Project H2ICE

Project
H2 ICE is a collaboration between AFV Tech, a serious high school teacher Mr.Cory Waxman, and his student Soroush Farzin. As a school project the team has built a device that produces hydrogen gas from water and solar panels. Their hydrogen electrolyze will produce enough hydrogen gas to power a small automobile. The electricity needed to separate the hydrogen from the water molecule is provided by solar panels. demonstrating the infinite renewable properties of this energy source.

Project H2 ICE is a 1998 Chevrolet S-10 pick up. This vehicle was chosen because of the relative ease to acquire parts and for the all around technical capabilities of the vehicle. The engine was removed and rebuilt with a few different modifications that allow it to use hydrogen more efficiently. For instance the cylinder head was milled to decrease the distance between the engine block and the cylinder head, raising the compression slightly. Also the intake and exhaust runners were extrude honed to eliminate all rough edges to reduce the chance for backfiring. The valves are stainless steel and have been shown to dissipate heat quicker and last longer than a standard valve. The pistons used are hypereutectic units that have a slightly higher than stock compression ratio and have a moly coating on the skirts to reduce noise and improve wear. The camshaft is a stock roller unit and the spark will come from individual coils transferred through high performance wires.

The induction is going to remain stock, although the hydrogen will be injected through the intake via tubes that are inserted about 2" away from the intake valve. This will provide quick response, accurate control and eliminate most of the chance for a backfire.