

The GAP Generator with no moving parts

HHO INTERNAL COMBUSTION ENGINE

An HHO internal combustion engine is a type of engine that burns hydrogen fuel within a traditional internal combustion engine similar to how gasoline or diesel engines work. While it shares the basic structure, it requires modifications to handle the unique properties of hydrogen and oxygen, such as specialized fuel injectors and ignition systems. HHO vehicles offer a potential pathway to decarbonizing transportation, particularly for heavy duty applications, with near zero tailpipe emissions.

Toyota's hydrogen V8 engine:

Toyota has developed a hydrogen-powered V8 engine based on the Lexus RCF engine, demonstrating the potential of adapting existing engines to run on hydrogen.

Yamaha's hydrogen V8 engine:

Yamaha, with Toyota's support, has also developed a hydrogen powered V8 engine, highlighting the ongoing research and development in this area.

Corolla Cross Hydrogen Concept:

Toyota has developed a prototype Corolla Cross Hydrogen Concept, showcasing the potential of hydrogen combustion technology in passenger vehicles.

SWRI's Consortium:

The Southwest Research Institute (SWRI) has established a consortium to address the technical challenges of developing clean and efficient hydrogen engines for various applications.

Cummins' 15-L hydrogen engine:

Cummins has developed a 15liter hydrogen internal combustion engine, demonstrating the potential for hydrogen engines in heavy duty applications like long-haul trucking.

The companies above were NOT the first by a long shot.



The first hydrogen car invented was not a fuel cell vehicle but rather an internal combustion engine. Swiss inventor Francois Isaac de Rivaz in 1807 designed the first 4-wheel prototype (pictured left) that ran on hydrogen and oxygen gas. The hydrogen gas was contained in a balloon and the ignition was an electrical Volta starter.

Why did Henry Ford choose gas over hydrogen?

Henry Ford chose gasoline over hydrogen for his early automobiles due to a combination of factors including fuel availability, cost, and infrastructure. Gasoline was more readily available and affordable during the early 20th century and the infrastructure for its distribution and refueling was already established. Hydrogen, while having some theoretical advantages, faced significant challenges in terms of production, storage, and transportation, making it impractical for widespread adoption at the time, according to several historical and technical sources. IT'S NOW EASY TO PRODUCE.