

Test results

XADO®

PE 8141.150.10-GR

Effectiveness confirmation

Product: XADO® Gel-revitalizant for gasoline engines

Manufacturer: XADO-Technology Ltd.

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Field of application: Gel-revitalizant for gasoline engines

Tests content: Study of the effectiveness of XADO Gel-revitalizant for gasoline engines according to the following parameters: exhaust gases toxicity reduction (CO₂, CO, HC), fuel consumption reduction, engine power increase, compression increase and noise level reduction.

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1. Description

The subject of inquiry was to determine if the application of XADO Gel-revitalizant for gasoline engine results in reduction of harmful substances in exhaust gases and in fuel consumption reduction. The possibility of engine power increase and compression increase during the product application was also studied.

2. Tests conducted

1. Measurement of exhaust gases toxicity (CO, HC, NO_x, CO₂,) according to 70/220/EEC i. d. F. 2006/96/EC Type I
2. Determination of fuel consumption according to 80/1268/EEC i. d. F. 2004/3/EC
3. Measurement of engine power according to 80/1269/EEC i. d. F. 1999/99/EC
4. Determination of compression with the help of compression-recorder
5. Analysis of noise parameters with the help of microphone placed close by the engine
6. Determination of metal content in motor oil

The tests were holding from 12.02.2010 to 04.03.2010.

The tests were conducted on the following car:

Mazda 626 2.0 (Year of production 2001, 85 kW, gasoline, 181 660 km run)

The car was investigated before and after application of the tested additive. Car treatment was arranged according to manufacturer's manual.

3. Results

A number of performed tests show the change and record of current parameters on the chosen vehicle. Basing on its results prolonged actions are not differentiated. The transfer of results from the chosen testing vehicle to other engines and units accordingly is mediated.

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3.1 Exhaust gases toxicity

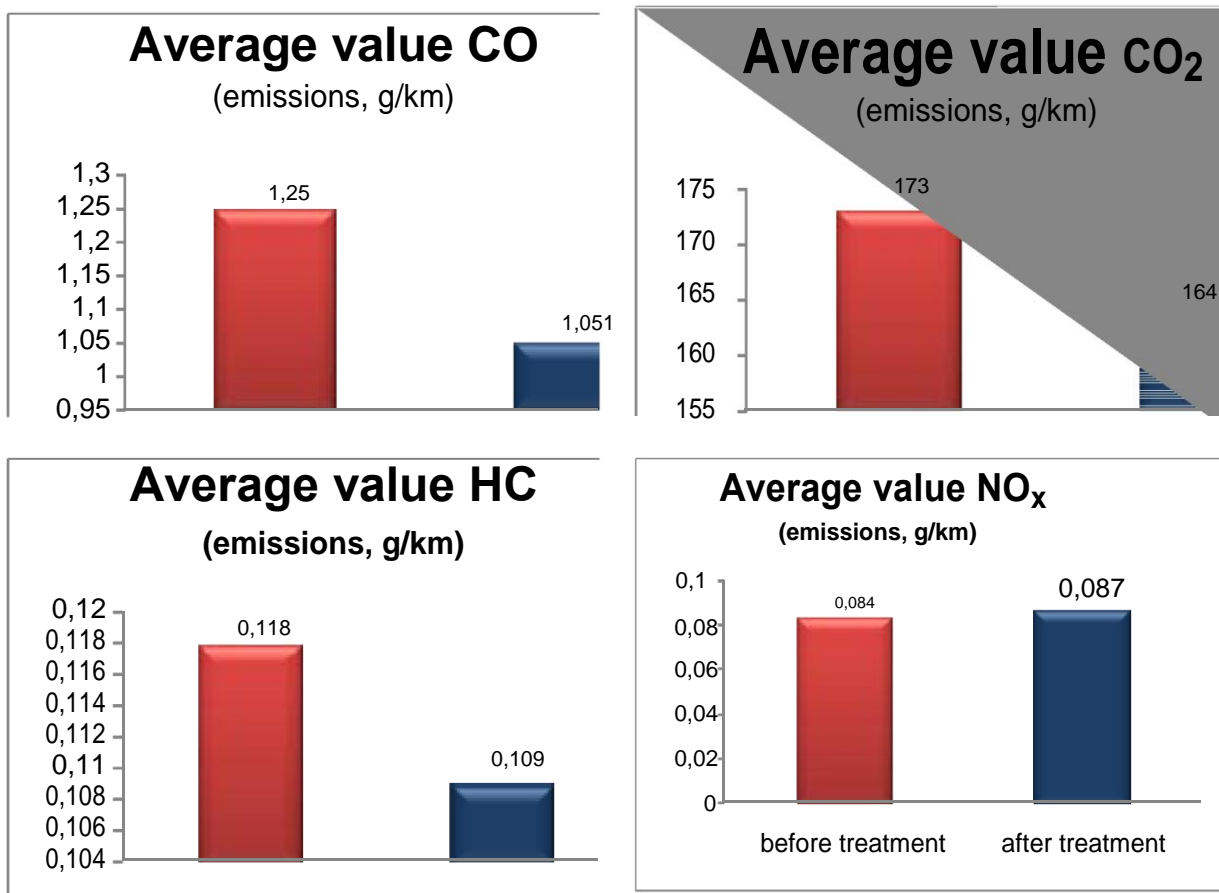
The product application resulted in positive change of emission of carbon monoxide, carbon dioxide and hydrocarbon (see PIC.1).

The change of average value from 1.250 g of CO/km to 1.051 g of CO/km shows the reduction of carbon monoxide emission by 15.92 %.

The change of average value from 173.247 g of CO₂/km to 164.319 g of CO₂/km shows the reduction of carbon dioxide emission by 5.16 %.

The change of average value from 0.118 g of HC/km to 0.109 g of HC/km shows the reduction of hydrocarbon emission by 7.63 %.

The reduction of nitric oxide was not determined within the project.



PIC.1: Comparison of the average values of toxicity before and after product application

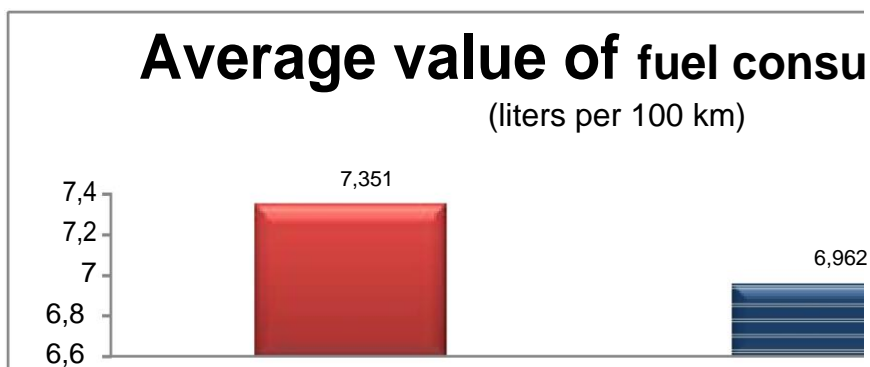
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3.2 Fuel consumption

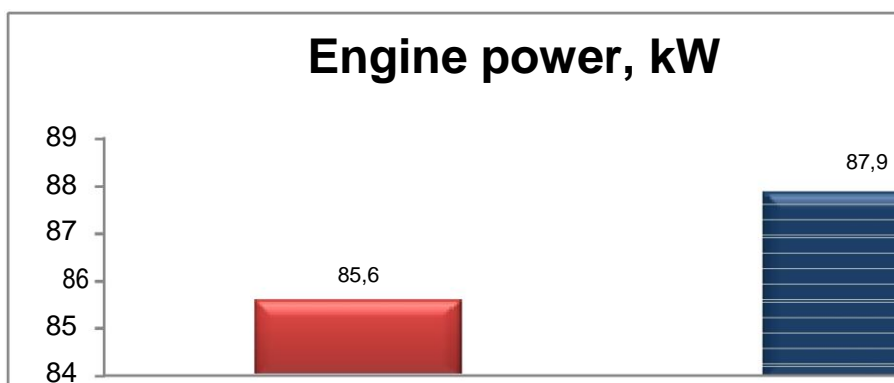
As a result of product application the reduction of fuel consumption was determined taking into account the comparison of data received. (See PIC.2). The change of average value from 7.351 L/100 km to 6.962 L/100 km shows the reduction of fuel consumption by 5.29 %.



PIC. 2: Comparison of the average results of fuel consumption before and after product application

3.3 Engine power

Within the tests conducted increase of engine power was determined (See PIC. 3). The change of engine power from 85.6 kW to 87.9 kW indicates the increase by 2.68% or 2.3 kW.



PIC. 3: Comparison of the average values of engine power before and after product application.

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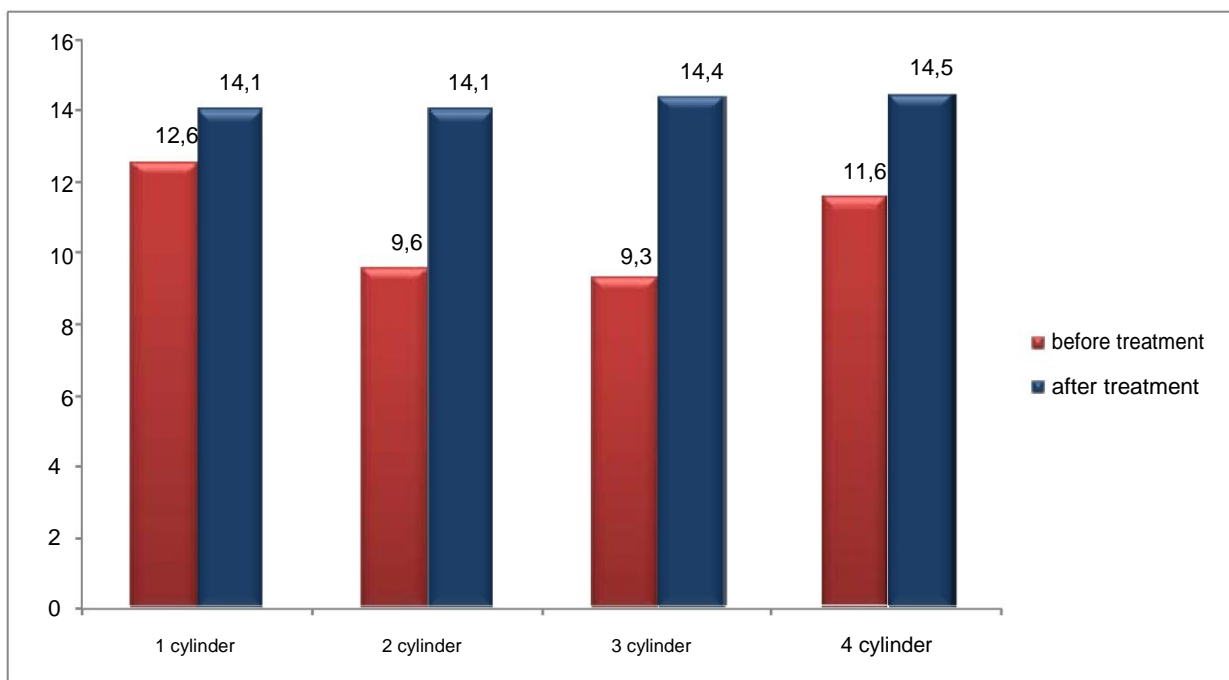
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3.4 Compression

The application of product resulted in positive change of engine compression (See PIC.4). When initial data are taken before additive application, an uneven picture of compression pressure was displayed; deviations were more than 2 atm in certain cylinders. After the product application, the picture of compression pressure became even. Deviations between the cylinders themselves became insignificant. Moreover significant increase of compression pressure in cylinders No.2 and 3 was observed.

Compression in engine cylinders



PIC.4: Overview of the average values of cylinders compression before and after product application

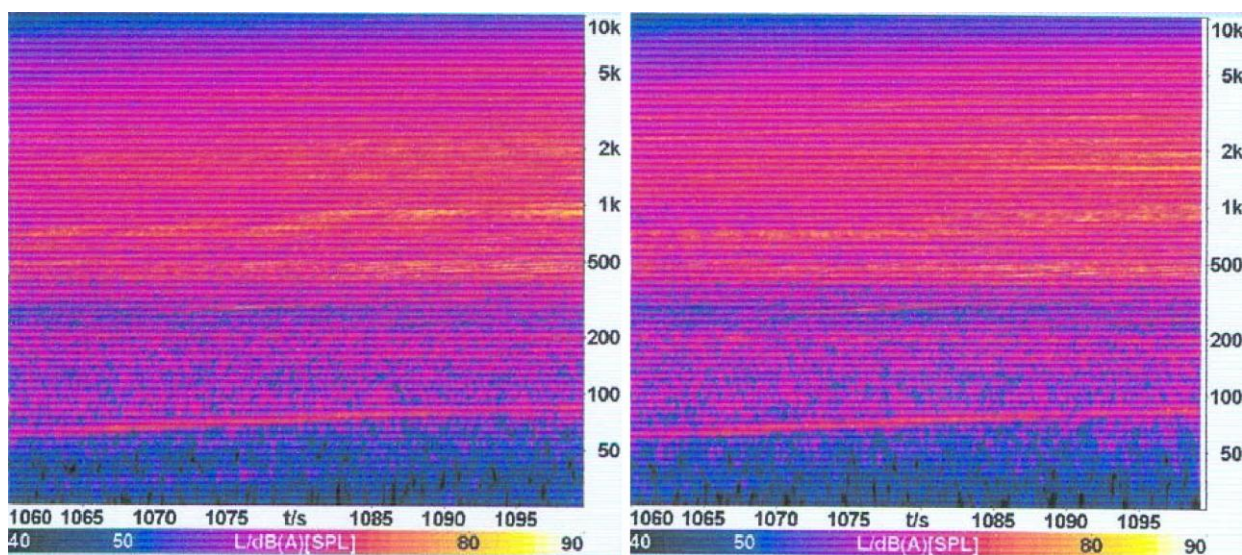
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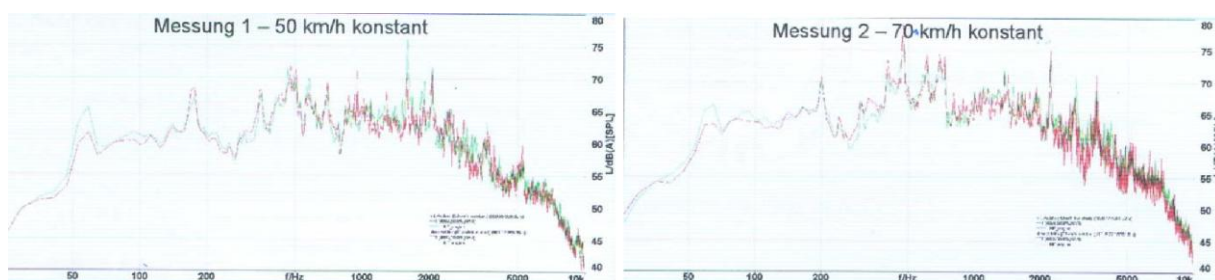
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3.5 Noisiness

The interval of 40.2 sec was chosen to analyze the results; the speed range from 50 km/hour to 70 km/hour was recorded. The measurements didn't show a significant difference between the treated and non-treated car.



PIC. 5: Comparison of average frequency f [Hz] in time t [s] at speed from 50 to 70 km/hour before and after product application



PIC.6: Comparison of average level of sound [acoustic] power L [dB (A)] from frequency f [f] at constant speed before and after product application

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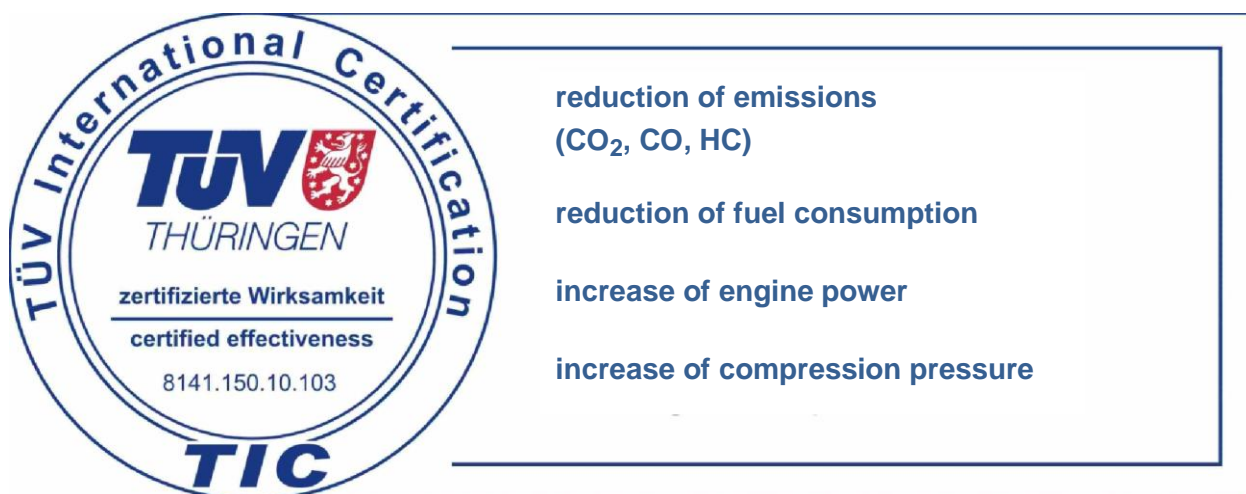
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4. Summary

Based on the confirmed properties:

- Reduction of carbon dioxide emission
- Reduction of carbon monoxide emission
- Reduction of hydrocarbon emission
- Fuel consumption reduction
- Engine power increase
- Compression increase

the symbol “Approved Certificated Effectiveness” was granted to the product XADO Gel-revitalizant for gasoline engine.



TÜV Thüringen Anlagetechnik GmbH & Co.KG