

Analysis of the Effect of Primary Pulley Angle Variation and Roller Weight on the CVT System of Scoopy Prestige 110cc Motorcycles on Power, Torque and Specific Fuel Consumption

by

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ABSTRACT

Rollers on automatic motorbikes have a wide variety of sizes, so when replacing the roller, you are faced with two choices, namely acceleration or top speed. From this, it is necessary to select a roller weight that is adjusted to the travel field. This study aims to determine the effect of variations in the primary pulley angle and roller weight on specific power, torque and fuel consumption. The method used is experimental, namely testing with variations in the primary pulley angle of 15o, 14o and 13.5o as well as variations in roller weight of 9 gr, 12 gr and 15 gr with variations in engine speed from 4000 rpm to 11000 rpm in performance testing (torque and power). , while the specific fuel consumption with a variation of 5000 rpm engine speed. Engine performance testing was carried out three times and the value that appears frequently was taken. The results showed that the highest torque value was found on the 12 gr roller with a primary pulley angle of 13.5o with a value of 11.01 N.m at 5000 rpm engine speed. The highest power value is found in the 9 gram roller with a primary pulley angle of 14o with a value of 10.9 HP at 11000 rpm. The results of calculating the lowest specific fuel consumption are found on the 12 gram roller with a primary pulley angle of 13.5o with a value of 0.083 L/HP.h at 5000 rpm engine speed.

Keywords : *Primary Pulley, Roller, Power, Torque and Specific Fuel Consumption*