

DYNAMIC MODEL THAT SIMULATES THE OPERATION OF A CAR ENGINE

Description:

There are some companies on the market that are dedicated to the manufacture of devices for simulating the real operation of vehicle engines for educational purposes, but sometimes they are usually models that make a simple exposition of the elements and do not allow to "simulate" how they work. In any case, the existing devices do not usually present the level of operation of the present invention, or are restricted to very specific processes that do not contemplate or in which all the variables that this invention allows to analyze do not intervene. Thus, the present invention deals with a model oriented to the analysis of the real-time operation of an electronic injection system in which we can simulate different operating conditions of a MEP, where they can be carried out with the help of the appropriate tools (oscilloscope, vacuum gun, strobe gun, etc.) a detailed analysis of the elements that comprise it. The elements that make up the dynamic model and their configuration is variable, depending on the characteristics of the engine to be simulated and its characteristics and components (sensors, actuators, power system, type of ignition, etc.).

Keywords:

[Model](#), [Motor](#), [Car](#), [Education](#), [Analysis](#)

Sectors:

[Engineering](#)

Areas:

[Mechanics](#), [Education](#)



Advantages:

Among the main advantages of the present invention are: • It achieves that the main processes of the fundamental circuits of a car engine can be reproduced. • It allows to know the operation of the different sensors that an injection system can incorporate in an ignition engine caused in the different operating conditions of the same. • It allows to quantify the injection time variations that occur when modifying engine operating variables, such as engine temperature, intake grade, etc. • Allows to provide signals to be processed by oscilloscope.

Uses and Applications:

The present technology has its main application in the educational field for the simulation for educational purposes of the real operation of vehicle engines, and more particularly of thermal or combustion engines.

Patent Number: ES2347857B2

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Filing Date: 14/03/2008

Protection Level: National (Spain)

Processing Status: Spanish patent