GOOD PRACTICE: No Idling in Fleet

PRACTICE

Simple Driver Behavior Changes Save Fuel and Carbon (No-idle Policy)

PROBLEM

Idling wastes a lot of fuel and emits a lot of carbon, without providing the company value. It is well-known that engine vehicle idling contributes to global climate change without providing value to the company. Idling releases unhealthy exhaust fumes, including particulates, carbon monoxide (CO), nitrogen oxides (NOx), and volatile organic compounds (VOCs).

The Business Case: What does idling cost YOU?

- **Bad for vehicles:** Idling causes twice the wear on internal parts compared to driving at highway speeds, increasing maintenance costs and shortening engine life. Prolonged idling can reduce the operating life of engine oil by 75%.
- **Bad for fuel use:** Trucks consume up to one gallon of diesel fuel for each hour at idle, using as much as 2,400 gallons (approximately USD 10,000) of fuel every year per truck. From trucks in the US alone, this totals 1.2 billion gallons of diesel fuel consumed every year. On a daily basis, Americans alone may be burning as much as 3.8 million gallons of gasoline or diesel from voluntary idling, which, in turn, results in producing about 40,000 tons of carbon dioxide.
- **Bad for environment:** Idling for over 10 seconds uses more fuel and produces more CO_2 emissions than restarting your engine. Idling just 5 minutes a day puts up to 300 pounds of carbon dioxide and other air toxics into the atmosphere each year. On average, each idling truck produces about 21 tons of carbon dioxide (CO_2) and 0.3 tons of nitrogen oxides (NO_x) annually.
- **Bad for employee and community health:** Breathing exhaust fumes increases the risk of cancer, heart and lung disease, asthma, and allergies, especially in children. Exposure to most auto pollutants can often be higher inside vehicles than outside while idling. By eliminating unnecessary idling, drivers can protect their health and that of their passengers and reduce impacts to air quality.

DESCRIPTION AND RESULTS

Companies such as Wal-Mart, Green Mountain Coffee Roasters (GMCR), and United Parcel Service (UPS) are reaping the financial benefits from implementing an idling reduction policy.

WAL-MART

When not actively driving, truck drivers tend to idle their vehicles for a few reasons: to warm up the engine before driving; to avoid wear and tear on the engine in situations that require frequent restarting; to talk on cell phones while parked in the vehicle; and to keep warm in cold temperatures or cold in hot temperatures while in the vehicle. To stop much of the idling in its truck fleet, Wal-Mart Trucking installed auxiliary power units in cabs for truck drivers for air conditioning, heating, and electronics when they sleep overnight. Wal-Mart installed the units in 100% of its trucks, saving millions[1] in fuel costs. In 2005 alone, Wal-Mart saved 25 million USD.

GREEN MOUNTAIN COFFEE ROASTERS

GMCR equipped the company's heavy duty trucks with telemetric systems to provide detailed engine data including percent of runtime that the engine is idling. GMCR found that the trucks were idling 28% of the run time. Two years after GMCR started to measure telemetric data, it has reduced idling to 10% of run time resulting in a 4% savings of fuel annually. By 2009, GMCR had already reduced idling to only 3%, resulting in savings of 7,000 gallons of diesel fuel, avoiding 152,000 pounds of carbon dioxide emissions and saving more than $20,000 a year from idle reduction.

How can you do it?

While GMCR utilizes truck telemetrics, a viable lower cost alternative for monitoring engine data are Engine Control Modules (ECMs). Many modern engines are equipped with ECMs that make available data of vehicle operational parameters. A customized data logger or similar device would need to be installed on most vehicles to read this data and track engine idling, and determine how much fuel and money is saved. This would pay for itself in short order. However, while recommended, it is not essential for vehicles to utilize these systems to institute an idling reduction policy. The main and virtually cost-free component is to establish a definitive policy or practice that clearly and regularly informs company fleet drivers of the multiple benefits of idling reduction.

UPS

Since the time UPS drivers adhere to a no-idling policy to help reduce fuel consumption and harmful emissions, UPS has cut the amount of time delivery vehicles idle by 24 minutes per driver per day – a fuel savings of $188 per driver in one year (100,000 vehicles delivering over 15 million packages and documents worldwide each day). UPS conserves around 10 million gallons of gas of fuel per year, which equates to 100,000 tons of carbon dioxide emissions per year.

Since the deployment of its route planning technology in 2004, UPS has eliminated millions of miles of delivery routes, which in turn has reduced time of delivery by taking already-expedient routes and giving them razor edge efficiency.

What else does UPS do?

UPS saves more than $1.2 million annually on its more than 100,000 vehicle fleet by implementing telemetrics and with formal driver training. By studying its routes and reacting to findings, UPS optimizes is fleets. For example, UPS learned that avoiding left-hand turns saves time, conserves fuel, lowers emissions, and increases safety. For the past several decades, UPS has designed routes in a series of loops with as few left-hand turns as possible. In the past few years, UPS rolled out technology that automates the process for minimizing left-hand turns. Today, UPS managers combine personal and historical experience with computer programs to design delivery routes.

MORE ADVANCES

Additionally, many companies have started to switch their fleet to hybrid-electric trucks and cars. New technology like hybrid-electric vehicles (HEVs) which combine the benefits of fossil fuel engines and electric motors and can be configured to automatically reduce idling by shutting off the engine when the vehicle comes to a stop and restarting it when the accelerator is pressed.

RESOURCES?

Check out the Fleet Safety Toolkit in your esKO site for resources on driving training and get started on implementing a No Idling Policy at your company. For access to the Fleet Safety Toolkit, contact Himanshu Jani, hijani@coca-cola.com.