Design and simulation of the suspension system of the Ford Ranger 2018 using Inventor software

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Abstract: In the context of increasingly advanced automotive technology, research on suspension system design and simulation is essential. This project aims to build a digital model of the suspension system for the 2018 Ford Ranger using Inventor software to optimize operational performance and minimize vibration. The research method combines theory with experimentation, utilizing modern 3D design tools. The expected results will provide innovative technical solutions for the automotive manufacturing industry, contributing to improved manufacturing quality and enhanced enterprise competitiveness.

Keywords: Automotive suspension system, Inventor software, Digital engineering design, Simulation technology, System optimization