

# **Building a 3D model and kinematic simulation of the front suspension system based on the Ford Focus suspension system.**

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**Abstract:** This topic focuses on building a 3D model and kinematic simulation for the front suspension system of a Ford Focus. Given the need to improve road handling and comfort, the research aims to address the problem through a combined theoretical and experimental approach. Accordingly, the topic seeks to provide a method for evaluating the kinematic performance of the front suspension system and to support the automotive design development process. The results of the study are expected to have high applicability in the field of automotive engineering and simulation technology.

**Keywords:** 3D model, kinematic simulation, front suspension system, Ford Focus, automotive engineering