



Bosch tips

Detecting oxygen sensor faults and dealing with them



BOSCH

Invented for life

Check and replace at suggested intervals

Here's how to detect faulty oxygen sensors



Oxygen sensors are important engine components indispensable for reliable engine function and correct emission values. But the perfect functioning of oxygen sensors can be jeopardized by many factors:

- ▶ Environmental influences, such as salt and dirt
- ▶ Large temperature fluctuations
- ▶ Poor-quality fuel
- ▶ Soot and oil residues in the exhaust gas

To prevent possible engine damage and increased fuel consumption - with resulting higher CO₂ emissions - oxygen sensors should be checked and replaced at the manufacturer's recommended intervals.

Prerequisite for oxygen sensor diagnosis:
The engine mechanics and ignition system must be in good working order.

To diagnose an oxygen sensor, proceed as follows:

1. Read out the fault memory and check the actual values from self-diagnosis
2. Check the signal patterns (comply with ESI[tronic] trouble-shooting instructions)
3. Examine cables and connections for secure contact

If you find anything unusual during these diagnosis steps, remove the oxygen sensor and follow the instructions on the right in cases of extreme contamination/discoloration.



State of oxygen sensor:
Greenish, grainy discoloration

Possible cause:
Antifreeze has escaped and entered the combustion chamber.

Measure:
Replace the oxygen sensor. Check the engine block, cylinder head, intake manifold and head gasket for wear and cracks.



State of oxygen sensor:
Blackened, with oily contamination

Possible cause:
Excessive oil consumption

Measure:
Check the valve guides and seals, which may be worn. Replace the oxygen sensor.



State of oxygen sensor:
Dark brown discoloration

Possible cause:
Air-fuel mixture too rich

Measure:
Check the fuel pressure. Replace the oxygen sensor.



State of oxygen sensor:
Reddish or white discoloration

Possible cause:
Fuel additives in the gasoline

Measure:
Do not use fuel additives. Replace the oxygen sensor.



State of oxygen sensor:
Broken cable

Possible cause:
Excessive cable tension

Measure:
Replace the oxygen sensor. Route the new cable without tension.



State of oxygen sensor:
The molded cable tubing is damaged.

Possible cause:
Impact by stone chippings

Measure:
Replace the oxygen sensor.

What makes Bosch oxygen sensors so unique?



Fast, reliable installation:

- ▶ The pre-greased thread allows you to replace the oxygen sensor quickly and easily, saving you work and time
- ▶ Made-to-measure cable lengths make the sensor suitable for every type of vehicle
- ▶ The original connector fits perfectly, just like in the original equipment

Original equipment expertise for virtually every vehicle

All Bosch Oxygen Sensors feature original equipment quality: in other words, they are subject to the same strict test criteria as the original part. The quality of the replacement oxygen sensor is therefore guaranteed to remain constant.

That's why vehicle manufacturers worldwide put their trust in oxygen sensors from Bosch - the Number 1 for oxygen sensors for original equipment and the aftermarket.

Regular oxygen sensor checking and replacement is well worthwhile.

- ▶ Up to 15 % savings in fuel costs
- ▶ Improved engine power
- ▶ Reduced CO₂ emissions