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THE EFFECT OF THE TRAILING IMPLEMENT CHARACTERISTICS ON THE TRACTOR RIDE COMFORT

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ABSTRACT

Previous work on tractor ride dynamics has concentrated on motion of the tractor alone. However, for most of the time tractor is operated with a drawbar pull which represents tractor implements. This paper is concerned with the investigation into the dynamic ride behaviour for an off road vehicle using drawbar pull. Different drawbar pull were used, and its effect on the tractor ride responses is evaluated. The influence of height for tractor hitch point on ride response is studied. Furthermore, the effect of link length between tractor center of gravity and drawbar pull on the tractor ride comfort is also studied. A mathemetical model for tractor with the drawbar pull is developed. Predicted results from the mathematical model indicate that as the drawbar pull is increased the tractor ride comfort improves. The effect of height hitch point and link lenght are discussed.

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