



PEP-5

## HHO Generation Application

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Alternate fuel is important and it should be used as an assist fuel beside the fossil one. Actually we spend a lot of our income for our vehicle fuelling.

Recently, using hydrogen as a supplement fuel for spark ignition engines is one of the potential solution that is not brand new. Hydrogen is not a fuel that occurs free in nature like fossil fuel so we need electrolyzing procedure, as electrical energy is used to break water into H<sub>2</sub> and O<sub>2</sub>. In principle, an electrolysis cell consists of two electrodes, commonly flat metal or carbon plates, immersed in an aqueous conducting solution called the electrolyte. HHO gas was produced by the electrolysis process is injected into the intake manifold after the carburetor. We create a MATLAB program to calculate the cycle with and without HHO, create the balance equation for H<sub>2</sub> addition in combustion equation, the saving percentage of fuel reached 5%. This work presents an investigation to the effect of Hydrogen Booster System on fuel consumption of an internal combustion engine and how we achieved it.