

The Comparison of the Methanol and Ethanol Adding to Pertalite on Engine Performance and Exhaust Emissions in 4 Stroke Motorcycles

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ABSTRACT

This research was is determine the effect of adding a mixture of methanol and ethanol on the performance of torque and power produced by motorized vehicles and exhaust gas emissions of motorized vehicles using pertalite fuel to obtain the lowest levels of carbon monoxide (CO) and hydrocarbon (HC) exhaust emissions and to determine performance produced by the addition of a mixture of methanol and ethanol. This study uses an experimental method of testing the torque and power performance of the two fuel mixtures, which tend to decrease more in the 5% mixture compared to pure pertalite fuel and pertalite + 15% methanol, while for 3000 to 5000 rpm the torque increases, especially at 3000 rpm at 3000 rpm. all mixtures of pertalite + methanol 5,10 and 15% of pure pertalite, engine power increased from rpm 3000 to rpm 7000 from the power test, the power produced by a mixture of pertalite + methanol 15% tended to be better than all mixtures of methanol, while for a mixture of pertalite + 10% ethanol the power produced also tends to be better than all petalite and ethanol mixtures, for the lowest CO at PM 5 of 0.03% at rpm 3000 while the fuel mixture with ethanol obtained the lowest CO and PE 5 of 0.08% at rpm 2500, while the lowest HC was at PM 5 of 61 ppm at rpm 3000 while the mixture fuel with ethanol in the lowest HC can be at PE 15 of 102 ppm at 2000 rpm.

Keywords: *methanol, ethanol, performance, emissions*