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THE EFFECT OF ENGINE OIL ON DIESEL EXHAUST EMISSION

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Much of the recent developments in lubricant technology have been driven by emission legislation.

Lowering pollutants and CO₂ emissions of cars and trucks is a major challenge for the automotive industry. One way to decrease emissions is to improve the fuel economy and reduction oil consumption.

The use of low friction engine oil minimizing the energy lost by friction, can improve engine fuel efficiency and lead to significant reduction of gaseous emissions. Therefore, engine oil become one of the important design parameters.

The paper shows that engine oils considerably contribute to diesel exhaust HC and NO_x emission. These depend on lube oil properties, of which the most important ones are sulfur, aromatics, calcium, zinc contents, oil volatility density and viscosity.

Key words: engine oil, diesel engine, emission.

UTICAJ MOTORNOG ULJA NA IZDUVNU EMISIJU DIZEL MOTORA

Mnogi od dosadašnjih razvoja u tehnologiji ulja rezultat su zakonskih emisionih propisa.

Smanjenje emisije štetnih zagađivača i emisije CO₂ automobila i kamiona je jedan od glavnih zadataka za automobilsku industriju. Jedan od načina smanjenja emisija je smanjenje potrošnje goriva i smanjenje potrošnje ulja.

Korišćenje nisko-frikcionih motornih ulja smanjuje gubitak trenja, poboljšava iskorišćenje goriva i vodi ka značajnom smanjenju gasnih emisija. Prema tome, motorno ulje je postalo jedan od značajnih konstrukcionih parametara.

Članak prikazuje doprinos motornog ulja emisiji NO_x i HC dizel motora. Emisija zavisi od fizičko hemijskih osobina ulja, od kojih su najvažnije isparljivost, gustina, viskozitet i sadržaj sumpora, aromata, kalcijuma i cinka.

Ključne reči: motorno ulje, dizel motor, emisija.