

California Environmental Engineering

In July 2015, CEE conducted testing on a 2002 Yamaha TTR off-road motorcycle under the supervision of the Project Manager Larry Swiencki. The tests were conducted to test the effects of the Xbee Natural Fuel Additive. This test used 87 octane pump gasoline. The gasoline 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 the Xbee Enzyme Fuel Treatment. 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, CO₂ and PM occurred. In addition the fuel economy also went up.

	Without Xbee	With Xbee	Difference (%)
PM – Particulate Matter (gr/mile)	0.022	0.017	-22.70
THC – Total Hydrocarbon emissions (gr/mile)	1.375	0.934	-32.10
CO – Carbon Monoxide (gr/mile)	21.684	18.891	-12.9
NO _x – Nitrogen Dioxide (gr/mile)	0.118	0.131	+11.0
CO ₂ – Carbon Dioxide (gr/mile)	42.48	41.42	-2.50
MPG – Miles per Gallon	109.51	119.55	-9.20

Engines and fuels guarantees:


× **Xbee** is in compliance with the **CEC** tests, recognized by the **ACEA** that represents 13 of the main European vehicles manufacturers. 

<http://www.acea.be>


× On the other hand, **Xbee** respects the European regulation EN 590 Diesel norm.

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