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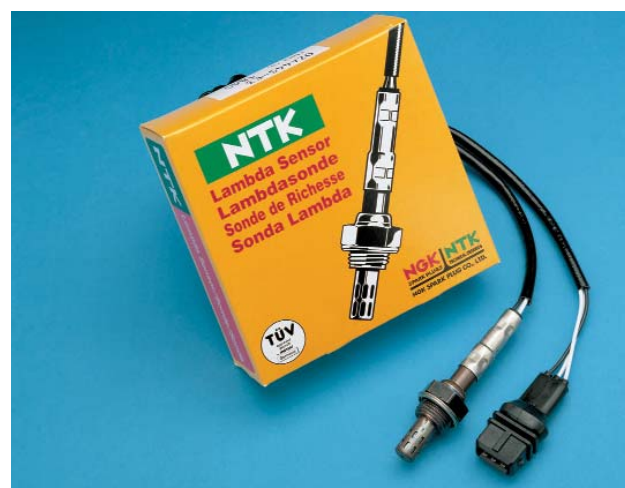
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NGK INDEPENDENT TESTS PROVE THAT FAULTY LAMBDA SENSORS PRODUCE SIGNIFICANTLY HIGHER OUTPUT OF POLLUTANTS AND INCREASE FUEL CONSUMPTION

NGK Spark Plugs, the world's leading manufacturer of Lambda sensors under the NTK brand name, has commissioned a detailed independent expert report from the highly regarded German technical inspection authority, TÜV Nord. The goal was to determine the impact of a defective Lambda sensor on the output of toxic emissions and fuel consumption.

The TÜV Nord tested a Volkswagen Golf III - year of construction: 1993 - following the European test cycle according to guide line 70/220/EWG. The experts carried out three road tests with an active Lambda sensor, followed by another three tests with a disconnected sensor to simulate the effect of a faulty sensor. During all the tests, the output of emissions and the rate of fuel consumption were monitored.

In the exhaust gas of the test vehicle, a massive increase in toxic emissions was observed when the engine ran without the Lambda sensor. In this case the engine control unit was missing vital information needed to control the air fuel ratio. The catalyst, therefore, was not able to correctly convert the pollutants resulting from the combustion process.



The output of carbon monoxide alone increased eightfold. This is particularly serious in urban areas. Carbon monoxide is heavier than air and concentrates near to the ground. As a result, children are particularly exposed to this gas. In addition, the level of hydrocarbon emissions increased by a factor of 2.5.

Fuel consumption was also adversely affected. On average it increased by 10 percent with a failed Lambda sensor and in urban traffic it increased even more significantly.



“This is the first fully independent test of the effects of Lambda sensor failure – carried out as a specific initiative by NGK”, says Brian Childs, NGK UK’s Deputy Managing Director, Sales & Marketing. “In the case of our test vehicle we were able to prove the negative impact for both people and the environment - as well as for fuel consumption.

“Although it is not certain that these results would be repeated on other vehicle models, the clear nature of the results make this very likely. It demonstrates that it is essential that Lambda sensors should be checked regularly and replaced if defective.”