

Variasi Penambahan Bioaditif Minyak Cengkeh Sebagai Campuran Peralite Terhadap Performa Mesin 4 Langkah (*Variations in the Addition of Clove Oil Bioadditives as a Peralite Mixture to the Performance of a 4 Step Engine*)
Pembimbing (Aditya Wahyu Pratama,S.T., M.Eng.)

Findi Erlina
Study Program of Automotive Engineering
Majoring of Engineering
Program Studi Mesin Otomotif
Jurusan Teknik

ABSTRACT

This study aims to determine the effect that appears with the presence of a mixture of clove oil bioadditives on peralite fuel on the performance comparison of a 4 stroke engine. The method used in this research is mixing clove oil with peralite fuel with a large ratio of 0%, 5%, 10%, 15%, 20%, 25%. Each variation is used as vehicle fuel for the carburetor and injection systems. The results of this study are the addition of clove oil to peralite fuel has an effect on increasing the value of vehicle performance. The best value of torque produced on a carburetor system vehicle is 9.87 Nm using a mixture of pure peralite fuel and 25% clove oil or MC-25, and the worst value for a carburetor system vehicle is the use of pure peralite fuel or MC-0% at 5000 rpm which has a torque value of 2.9 Nm while for the injection system the best torque value is 15.87 Nm which is located at 3000 rpm with the use of clove oil mixture fuel of 25% or MC-25%, for the worst value in the vehicle system This injection lies in the use of a mixture of peralite fuel with 10% clove oil or MC-10% at 8000 rpm which has a torque value of 3.57 Nm The best power produced from the carburetor system is 7.7 (HP) at 7000 rpm in a mixture of fuel 25% fuel or MC-25%, for the worst power value of the vehicle the carburetor system is located at 5000 rpm with a value of 2.1 (HP) which at this value uses peralite mu rni or MC-0%. As for the best injection system, it produces 7.6 (HP) which is located at 6000 rpm with a large variation of 25% MC fuel and the worst value lies at 8000 rpm with a value of 4.1 (HP) on the use of pure peralite fuel or MC- 0%

Keywords: *Clove Oil, Peralite, Torque, Power, HP and Nm*