

Building a 3D model and kinematic simulation of a manual transmission gear drive system based on the Ford Focus gearbox.

Hoang Dai Phuc

Abstract: This topic focuses on building a 3D model and simulating the dynamic processes of the gear transmission system in a manual gearbox, based on the structure of the Ford Focus gearbox. Thereby, it aims to enhance operational efficiency and improve the quality of the driving experience. The research method includes synthesizing information from existing technical documents combined with experimental analyses to build a theoretical model. The expected result of the topic is to provide a useful tool for the testing and optimization process of the transmission system, making an important contribution to improving the quality of automotive products.

Keywords: 3D model, Kinematic simulation, Manual transmission, Ford Focus car, Drivetrain system testing