

Five Ways to Reduce Fuel Consumption Using GPS Tracking

Introduction

Fleet management technology is changing the way fleet managers look at vehicle fuel consumption. Every fleet, big or small, must pay for fuel. The challenge is to consume it in the most effective way possible.

As fuel costs continue to rise, business owners and fleet managers seek cost-effective ways to manage this unavoidable expense. GPS fleet tracking technology can be one of the most cost effective means to manage fuel consumption. Reduced margins and heavy competition in delivery, distribution and transportation service industries create a high level of urgency for every business to implement an effective fleet management system that can manage costs and provide a measureable return on investment (ROI).

A recent study conducted by C. J. Driscoll & Associates reported that the number of local fleet vehicles equipped with GPS tracking has nearly doubled in the last four years from 920,000 units to more than 1,173,000. The report states that the single most important reason for this market growth has been the significant increase in awareness and acceptance among fleet operators of the high ROI obtained with GPS fleet management solutions.

Here are five ways GPS fleet management technology can help you reduce your fleet's fuel costs:

1. Minimize engine idle time
2. Monitor speeds
3. Optimize routing
4. Maintain accurate records
5. Proactive vehicle maintenance September 2010

Minimize Engine Idle Time

The question is, “How much fuel can I save by reducing my idle time?” The best answer is, “All of it.” Reducing unnecessary engine idle time is a highly effective way fleet operators can save fuel costs, extend the life of their vehicles and reduce greenhouse gas emissions. Drivers prefer to keep their cabins comfortable during the day. They want it warm in the winter and cool in the summer months so they leave the engine running when they make their deliveries or stops.

Over the course of a day, the engine will idle for hours burning fuel. One extra hour a day of idling is equivalent to 64,000 miles of engine wear. This prematurely ages the vehicle, which further impacts its fuel economy and efficiency. With a GPS vehicle tracking system, fleet owners and dispatchers can monitor their fleets and receive reports and alerts that track when the driver turns the engine on or off and when the vehicle is moving, providing accurate idle times.

Many companies are becoming more aware of the harmful effects of unnecessary vehicle idling. Voluntary employee-driven efforts to reduce engine idling have helped reduce fuel consumption costs. In fact, Verizon employees addressed their idling time and reduced fuel consumption by more than one million gallons a year. The company states that this is the equivalent of taking 1,600 vehicles off the road for a year. Small fleets of 25 vehicles can save nearly 600 gallons of fuel a year by reducing their idling time by just 15 minutes a day. Organizations of all sizes are taking matters into their own hands and are doing their part to reduce their engine idle time.

There are mandatory idle reduction measures in place to address this issue due to the health hazards related to greenhouse gasses. For example, the city of New York passed legislation to reduce engine idle time. In another example, the Oregon Department of Environmental Quality has recommended a state law to address fleet vehicle engine idle time. Compliance with these types of measures makes it essential that fleet operators, both small and large, have a reliable means to monitor, measure and correct driver behavior related to engine idling to avoid fines and penalties. GPS vehicle tracking technology makes it possible to measure and address engine idling to reduce operating expenses and greenhouse gasses. September 2010

Monitor Speeds

Every day, organizations of all sizes dispatch delivery trucks, service vehicles, vans, passenger cars and large trucks onto the streets and highways with the same mandate: get there as fast as possible! Drivers hustle to their work, often exceeding posted speed limits on the way. There are at least two negative side effects to this behavior. Excessive speeding is dangerous and burns extra fuel, adding risk and expense to overall fleet operations. This article is not about speed detection devices or ways to get out of a speeding ticket. It's about how to reduce fuel consumption by leveraging GPS vehicle technology.

GPS vehicle tracking systems are set to send alerts to fleet operators and drivers that notify them when they exceed predetermined speed limits, encouraging them to slow down. The U.S. Environmental Protection Agency estimates that excessive speeding may decrease fuel economy by up to 20%. In a small fleet of just 25 vehicles, saving 20% of fuel costs each year per vehicle quickly makes an impact. Larger fleets will see even more dramatic results enterprise wide.

GPS and wireless technology have evolved to the point where vehicle tracking and fleet management technology can integrate data such as maps, traffic and posted speed limits in real-time to help organizations communicate, increase efficiencies and track data such as fuel consumption, fuel efficiency, vehicle speed and maintenance schedules. Leveraging this data to improve operational efficiency reduces fuel consumption, saving thousands of dollars a year in lost profits.

Installing GPS vehicle tracking devices encourages drivers to be more accountable and to practice safer driving habits. Once employees know you are monitoring their driving, speed and gas mileage, they tend to take greater care in how they are using company vehicles. This improved behavior will save fuel, reduce unsafe driving and enhance a company's reputation with the public. September 2010

Optimize Routing

Starting, running and idling an engine burns fuel and increases operational costs for fleets of all sizes. Service, delivery and transportation fleets typically make multiple stops each day and can save time and reduce fuel consumption by efficiently routing their drivers. When the number of stops and the locations are subject to frequent change, or are not scheduled by appointments, it becomes even more important to determine the order of stops and the most efficient route.

GPS vehicle tracking devices support routing and work scheduling either as stand-alone applications or through integrations with third-party routing applications via standard Web-based APIs. Destinations and work tickets scheduled for each vehicle are communicated to the driver through the GPS vehicle tracking system. The next level of functionality is to “optimize” the order of the destinations to provide the most efficient route. Routing and work scheduling help service and delivery companies conserve fuel and plan their work. However, there is a significant difference between merely planning the routes and optimizing the routes.

Optimizing a route helps drivers navigate the roadway, avoid traffic challenges, reduce idling and other delays, which saves precious fuel. Fleet dispatchers can quickly communicate with drivers to determine the best order for multiple stop trips even as driving conditions or work orders change during the day. A recent study by Motorola reported that 48% of drivers change their route on a daily basis. Keeping drivers well informed helps them make the best route revisions.

Moving from a traditional dispatcher process to an automated GPS-driven fleet tracking and management solution can increase productivity 25% or more as the application can track and contact multiple drivers simultaneously as opposed to phone or radio contact to multiple drivers in an effort to find vehicles close to a specific location. According to the Motorola survey, using GPS fleet tracking technology saves more than 240 miles of driving per vehicle each week, saving engine wear and fuel. With fewer gallons of fuel burned and extended vehicle life, service and delivery fleets can direct more of their attention and resources to servicing their customers instead of their fleet vehicles. September 2010

Maintain Accurate Records

Fuel is one of the top operating expenses for fleets. FleetFinancials.com reports the national rate for fuel theft of gasoline powered vehicle fleets is 3% of a company's total fuel budget. It's challenging to manage fuel consumption when it's being stolen. Keeping track of fuel purchases is a highly effective way to manage fuel expenses. Many fleet operators have implemented fuel programs to help them manage fuel costs.

Fleet management programs help monitor purchases and fuel card providers and fuel merchants may offer discounts or negotiated rates for their customers to build brand loyalty. Once these measures are in place, the work of effective fuel management has only just begun. To maximize the impact of a fuel management program, companies can implement a GPS fleet tracking solution to capture purchase and mileage data, maintain accurate records and implement processes to modify fuel purchase behavior.

Monitor fuel purchase frequency and price to find opportunities for savings. GPS vehicle tracking applications can provide important information to fleets such as the location of preferred fuel providers, vehicle mileage by state and daily route tracking reviews showing every stop during the day. Tracking and monitoring fleet fuel expenses by vehicle and driver make it easier to manage your business.

After-hours vehicle use and unauthorized vehicle use costs fleets thousands of dollars each year in additional fuel costs and engine wear and tear. GPS fleet tracking systems send alerts to notify fleet operators when a vehicle starts or is used outside of authorized schedules. Fuel consumed by unapproved side jobs are identified and eliminated, reducing expenses and increasing productivity.

It is not cost effective or realistic for fleets to manually track and monitor the data provided by active vehicle tracking devices. GPS fleet tracking solutions capture volumes of data that can be powerful tools used to reduce fuel consumption and expense. September 2010

Proactive Vehicle Maintenance

Properly maintained engines operate more efficiently than neglected engines, saving money and fuel expense for fleet operators. GPS fleet management systems provide vehicle summary reports, maintenance logs and schedule notification to ensure each vehicle in the fleet is operating as efficiently as possible. Fleet maintenance reporting can send alerts and notifications for scheduled maintenance based on variables such as mileage driven, time, duration or date.

Vehicles get their best gas mileage when they operate at peak condition. Routine maintenance services such as properly inflating tires, changing oil, filters and spark plugs improve fleet fuel economy by 4% to 10%. These savings add up quickly for fleets of 25 or more vehicles. It is critical to maintain engine and fuel management systems to optimize fuel economy. GPS fleet management applications are used to communicate that a vehicle is ready for service, and provide helpful logs of past maintenance events. Well-maintained vehicles stay in service longer, operate more efficiently, produce fewer green house gases and provide service that is more reliable. Implementing an end-to-end GPS vehicle tracking technology keeps vehicles on the road and out of the garage.

Summary and Next Steps

Fuel prices continue to rise and remain a major expense for fleets. GPS fleet tracking can be a powerful and effective means of reducing fuel consumption. While some GPS tracking services do little more than put a pin on a map, a fully integrated GPS fleet management solution can provide benefits that quickly help reduce fuel costs and improve business performance.

Source : “Discrete Wireless”, 2010.