



FASTechnology™ Benefiting School Districts, Mining & Oil Industries

In a dynamic world, attention to new technology and how to leverage this new technology is essential. Cost savings from technology is always beneficial, but becomes critical when it involves health and safety issues.

Benefits in Leveraging FASTechnology™

What are the benefits of the FASTechnology™ and its reduction of CO₂ or carbon pollutants? Let's first consider the following:

- 1) By re-routing the blow by tube (which is referred to as close cranking) we eliminate 100% of the CO₂ from the blow by tube. This percent is equal to 50% of the total mass or half of the pollution produced by the engine.
- 2) By the very nature of what the Fuel and Air Saver™ does, even though we are not in the tail pipe business, FASTechnology™ is able to reduce exhaust CO₂ by up to 20%. This 20% is attained by re-routing the lost unburned fuel back to the intake which is mixed fresh incoming fuel.
- 3) Because the returning fuel is at a different N point (flash point) it ignites easier, burns cleaner and more completely, and causes a better burn. This cleaner burn in turn produces less CO₂ because less soot (unburnt fuel) is present in the exhaust and is not venting into the atmosphere through the blow-by tube.
- 4) By re-routing the blow-by, the Fuel & Air Saver™ captures 100% of the 2.5mlgs and smaller particles that are not seen but the odor it emits can be detected by our sense of smell. These smaller particles are contaminants which settle in our lungs and, unfortunately, never come out, and are among the highest cancer causing agents in the world today.
- 5) By re-routing lost blow-by the Fuel & Air Saver™ is able to gain horse power, reduce toxic fumes emanating from the engine crankcase, reduce CO₂ in the exhaust and provide fuel savings. This fuel savings come from a better and higher volatile fuel produced by the already expended fuel lost through the open blow-by.

So, how does this provide an additional benefit for companies? Let's as an example, look at the underground mining industry with the challenges and solutions for this one particular industry:

- 1) All companies pay insurance premiums based on Experience Modification Factor or Experience Modification Ratings (EMR). With increased claims come higher insurance costs; with fewer claims, lower cost of insurance.
- 2) If a company has employees making repeated claims equaling 60% of claims found in that industry, and if the number of claims continues at that rate or gets higher, then that company's insurance goes up to cover the cost in rising claims. This results in the company having to provide information to its carrier that they are doing all they can to reduce or prevent this from getting worse. Insurance companies will set guide lines and goals that the company has to achieve, otherwise their insurance cost go up.
- 3) Miners are subjected to a very high concentration of CO₂ within an enclosed working area while having engines running with an open blow-by tube greatly aggravates the conditions in the mines. By re-routing the blow-by and eliminating 100% of the unhealthy fumes from the open blow-by tube, the mining company can show they are greatly reducing these cancer causing agents.
- 4) By filing for certified emission credits, the mining company is able to offset some of its investment expenses while at the same time showing the insurance company that they are in compliance with the health and safety laws protecting their workers.
- 5) By reducing the CO₂ output from the engines, the company provides a cleaner working environment in the mines and a better and healthier working atmosphere, which reduces their EMR.

Emissions on School Busses

An area of great concern by parents is the health of their children. In a 2006 report titled "[Clean School Bus Pollution Report Card \(2006\)](#)" the report stated "*The exhaust from diesel fuel, which powers about 95 percent of the more than 505,000 school buses on U.S. roads today, is linked with asthma, heart disease, cancer, and even premature death. Recent studies have found that pollution can concentrate inside school buses, leading to even higher exposures for children who ride buses.*" It is widely known that most school buses are designed with the engine compartment located at the front of the bus. Although exhaust emissions are dangerous and harmful, they are not the only source of the pollution. Pollutants emanating from the engine's open blow-by tube can easily enter the cabin of the bus through the floorboard as well as the door at the front of the bus. FASTechnology™ provides an inexpensive solution not only for eliminating 100% of these harmful pollutants and protecting our children, but in reducing the cost of fuel by increasing the engine's efficiency and economy.

Carbon Credits & How They Work

Carbon credits Offsets are based upon established scientific protocols, and represent accumulated reductions of CO₂ in one pound increments. When a sufficient amount of carbon credits offsets are accumulated, they can be converted into a Carbon Financial Instrument (CFI's) as defined by the current carbon trading community. Companies using engine treatments that accumulate CFI's can reduce their own carbon footprint or profile.

Carbon Credit Calculation

Fuel Assumption: Class 8 Tractor drives 100,000 miles per year and averages 5.5 mpg of diesel fuel, or about 18,000 gallons each year.

Facts:

1. One gallon of diesel fuel produces 22.2 pounds of CO₂.
2. 18,000 x 22.2 pounds equals 40,000 pounds of CO₂ or about 20 metric tons of pollution.
3. World NCI Fuel & Air Saver™ has proven to increase fuel efficiency by 5 %. The result is a 900 gallon reduction in fuel usage and a 10 metric ton reduction in pollution.

Emissions Facts:

1. The Clean Air Task Force (CATF) study indicated that 50% of the harmful emissions emanate from the "blow-by", and the other 50% from the "tail-pipe.
2. Certified tests have established that the Fuel and Air Saver™ totally eliminates the 50% of the lethal emissions from the "blow-by" and about 10% from the "tail-pipe" exhaust.

Conclusion: World NCI has successfully reduced the harmful contaminants from diesel tractors 50-60%, while increasing the fuel savings by 5%.

World NCI is currently in negotiations with a HYDROGEN TECHNOLOGY industry leader to join forces and combine our technologies to achieve a remarkable reduction in total emissions by 75-80% while increasing fuel savings by 25-30%. More information will be provided on this developing and huge break-through as details become available.

CO₂ credits are traded by the ton, and as a commodity, are subject to market fluctuations. As of 04/08, a metric ton in the U.S. sells for \$17.00 whereas in Europe and Kyoto signature countries it sells for \$53.00. Since Gold standard CFI's are registered under the Kyoto protocol, we can trade in Europe.

The investment for installing the Fuel & Air Saver™ can easily and quickly be recovered through carbon credits and fuel efficiency, while creating a healthier environment by eliminating engine crankcase pollutants.