

## MODIFICATION CONCEPT TO IMPROVE THE POWER OF MOTORCYCLE ENGINE

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### ABSTRACT

This study aims to, (1) Know the power improvement of four stroke engine with carburetor fuel system after modification of, (a) engine capacity (cc); (b) compression ratio; (c) valve mechanical systems; (d) intake system; (e) exhaust system; (2) Know the exhaust gas emission level compared with maximum emission level from the government. This study was included into research and development. Subject of this study was four stroke motorcycle engine with carburetor fuel system. Data was collected by dynotest dan exhaust gas analyzer. Data was analyzed by descriptive statistic as mean and percentage (%), and simple regression. The result of this study showed that (1) The improvement of engine power is 151%, from 5,8 HP/6063 rpm into 14,6 HP/10.171 rpm; (2) The exhaust gas emission after the engine modification is lower than the rule of maximum emission level from the government, HC 815 ppm and CO 3.306 % with the rule of maximum emission level are HC 2400 ppm dan CO 5.5 %.

Kata Kunci: *Modification, Power, Emission*