The Effect of Variations in Roller Weight with the Addition of Turpentine Oil to Pertalite Fuel on Motorcycle Performance

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ABSTRACT

There are various sizes of rollers on automatic motorcycles, so that in replacing the rollers, you are faced with two choices, namely acceleration or top speed. From this, it is necessary to select the weight of the roller that is adjusted to the travel field. The addition of turpentine oil additives into the fuel is expected to improve vehicle performance. This study aims to determine the effect of variations in roller weight with the addition of turpentine oil to pertalite fuel on torque, power and vehicle fuel consumption. The method used is experimental, namely testing with variations in roller weight of 13 g, 15 g and 17 g on pure pertalite fuel with the addition of 5% and 10% turpentine oil with variations from 4000 rpm to 8000 rpm for torque and power, while fuel consumption with a variation of 5000 rpm. The results showed that the engine performance testing was carried out five to seven times and the values that often appeared were taken. The highest torque value is found on the 13 gr + MT 5% roller with a value of 11.60 N.m at 5000 rpm. The highest power value is found on the 17 gr + MT 5% roller with a value of 10.8 HP at 8000 rpm. The results of the calculation of the lowest fuel consumption are on the 13 gr + MT 10% roller with a value of 0.102 kg/hour at 5000 rpm rotation.

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