

EMISSIONS REDUCTION Hydrogen fuel systems Results January 2023

test	Without hydrogen	With Hydrogen
Suspended Particulate matter (ug/cubic meter}	87.5	13.5
Hydrocarbon (ug/cubic meter}	0.19	0.05
Oxides of Nitrogen (mg/cubic meter}	0.21	0.083
Carbon Dioxide (mg/cubic meter}	664.69	536.25
Carbon Monoxide(mg/cubic meter}	0.758	0.24

Our Hydrogen fuel systems have been tested extensively and the recent results on emissions reductions have been exceptional and again confirm and support reports on the excellent fuel savings achieved by using our systems in internal combustion engines powered by petrol (gasoline)

Vehicles were tested for emissions on suspended particulate matter, hydrocarbon, Oxides of Nitrogen, carbon dioxide and carbon monoxide in conditions of

- a) Normal operation without hydrogen
- b) Engines/ vehicle operating using our Hydrogen fuel systems along with normal fuel

Shown above we can see the reduction in hydrocarbon emissions of 73.68%. This is what would be expected with reduced fuel consumption as well as the fact that the Hydrogen increases the efficiency of the fuel combustion , therefore releasing partly burnt fuel with emissions

Releasing hydrocarbons means the fuel injected into the engine is not burning and therefore wasting the energy stored in the fuel and harming the vehicle economy.

It can be seen that the carbon dioxide concentration only dropped from 664.69 to 536.25 but this can be explained that the normal concentration entering the engine is 440 mg/ cubic meter, so in fact the reduction is a reduction from 224.69 mg/cubic meter (664.69 - 440) to a value 96.25 mg/cubic meter (536.25 - 440) . This is reduction of 57%.

This reduction in carbon dioxide is supported by the reduction in carbon monoxide (68%)

These results are official and documented results using our latest Hydrogen fuel systems.

These systems have been tested on the road as well under a variety of driving and loading conditions and found to be most effective and most economical operating at 12.7 volts and currents up to 37 amp.

Testing in the Lab is good in proving the economy improvements but testing in real world city and highway conditions provides more realistic results in busy traffic. Road tests on our hydrogen systems are currently being conducted in heavy city traffic of Pune (average speed 30 mph) as well

as on Highway traffic (Average speed 50 mph) .. the excellent fuel savings achieved are reflected by the excellent reduction in Emissions achieved.

Further results from New 8.7 litre diesel powered trucks are being collated and will be listed in a future post.

These are new trucks which claim fuel saving and emissions reducing technology already . Initial results also show excellent fuel savings for these new Diesel Powered Trucks.

For More information call Gavan on 0403177183 glknox11@live.com
<https://hydrogenfuelsystems.com.au>