

THE ANALYSIS OF CAR MULTI-LINK REAR AXLE

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Rezumat. *Aceasta lucrare prezinta cateva solutii constructive ale puntilor fractionate spate ale autoturismelor utilizand softul Autodesk Inventor Professional 2008, in scopul determinarii variatiei unor parametrii care influenteaza din punct de vedere functional comportamentul autovehiculului. Sunt analizate trei tipuri de punti fractionate cu suspensie independenta multilink utilizate pe autovehicule din clasa medie. Rezultatele sunt concretizate prin reprezentarea modului in care ecartamentul si unghiul de cadere al rotii variaza in functie de deplasarea rotii prin comprimarea si relaxarea suspensiei. In timpul functionarii mecanismelor puntilor apar incompatibilitati cinematice.*

Abstract. *This paper presents several constructive solution of the car rear axle using the Autodesk Inventor Professional 2008 software, in order to determine the variation of some parametres which are influencing the functionality of the car behavior. Three car multi link rear axle are used on the middle car class. The results are interpreted through the way that the semi-track width and the camber angle are varied depending on the wheel displacement by the compression or relaxation of the wheel suspension. During the use of the rear axle results the kinematics incompatibilities. In order to solve this incompatibilities.*

Keywords: Rear axle. Car. Kinematic incompatibilities. Track width. Wheel camber angle.

1. Introduction

Knowledge of the state of the art in the automotive industry is encumbered by the need for confidentiality and secrecy in relation to the results of industrial research by auto makers. Usually, research in this field is conducted by researchers from the companies' product department, academic institutes or scientists with wide experience in the industry.

2. Analyzed models

This paper presents research starting from the analysis of an existing variant of multi-link rear axles (Fiat, Volkswagen and Honda cars).

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