REPORT:
CALIFORNIA ENVIRONMENTAL ENGINEERING

Summary

Better fuel,
better performance.
Better combustion,
better emissions.
XBEE: naturally better.

XBEE
ENZYME FUEL TECHNOLOGY

Context

On July 17, 2015 California Environmental Engineering LLC (CEE) carried out an exhaust emissions test on a 2002 Yahama TTR off-road motorcycle under the supervision of the Project Manager Larry Swiencki.

The tests were conducted to demonstrate the effects of **XBEE Enzyme Fuel Technology** in gasoline.

CEE is is a major independent emission testing facility recognized by the Environmental Protection Agency (EPA) and California Air Resources Board (CARB).

Data

1 | Conditions of the evaluation

This test used 87 octane pump gasoline. The fuel was CARB E10 87 octane regular grade pump gas provided by Clean Fuel Resources. The two gallons provided were divided into two one-gallon containers. The first container was then marked as baseline fuel.

The second container was treated with 2 ml of **XBEE Enzyme Fuel Technology**. The treated fuel then sat for three hours before being introduced into the vehicle's fuel tank.

CEE ran three baseline hot start tests with the baseline fuel. CEE then ran three hot start tests with the **XBEE** treated fuel. The third test with **XBEE** the motorcycle acted as though it was running out of fuel during the high acceleration. The motorcycle then cleared up and ran fine for the remainder of the cycle. The result of the motorcycle running poorly caused the hydrocarbons to go up significantly. Therefore the third test data with **XBEE** was not used in calculating the averages.

The results were positive in that a reduction in HC, CO, CO_2 and PM occurred. In addition the fuel economy also went up.

2 | Measured parameters

California Environmental Engineering has measured the following parameters using a Mustang Motorcycle Dynamometer with real time controls, and a Horiba CVS:

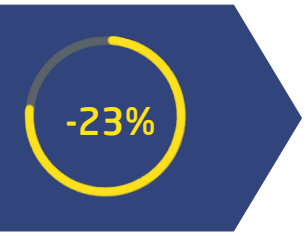
- Particulate matter – PM (grams per mile – g/mi.)
- Total hydrocarbons – THC (g/mi.)
- Carbon monoxide – CO (g/mi.)
- Nitrogen oxides – No_x (g/mi.)
- Carbon dioxide – CO_2 (g/mi.)
- Fuel consumption (miles per gallon – MPG)

Data analysis

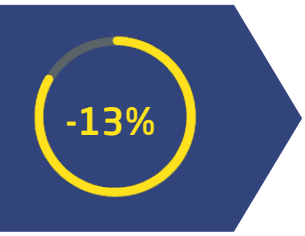
Baseline	PM	THC	CO	NOx	CO2	MPG
V6006356	0.0259	1.282	23.234	0.106	43.53	105.28
V6006357	0.0175	1.201	20.424	0.134	43.35	111.72
V6006358	0.0227	1.641	21.394	0.115	40.56	111.54
Average	0.0220	1.375	21.684	0.118	42.48	109.51
With XBEE						
V6006359	0.0165	0.890	18.522	0.128	42.39	119.14
V6006360	0.0176	0.978	19.259	0.134	40.45	119.95
Average	0.0170	0.934	18.891	0.131	41.42	119.55
Difference (%)	**-22.7%**	**-32.1%**	**-12.9%**	**+11.0%**	**-2.5%**	**+9.2%**

Conclusions

HC



CO



Fuel cons.

This test does not demonstrate the full benefits of using **XBEE Enzyme Fuel Technology** on a daily basis. Indeed, the test cycle has been operated on July 17, 2015, and the whole operation only took a few running hours of the motorcycle on the bench.

Yet, it does clearly demonstrate that **XBEE** additive is also very efficient in gasoline engine as it reduced hydrocarbon and carbon monoxide emissions, both marker of improved fuel combustion.

Meanwhile, measurements show a dramatic reduction of fuel consumption by -9.2%, paying for the product and more.

You are entitled to expect the best from **XBEE Enzyme Fuel Technology**. We offer a wide range of benefits: cleaning fuel systems, saving money, reducing pollution.

Annexes

Original database

CEE LLC
CALIFORNIA ENVIRONMENTAL ENGINEERING

TEST SUMMARY

Test #	PM	THC	CO	NOx	CO2	MPG
BASELINE						
V6006356	0.0259	1.282	23.234	0.106	43.529	105.28
V6006357	0.0175	1.201	20.424	0.134	43.35	111.72
V6006358	0.0227	1.641	21.394	0.115	40.56	111.54
AVERAGE	0.022	1.375	21.684	0.118	42.48	109.51
WITH SOLTRON						
V6006359	0.0165	0.890	18.522	0.128	42.39	119.14
V6006360	0.0176	0.978	19.259	0.134	40.45	119.95
AVERAGE	0.017	0.934	18.891	0.131	41.42	119.55
		%CHANGE				
	-22.7%	-32.1%	-12.9%	+11.0%	-2.5%	+9.2%

NOTE: All numbers in the summary are in grams/mile or Miles per gallon

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