

## عنوان مقاله:

Enhancement of Vibration Characteristics of an Air Filter Box Utilizing Numerical Analysis

## محل انتشار:

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## خلاصه مقاله:

Air intake system (AIS) that prepares clean air for engine aspiration, plays an important role in internal combustion engines. It contributes in different aspects of engine's attributes such as fuel consumption, engine power, Engine pollution and engine noise and vibration. Powertrain system is known as one the main source of the noise and vibration in the vehicle. So, enhancement of the engine NVH characteristics provides passenger's comfort. AIS is one of the component that generates significant noise and vibration due to connecting to the engine and passing transient air flow. Therefore, tuning this system decreases vehicle sound and vibration level noticeably. In this paper, in the first step modal analysis of a concept filter box is conducted and some modifications is proposed to enhance vibration performance of this system. At the next stage, frequency response function (FRF) analysis is performed to survey sensitivity of the air box structure due to these modifications and finally suitable air filter box is chosen. To this end, finite element method (FEM) is applied

## کلمات کلیدی:

Air intake System, Engine Vibration, Finite Element Method

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/909293>

