Lambda Sensors
Overview, features and benefits

A new original equipment lambda sensor can provide up to 15% savings (up to £230 per year) in fuel consumption compared to a part that has reached its life-expired replacement interval.

Key reasons for replacing lambda sensors
The lambda sensor is a key component of a vehicle’s engine management system and also prevents damage to the catalytic converter.

Only if the sensor is working perfectly will the engine be able to operate at its full efficiency and keep exhaust emissions below strict limits.

<table>
<thead>
<tr>
<th></th>
<th>Old lambda sensor</th>
<th>New Lambda Sensor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual milage</td>
<td>11,000</td>
<td>11,000</td>
</tr>
<tr>
<td>Average fuel consumption</td>
<td>30 mpg</td>
<td>34.5 mpg</td>
</tr>
<tr>
<td>Annual fuel consumption (litres)</td>
<td>1.456</td>
<td>1.260</td>
</tr>
<tr>
<td>Price per litre*</td>
<td>£1.20</td>
<td>£1.20</td>
</tr>
<tr>
<td>Annual fuel costs</td>
<td>£1,747.20</td>
<td>£1,512.00</td>
</tr>
<tr>
<td>Annual fuel saving</td>
<td>–</td>
<td>£235.20</td>
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</tbody>
</table>

* Based on average petrol price March 2017

Although not strictly a service item the Lambda sensor does have a defined service life and its efficiency will gradually deteriorate over time.

Disadvantages of an old sensor
- It will not measure the level of oxygen in the exhaust gases correctly
- Increased fuel consumption
- Poor engine performance
- Poor exhaust emissions
- Damage to catalytic converter

Advantages of a new sensor
- Fuel savings of up to 15%
- Increased engine power
- Better for the environment
- Longer operating life of catalytic converter

An original equipment quality lambda sensor is essential to deliver optimum fuel economy and emissions performance.
The accuracy of the lambda sensor is critical to providing efficient engine performance
The lambda sensor measures the oxygen content in the exhaust gases and converts this into an electrical signal for the engine management ECU. The ECU will then adapt the air/fuel mixture accordingly to ensure optimal engine performance and reduce the vehicle’s emissions.

Why does my new Bosch lambda sensor look used?
Don’t worry, they’re not used! Part of the quality process during production is for each and every Bosch lambda sensor to be tested at full operating temperature before it leaves the factory. That is why each one has the heat tarnish on the unit.

New technology:
Wide band Lambda sensors measure exhaust oxygen content in a range outside of λ=1 (as the traditional switching sensors do). This makes them suitable for diesel and other lean burn engines

Lambda sensor summary:
- Original equipment product
- Each unit tested at full operating temperature
- Provides optimum fuel economy and emissions performance