

***Analysis of Fuel Variations on Exhaust Emissions for  
110 CC Matic Engines***

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***ABSTRAK***

*This study aims to determine the effect of the four types of fuel that will be tested including pertalite, pertamax, pertalite which is varied with ecoracing and pertamax which is varied with ecoracing on exhaust gas emissions of motorized gasoline-fueled vehicles to obtain levels of carbon monoxide (CO) exhaust emissions, carbon dioxide (CO<sub>2</sub>) and hydrocarbon (HC) lowest. This study uses an experimental method by comparing the type of fuel and varying it with ecoracing then testing the exhaust emissions of the four types of fuel, for the lowest CO content obtained in pertalite fuel type with a value of 0,034% at engine idle speed, while for the highest CO content obtained in Pertamax fuel type with a value of 7,716% at 4500 engine speed, then for the lowest CO<sub>2</sub> content obtained in Pertamax fuel type with a value of 7,88% at 4500 engine speed and the highest was obtained in Pertamax Ecoracing fuel type with a value of 12,08 The last % for the lowest HC content was obtained on pertalite fuel type with a value of 88,4ppm at engine idle speed and the highest was obtained in pertalite ecoracing fuel type with a value of 612,4ppm at 4500 engine speed.*

***Keywords:*** *pertalite, pertamax, ecoracing*

