

**ANALYSIS OF CHANGES IN *PULLEY* ANGLE, *PULLEY* DIAMETER,  
*ROLLER* PATH LENGTH AND *ROLLER* WEIGHT ON TORQUE AND  
POWER ON A VARIO 125 CC MOTORBIKE**

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***ABSTRACT***

*There are many complaints about the performance of automatic motorbikes that they feel less responsive. This can be felt when crossing a hilly road that has twisting corners and then going uphill (stop and go). Modifications are needed to the CVT components, this can be done by changing several components such as using a primary pulley with a larger diameter, extending the roller path, changing the angle of the primary pulley and changing the weight of the roller. Modifications were made so that the power transmitted from the engine to the wheels via the CVT could be maximized. This research uses experimental methods to determine differences in torque and power after modifications to the primary pulley. From the torque test results, it was found that the highest torque was obtained from the custom primary pulley, 9.7 Nm. Meanwhile, for power testing, the highest power was obtained from a standard primary pulley of 8.88 hp. This can be concluded that changes in pulley angle, pulley diameter, roller path length and roller weight produce higher torque values, while the use of standard primary and roller pulleys produces greater power values compared to custom primary pulleys which have been made changes to the pulley angle, diameter pulley, roller path length and roller weight.*

**Keywords:** *Pulley, Roller, Torque and Power*