

***Analysis of Adding Clove Oil Additives to RON 90 Fuel on Vehicle Fuel Performance and Consumption***

*Commicion Guide, Aditya Wahyu Pratama S.T., M.T.*

*by*

**Fajar Ali Fanani**

*Study Program of Automotive Engineering, Department of Engineering  
Politeknik Negeri Jember*

***ABSTRACT***

*Improving engine performance can be done by mixing several types of fuel or by adding additives to the fuel. In relation to improving vehicle performance, one way is by adding additives, for example clove oil. Clove oil has very good ingredients that improve vehicle performance. This research aims to determine the effect of adding clove oil to pertalite fuel with variations of PMC 0, PMC 3, PMC 6 and PMC 9 on engine performance and fuel consumption. The method used is experimentation. Research was carried out in the Lab. Renewable Energy Engineering (TET) POLIJE and Yamaha Anugrah Sejahtera Kab. Jember. The research results show that adding clove oil to pertalite fuel can improve engine performance, but excessive addition will actually reduce engine performance. At an engine speed of 6000 rpm, the highest torque and power values are 10.45 Nm and 10.5 HP in the PMC 6 variation. The greater the percentage of clove oil added to the fuel, the more economical its use. The most economical use of fuel with an engine speed of 5000 rpm is the PMC 9 variation with a consumption value of 0.127 kg/hour.*

***Keywords:*** *Additives, Clove Oil, Engine Performance, Fuel Consumption*