

Report Cover Sheet

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16. Abstract The features of particle reduction by 4 particle catalysts (PMS) were extensively investigated on an Euro 3 Diesel passenger car and chassis dynamometer. Additionally to the limited exhaust gas components (CO, HC, NO _x and particle mass) the unlimited particle counts were measured with different methods. <ul style="list-style-type: none"> • At transient operation in different driving cycles the average reduction rates for particle mass and for nanoparticle counts (CPC), which were attained with the investigated PMS, are between 25% and 55%. • The fuel consumption is not influenced by the PMS. If it is influenced, than only in the range of the driver effect and measuring dispersion. • The NO- NO₂ conversion in the oxidation catalyst causes a NO₂-increase comparing the original status only with one PMS mounted in underfloor. With the other PMS, the NO₂ emissions from the original catalyst are partly reduced. With the PMS placed near to the engine instead of the original DOC the NO₂-emissions are approximately equal. • The PMS purchased from the market and investigated with a shortened procedure show mostly the same behaviour as those supplied by the manufacturers. 		
17. Keywords Particle catalysts, open particle filters, filtration efficiency, particle mass, nanoparticulates, emissions of Diesel engines.		
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