Lambda sensor tester and simulator TSL-3

TEXT_PRODUCTS_NAMELambda sensor tester and simulator TSL-3

Manufacturer : -

Catalog No. : -

The TSL-3 tester is used to diagnose the most common zirconia lambda sensors. It also serves to simulate the rich and poor fuel mixture. In order to test the lambda sensor first, it is necessary to locate the signal wire of the lambda sensor (preferably using the diagram) and next to connect it to (in parallel - according to the technical drawing), for example by means of the pin sensor or just the pin itself, the blue wire of the TSL-3 tester. The black cable of the tester shall be connected to the second pole of the lambda sensor most often it is just the body and the "mass" of a car, but there are some sensors with the "negative" pole in the form of cable. The lambda sensor signal is weak. Therefore, it is necessary to remember that in order to carry out proper measurements, the minimum resistance of the contacts shall be preserved.

Next, the engine shall be started and after the lambda sensor warms up (after about 10 min at 1000 rpm), it should give a signal of about 0.8 V amplitude and 1 Hz frequency. The voltage controller shall indicate voltage changes ranging from 0.1 V to 0.8 V, which should occur approximately once a second.

If the voltage does not exceed 0.5 V or the changes are too slow, this means that the lambda sensor is worn and needs replacing.

However, please note that any short circuits of the lambda sensor circuit will cause the lack of its signal even though the sensor itself is still in a good condition. Therefore, if the lack of the signal is detected first, it is recommended to check whether there is a short circuit of its circuit and then to decide on its replacement.

To check the proper operation of the lambda sensor circuit and respondence to the signals emitted by the control unit (ECU), it is possible to make the simulation of the poor and rich mixture. If we have a gas analyzer at our disposal, it will surely come in handy during this test. After connecting the TSL-3 tester, we can press the simulation button placed on it for example, "the poor mixture" button and in response to this signal, the controller should enrich the mixture, which can be observed on the exhaust analyzer. If we do not have the analyzer at our disposal, after releasing the "the poor mixture", the tester indications corresponding to the "rich mixture" shall be shown immediately.

The same test can be similarly performed to simulate a rich mixture. After pressing the "rich mixture" button, the controller should lean the mixture, which can be seen on the exhaust analyzer. In case we do not have an analyzer, we can observe an indication corresponding to a poor mixture.

During these tests, we can also measure the fuel injection time, which will vary according to each situation.

It was assumed that the point of splitting the mixture into the poor and the rich is the 0.45 V voltage, which corresponds to the lambda ratio equal to 1, which in practice means that the indication on the tester ranging from 0.1 to 0.4 V correspond to a poor mixture. But indications ranging from 0.5 to 1 V correspond to a rich mixture.

Price : 198.00EUR

Lambda sensor tester and simulator TSL-3

Availability: This product was added to our catalog on Friday 20 July, 2018