The Study on Dynamics of Engine Timing Chain System

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ABSTRACT

Engine valve train system controls the valve action sequences of cylinders in engines. It is one of the main control factors to the engine performances. The valve train system is driven by the cam shaft which is driven by the engine crank shaft and linked through belts or chains. The entire system is called engine timing system. The goal of this research is to study the dynamics of the engine timing system. The variations of the system resonant frequencies under the different chain speeds and also investigatived. Besides the mathematic model, the experiment bench is also set up in this research. The main purpose of this research is to assist the co-operative chain manufacturer to set up the relative technologies on engine timing system.

Keywords : engine timing chain system , system dynamic analysis,resonant frequency

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