holder (1) on manifold.

Caution: Catch and dispose of fuel as it escapes.

Instructions for removing and installing fuel hoses.

Unlock fuel feed line (2).

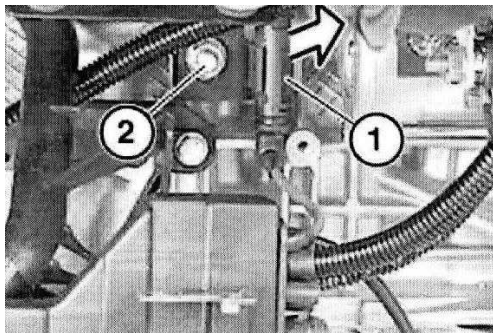
Unlock fuel return line (3).

Release guide tube for dipstick.

Press lock and detach return line from oil dipstick guide tube.

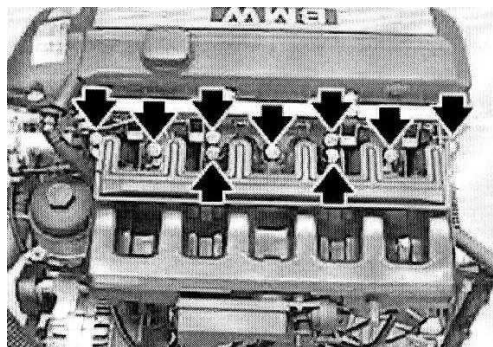
Remove throttle assembly.

Disconnect plug connections and lay cable duct to one side.



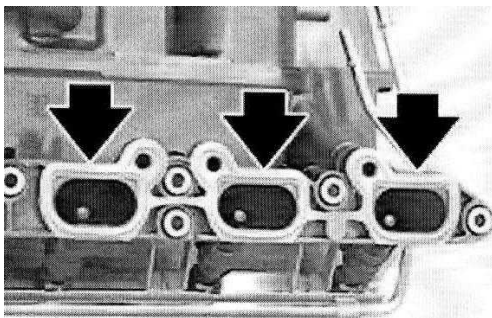
Unclip plug connection (1) for knock sensors from holder.

Release nut (2) on manifold support.

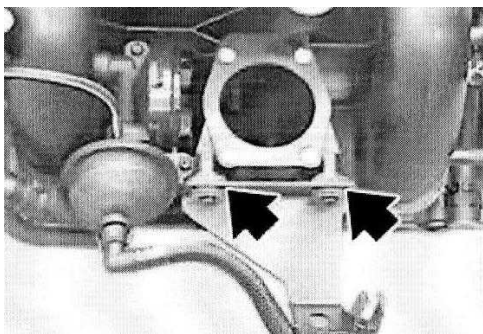


Release nuts on manifold.

Remove intake air manifold.

**Installation:**

Check gaskets on all cylinders and replace if necessary.

**Installation:**

Check rubber dampers and if necessary replace together with manifold support.