

Experimental studies on the influence of diesel quality and additive for fuel on the smoke emission of diesel cars

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Abstract

The paper presents experimental determinations that highlight the substantial reduction of smoke in the exhaust gases for a car with a diesel engine with pollution norm Euro 4 in the case of using OMV MaxxMotion diesel and Super Diesel additive from Liqui Moly. For the load determinations when running on a horizontal road (by simulation on the chassis dynamometer V-Tech Dyno VT-2/B1), in case of using diesel with CN55 and Super Diesel additive from Liqui Moly, was found a smoke reduction of up to almost 50%, the larger reductions being at speeds above 110 km/h, which indicates a substantial reduction in smoke when running in extra-urban mode. At the same time, only the superior quality of diesel with cetane number 55 compared to that with cetane number 51, led to better combustion, so that the smoke emission was reduced by up to 33% at high speeds, this reduction being quite important up to 27% for lower speeds below 90 km/h.

Keywords: exhaust gases, smoke emissions, Diesel engine cars

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