

## **Influence of Shock Absorber Condition on the Vertical Dynamic Load Applied on the Pavement by a Truck's Front Suspension**

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**Abstract :** The main objective of this research study is to present the results of the influence of shock absorber condition, from a truck front suspension, on the vertical dynamic load applied on the pavement. For the measurements, it has been used a durability test track located in Brazil. The shock absorber conditions were new, used and failed with a constant load of 6 tons on the front suspension, the maximum allowed load for front axle according to Brazilian legislation. By applying relative damage concept, it is possible to conclude that the variation on the shock absorber conditions will significantly affect the load applied on the pavement. Although, it is recommended to repeat the same methodology in order to analyze the influence on the variation of the quarter car model variants.

**Keywords :** damage, shock absorber, vertical dynamic load, absorber

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