

ABSTRACT

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ANALYSIS OF THE INFLUENCE OF OVERSIZE PISTONS ON 110 CC CARBAL BEAT TYPE MOTORCYCLES AND 110 CC CARBURE VARIOPI.

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(... + 34 + Appendix)

Motorcycles are a means of transportation/vehicles that grow and develop very rapidly. As time going by, the motorcycles can cause damage and experience a decrease in engine performance as a result of using the motor for a long time, resulting in wear and tear which causes gaps (learance) between the piston and cylinder. If it already feel the symptoms of tickling and the performance of the motorbike has decreased, it is better to take several steps to restore engine power by doing *oversize*. *Oversize* for the purpose to increase the default piston diameter from the factory, then the piston will have a larger size. This research is intended to study the comparison of compression values, torque, and performance tests on vario and beat motorcycle engines with engine capacities from 110cc to 115cc. Therefore, to get a comparison of the values of compression, torque, and performance tests, the treatment method is used *oversize* by replacing the piston on the beat and vario motorcycle engines. The results on the compression values of the 110cc beat and vario motorcycle engines before being carried out *oversize* to 115cc is 9.2: 1. The results on the compression value of the beat and vario 110cc and beat 110cc type motorcycle engines after being carried out *oversize* to 115cc is 12.06: 1. the result of the torque value obtained on a beat type motorcycle engine before being carried out *oversize* to 115cc is 16.37 N.m and the result after done *oversize* down to 14, 65 N.m. the results of the torque values obtained on the vario type motorbike engine before being carried out *oversize* to 115cc is 15.28 N.m and results after done *oversize* rose to 16.78 N.m. results of performance values on vario type motorbike engines before being carried out *oversize* to 115cc, the value of horse power (hp) is 6.9 hp at 4547 RPM and after *oversize* increased to 7.1 hp at 4575 RPM. results of performance values on beat-type motorcycle engines before being carried out *oversize* to 115cc, the value of horse power (hp) is 7.2 hp at 3686 RPM and after *oversize* increased to 7.6 hp at 5852 RPM.

Bibliography (2012 to 2022)