

***The Mileage Test on the Pneumatic Vehicle (Pneumatic Vehicle DA40150)
Powered by an Energy Source O₂ Gas and N₂ Gas Pressured***

by

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ABSTRACT

The pneumatic system works with fluid pressure, commonly used as o₂ fluid, with a construction of many components. In the study applying the pneumatic system as a pneumatic drive implemented on a mountain bike to analyze the accelerated comparisons that result from testing mass variations (load on riders) using the pressure of the O₂ gas and N₂ gases. The purpose of this study is to find a comparative velocity value of the result of mileage and time between using the pressure of the O₂ gas with N₂ gas on the varied burden of the driver. 50kg, 60kg, and 70kg maximum weight. There have been three times of data retrieval on each variation of drag load, where the work pressure is from tube 60 psi. Based on the results of the analysis, the highest velocity was achieved at N₂ gas pressure of 7.8 m /s on a 50kg travel average of 1,200 meters in time 152 second and the lowest velocity was obtained at 2.6 m/s of the N₂ gas at 70kg travel average 700 meters in time 216 second.

Keyword : *pneumatic, fluid pressure, gas O₂ and gas N₂, velocity*