

عنوان مقاله:

Performance Analysis of Different Modified MR Engines Mounts

محل انتشار:

فصلنامه مکانیک جامد، دوره 3، شماره 2 (سال: 1390)

تعداد صفحات اصل مقاله: 8

نویسندگان:

T Feyzi - *Department of Mechanical Engineering, Isfahan University of Technology*

R Tikani - *Department of Mechanical Engineering, Isfahan University of Technology*

M Esfahanian - *Department of Mechanical Engineering, Isfahan University of Technology*

S Ziaei Rad - *Department of Mechanical Engineering, Isfahan University of Technology*

خلاصه مقاله:

Increasing current vehicle development trends for small, light, front wheel drive vehicles with low idle speeds have been forced automotive industries to use hydraulic engine mounts for further improvement in vibration, noise and harshness (NVH) performance of the vehicles. However, with the development of modern vehicle designs such as hybrid vehicles and variable engine management systems which have different operational modes, more sophisticated engine mounting systems are required to effectively response to each operational mode. Magnetorheological (MR) engine mount is a semi-active hydraulic engine mount, containing MR fluid, which can alter its dynamic behavior as a result of applying magnetic field. In this paper, design concept of two MR mounts is presented and their dynamic behavior is simulated. It is shown that the simulation methods used in this paper for simulating the dynamic behaviors of the MR mounts are effective with which the dynamic characteristic analysis and design optimization of MR mounts can be performed before its prototype development. Because of increasing demands for semi-active MR mounts in automotive industries, this can ensure their low cost and high quality for development.

کلمات کلیدی:

Hydraulic engine, Mr fluid, Dynamic stiffness, Vibration isolation

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1730637>

