

# ***ANALYSIS OF THE EFFECT OF BORE UP VARIATION ON PERFORMANCE AND FUEL CONSUMPTION OF 4 STROKE MOTORCYCLE***

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## ***ABSTRACT***

*This research aims to analyze the effect of bore up variations on performance (torque and power) and fuel consumption on a Honda GL 4 stroke motorcycle. The method used is an experiment with three variations of piston size, namely 63,5 mm (standard), 65,5 mm, and 68 mm, and using two types of fuel: Pertamina and Shell Super RON 92. Tests were conducted with a chassis dynamometer to measure torque and power, and a burette gauge to measure fuel consumption at 1500 rpm engine speed. The test results showed that increasing the piston size significantly increased the torque and power values, with the highest value obtained at 68 mm piston using Shell Super fuel, which is 21,45 Nm of torque at 6720 rpm and 21,01 HP of power at 7160 rpm. However, the increase in bore also led to an increase in fuel consumption was recorded for the standard piston (63,5 mm) using Pertamina at 0,914 kh/hour. Thus, bore up was able to significantly improve engine performance, but was accompanied by an increase in fuel consumption.*

**Keywords:** Bore up, torque, power, fuel consumption, motor 4 stroke motor, piston, pertamax, shell super