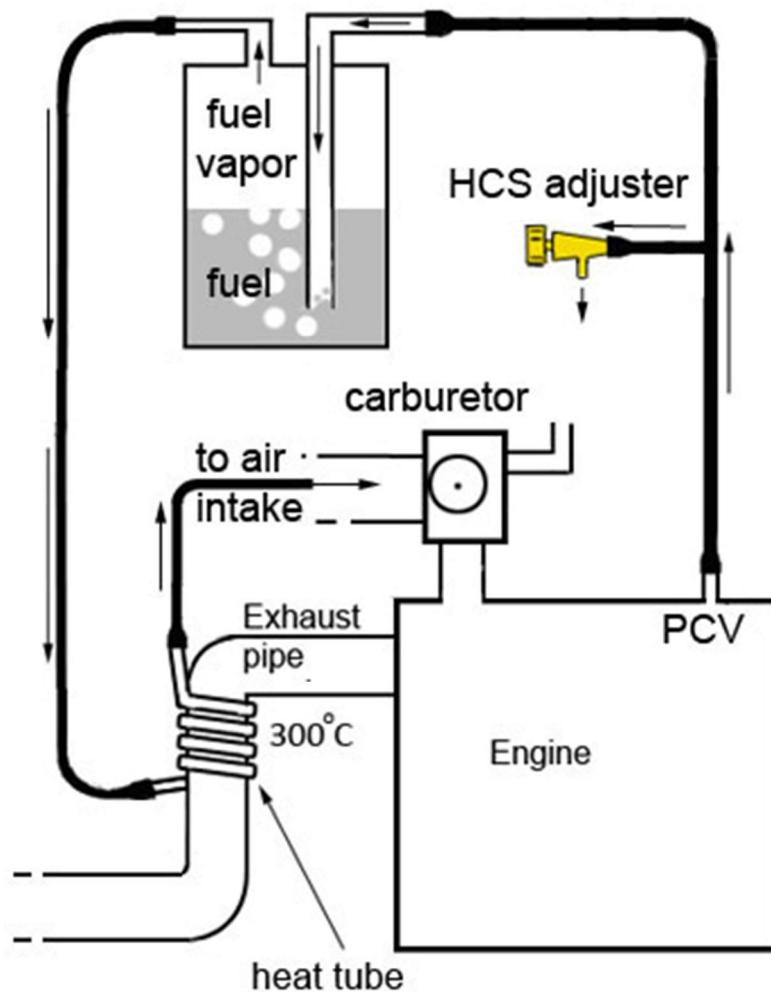


Hydrocarbon Crack System (HCS)

This is a simple, home-made system that can be added to any engine in an afternoon by anyone with minimal engine maintenance skills. It uses cheap parts that are readily available and easily bought at local stores. It will increase the efficiency of your engine resulting in more power and torque, reduced engine noise and vibration and reduced exhaust emissions. You should also experience at least 20% mileage increase.

Basically; it produces Hydrogen on Demand from regular petrol (gasoline) by cracking Hydrocarbon from Hydrocarbon vapor using heat alone. Here is a schematic of the system:

HCS using Positive Crankcase Ventilation



As you can see; vapor from an auxiliary bubbler tank (half filled with petrol) flows through a rubber pipe into a 'heat tube' where it is heated to about 300 degrees Celsius by the hottest part of the exhaust pipe. This cracks the hydrocarbon molecules into Hydrogen and Carbon which flows on to the air inlet of the engine. It mixes with the regular fuel/air and greatly increases the burn-efficiency of the engine.

All four stroke engines leak air/fuel mixture past the piston rings into the crankcase. This is known as 'blow-by' and needs to be ventilated (usually to the air filter where it finds its way back into the burn chamber). PCV flows out of the crankcase with sufficient pressure to operate the Hydrocarbon Crack System and is ideal for our purposes for the following reasons:

a. It varies in pressure depending on engine speed.

This means that the faster the engine speed, the more Hydrogen is delivered to the burn chamber.

b. Its destination is the burn chamber anyway so all we are doing is borrowing its variable pressure to operate the HCS.

c. It is warm and so helps evaporate the petrol as it flows through the auxiliary bubbler tank.

PCV pressure is generally more than is needed by the HCS and so we ventilate it via a screw valve before it reaches the bubbler tank. If the ventilation screw is closed completely; too much PCV pressure will reach the bubbler tank. If the ventilation screw is opened wide; little or no PCV pressure will reach the bubbler tank. An ideal adjustment gives minimal bubbling at engine idle.

Aquarium stores sell plastic screw valves at very reasonable prices. A radiator overflow tank makes an ideal bubbler and can be purchased at minimal cost from any auto-parts store. They also sell the rubber fuel pipe that is used to connect the various parts of the system. The 3mm bore copper piping (usually used for brake lines) can also be purchased there.

Locate the fuel bubbler anywhere handy for refilling and connecting to the rest of the system. Wind the copper tubing at least three times around the hottest part of the exhaust pipe (closest to the engine block). Allow about 6 inches (15 cm) leading into and out of the coil so that the rubber connection pipe is not too close to the exhaust pipe.

The rubber pipe carrying the Hydrogen can be fed directly into the air filter. This system gives similar results to the better known HHO system (or Hydrogen Booster) but it has significant advantages. HHO requires electrical current in order to crack Hydrogen and Oxygen from water and this places a constant drain on the engine. HCS places no such burden on the engine and takes nothing from the engine that wasn't to be discarded anyway. In addition to this; the 'Brown's Gas' produced by the HHO system is highly explosive whereas the Hydrogen produced by the HCS contains virtually no oxygen at all and is therefore much safer.