



KEEP FUEL THEFT FROM DRAINING  
YOUR BOTTOM LINE

The gas in your fleet’s tanks is a high-demand commodity. Thieves take little risk in siphoning and reselling it, leaving fleets with the financial burden. Smart fleet technology is an inexpensive, preventative measure that pays for itself by protecting your fleet and its fuel.

Fuel theft is a non-violent crime. Rising prices and reliable demand make diesel and unleaded gasoline hot commodities for thieves looking for low-risk, high-reward profits. Criminals who steal fuel from your fleet’s tanks can make **more than \$1,000 a day** reselling it, adding up to **millions of dollars each year** in profit. According to the U.S. Energy Information Administration ([USEIA](#)), the average price for a gallon of diesel was \$2.785 in September 2017. Over the next two years, it rose to \$3.016, with peaks above that along the way. Over the same timeframe, the average price for unleaded followed a similar path of fluctuations and steady increases.

Fuel doesn’t come cheap. Hard fuel costs are one of the largest portions of a fleet’s budget, but that fuel doesn’t always go far. Gas guzzlers such as school buses, transit buses, refuse trucks and Class 8 semi-trucks only get **4 to 8 miles per gallon**. Every drop counts; when fuel is stolen, it counts more.

6 costs of fuel theft		
<p><b>Replacement purchase</b></p> <p>You pay for two tanks of fuel without getting your money’s worth from the first purchase.</p>	<p><b>Higher price</b></p> <p>Fuel prices can change daily, so the replacement fuel may cost more than the original purchase.</p>	<p><b>Vehicle repairs</b></p> <p>You’ll pay for broken physical components or engine damage caused by fuel adulteration.</p>
<p><b>Insurance expenses</b></p> <p>If the damages and fuel are insured, you still pay a deductible and possibly higher premiums.</p>	<p><b>Lost productivity</b></p> <p>Discovering and reporting the theft, filing paperwork and arranging repairs take resources.</p>	<p><b>Vehicle downtime</b></p> <p>Unplanned towing costs, repairs and refueling cost time, money and resources.</p>

### Understand external fuel theft.

External thieves, such as those working in gangs or organized crime, want to steal as much as possible, as quickly as possible. One method is using credit card skimmers at gas station pumps to steal card information. A second is draining an unattended vehicle’s gas tank by cutting gas lines or breaking the gas cap, then siphoning fuel into an auxiliary “bladder” tank concealed inside an inconspicuous van or pickup truck.

Each bladder tank typically holds up to 300 gallons of fuel and can be filled repeatedly before you or your driver notices. To cover their tracks, some thieves will replace the stolen fuel with harmful substances that can damage components such as fuel injectors and, depending on the substance, the engine itself.



Image source: [www.miamiherald.com/news/local/crime/article194490029.html](http://www.miamiherald.com/news/local/crime/article194490029.html)

Once these thieves collect enough stolen fuel, they either transfer it to their own 4,500-gallon industrial fuel tanker or sell it directly from the makeshift truck or van that holds the bladder tank. Either way, they target unsuspecting (or unscrupulous) buyers such as gas stations, construction sites or truck drivers trying to save money by buying roadside fuel.

### Understand internal fuel theft.

Internal fuel theft is more difficult to spot because monitoring each vehicle, each route, each trip and each driver is time consuming—especially for large fleets that consume large amounts. Unlike external fuel theft, internal fuel theft is often a crime of small opportunities; employees steal smaller amounts for resale or personal use. Still, although the amount stolen at a time may be comparatively small, it adds up over the time it takes to suspect theft.

### Look for red flags.

External or internal, fuel thieves leave footprints. The faster you catch on, the faster you can address the theft and take steps to deter future incidents. Know what to look for as you monitor fleet vehicles and fuel purchases for key indicators.



Purchasing more fuel than the vehicle can hold



Unplanned, off-route stops



Distinct drop in fuel efficiency



Purchasing the wrong fuel type for that vehicle



Purchase locations don't match vehicle location

Building trust between you and your drivers is essential to building an effective fleet. Few drivers, especially quality ones, want to work for a company that eyes them with suspicion. If you see a red flag, assume good intentions—even if the red flag signals potential internal theft.

Excessive fuel purchases can indicate external or internal theft. Larger amounts may be easier to identify, but smaller amounts are easily overlooked—something internal thieves count on. However, with the right fuel tracking solution, you can quickly and accurately detect when the amount of fuel purchased exceeds a vehicle's gas tank capacity.

### Scenario 1

Driver A fills up his commercial truck using the carrier's credit card. He also fills up a private gas can or two with fuel purchased on that same card for resale or personal use, such as for his lawnmower. The additional fuel purchase may be small compared to the amount purchased for the commercial truck, but it's still theft and it still adds up.

### Scenario 2

Driver B and Driver C take identical trips in identical fleet vehicles at the same time of day. As planned, each should stop for fuel twice during the entire trip. However, Driver B stops to fill up three times while Driver C stops to fill up twice, as anticipated.

One of the following may be occurring:

- An external thief has stolen fuel from Driver B's vehicle without his knowledge.
- An external thief has skimmed Driver B's card information at the pump and used it.
- Driver B is stopping to buy additional fuel to sell on the side for personal profit.

With the right fuel and vehicle tracking technology, you're more able to identify the incident and investigate the causes. And help drivers protect their vehicles.

### Watch for irregular movement and unplanned stops.

Circumstances may require a driver to deviate from the planned route. Detours, construction, weather, traffic; they're all valid reasons for making an unplanned fuel stop. Vehicle tracking and geofencing show if (and where) a driver takes the vehicle off route. The right fuel tracking technology shows if that stop is necessary.

### Scenario

After leaving the yard, Driver D drives the company van a mile home to pick up personal gas cans, then to a gas station to fill those cans using your company's card. Once the cans are full, Driver D then drives to a remote area and stops for a few moments, before resuming his assigned route. Vehicle tracking shows locations and times; fuel tracking shows that your fleet van didn't require that stop for refueling.

Irregular stops, especially those for unnecessary fuel, indicate that further investigation is prudent.

### Prevent fuel theft with modern methods.

Fuel theft is rampant and spreading. No deterrent will keep fleet vehicles completely safe from determined thieves looking for the payoff. However, certain basic precautions can make your fleet less vulnerable. Smart fleet management technology provides additional safeguards.

## 4 common sense precautions

Physical deterrents	Card monitoring	Defensive parking	Safe locations only
Create physical barriers to the vehicle's fuel by installing locking gas caps and anti-siphoning hardware.	Monitor card usage and vehicle efficiency per trip and over time to spot anomalies.	Teach drivers to position vehicles in a way that denies access to the gas tank and fuel lines.	Ensure drivers park in well-lit areas with security cameras and high fences.

### Basic precautions have limitations.

Drivers are limited in their ability to deter thieves from damaging the vehicle to reach the fuel. Locking gas caps and anti-siphoning hardware aren't guaranteed security. Fuel thieves can—and do—puncture or remove the vehicle's gas tanks, damaging components in the process. The higher a vehicle's ground clearance, the more vulnerable its gas tanks and lines.

Credit card skimming bypasses anti-fuel theft hardware completely. Teaching drivers to check for credit card skimmers at the pump is essential but not foolproof. Human judgement is still prone to error, and as credit cards become more sophisticated, so do skimmers. Monitoring credit cards can signal if information has been stolen, but only after the fuel theft has happened and after the charges show on the statements.

### Extend your fuel theft prevention strategies.

#### Track vehicle and fuel usage in detail.

To determine if an anomaly in fuel usage or efficiency indicates fuel theft, you first need to identify the anomaly. For that, you need a [fuel tracking solution](#) that captures more than just miles per gallon, and [high-definition vehicle tracking technology](#) that details each vehicle's location. Ideally, all of the data pulled by the smart fleet management solution should be readily accessible through a [secure, online portal](#) so you can focus on putting the data to work protecting your fleet from fuel theft.

1

**Determine fuel efficiency** based on MPG, terrain, altitude, weather conditions, routing, maintenance, aerodynamics and gearing.

2

**Create a No Park list** of specific locations such as certain truck stops or gas stations known for high rates of fuel theft incidents.

3

**Build geofences** on the back end, and use high-definition vehicle tracking to see in near real time when a vehicle is taken off route.

Just because something's out of the ordinary doesn't mean someone's stealing fuel. A drop in fuel efficiency could be the result of traffic or the vehicle needing maintenance. An off-route stop could reflect an unplanned detour due to construction and traffic congestion.

Reduced efficiency may also be the driver's habits. Weather and traffic can't be controlled or avoided, but driver behavior can. The right fuel tracking solution monitors factors such as speeding, idling, RPMs and cruise control usage, all of which affect a vehicle's fuel efficiency. With detailed trip analysis and fuel data, you can more quickly—and more easily—determine what's a red flag and what isn't.

#### Match fuel transactions with locations and dates.

An effective fuel tracking solution should include a report function for matching fuel card transactions with a vehicle's GPS locations, including dates and times. For example, if an extra fuel card transaction was made on the same day your driver made a fuel stop, but in a different county than the driver's route, you can reasonably consider that external thieves stole the driver's fuel card information. On the other hand, if fuel card transactions match the vehicle's location within the timeframe, you can focus on internal factors instead.

Assume good intentions; most drivers don't want to work for a company that doesn't trust them. But you'll still have direction for your questions.

Also, keep in mind that fuel card transaction data may have some inconsistencies, from time or day delays in posting the purchase to GPS location. These inconsistencies are baked into the nature of using credit cards. Still, even close approximations can provide enough insight to answer questions, exonerate drivers and direct further inquiries.

**Inspect the vehicle before leaving each stop.**

Thieves can bypass anti-fuel-theft hardware to steal the fuel in your vehicle’s gas tank. When they do, they damage the vehicle’s components. Drilling into tanks, cutting gas lines, breaking locking gas caps; ensuring your drivers inspect their vehicles before and after making a stop ensures they’ll spot the damage and, therefore, the theft. Additionally, damage such as a punctured gas tank can pose a safety hazard, but a thorough vehicle inspection before hitting the road again will catch that hazard.

If thieves have damaged the vehicle, these inspections ensure:

- the damage is identified and reported early
- appropriate people such as fleet managers are notified
- you know exactly where and when the theft occurred

Using an [electronic verified inspection reporting solution](#) ensures that the inspections are completed properly and that the results are automatically uploaded for review. And, if there’s a safety concern, maintenance can be notified immediately, photos of the damage uploaded for further assessment, and issues addressed before becoming dangerous.

**Track who fuels which vehicle.**

Knowing who fueled the vehicle each time creates a starting point for investigating. If your vehicle inspection solution allows, require each driver to electronically record the mileage and how many gallons they used to refuel.

Also explore requiring drivers to complete a digital form that captures:

- driver name
- odometer
- fuel type
- name of fuel stop
- gallons
- invoice number

Associating the vehicle, the driver and the fuel provides further insight during an investigation. Sudden drop in efficiency? Additional fuel purchases at that station? Unscheduled fuel stop off route? You know whom to ask, then go from there.

[Protect your fuel, protect your organization.](#)

Black market fuel as a whole is a billion-dollar business. Compared to violent crime, punishments are still relatively light, but these preventions aren't expensive. The right technology will more than pay for itself in fuel savings alone. As gas prices go up, fuel thieves become more determined and resourceful. Implementing a multi-faceted smart fleet management solution to track every aspect of your fleet vehicles’ usage, including fuel, equips you to more easily identify fuel theft and adjust your preventative measures.

## About Zonar

Founded in 2001, Zonar has pioneered smart fleet management solutions throughout vocational, pupil, mass transit, and commercial trucking industries. Zonar helps fleets of all sizes maximize the use of their assets with solutions dedicated to improving compliance, efficiency, maintenance, ridership visibility, safety, and tracking. Cloud-based services with open APIs drive Zonar's smart fleet solutions by making it easy for fleet owners and managers to stay connected to their fleets and drivers and operators to dispatch. Headquartered in Seattle and owned by technology company Continental, Zonar also has a Technology Development Center in downtown Seattle, a regional office in Cincinnati, and a distribution center outside of Atlanta.

For more information about Zonar, go to [www.zonarsystems.com](http://www.zonarsystems.com).

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