Fuel card fraud is on the rise:

How two-factor authentication and telematics help protect your trucking business.



wex®

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Introduction

Fraud is becoming more sophisticated, harder to detect, and more costly for businesses. It's not just about financial losses; every fraudulent transaction can lead to operational disruptions, drain resources, and risk brand reputational damage. Five to ten percent of a trucking company's annual fuel consumption is now lost to theft or misallocation, and 12% of fuel fraud, including unauthorized fuel card use and skimming, can significantly erode the profitability of your operations. The Federal Trade Commission estimated that in 2025 the overall cost of fraud to consumers may have been as high as $196 billion. Operations leaders estimate that 19-22% of their fleet spend is actively lost to theft and fraud.

Because the trucking industry is experiencing an increase in skimming, carriers are on the hunt for additional fuel card security features. Skimming is a particular form of fraud occurring when illegally installed devices on fuel pumps, point-of-sale (POS) terminals, or ATMs record the cardholders' personal identification numbers (PINs) or capture data. The skimmers — the criminals behind these scams — then use the data to create fake credit or debit cards and ultimately steal from victims' accounts.

Unfortunately, skimmers are getting smarter, and their efforts are getting more sophisticated. This white paper shares the most effective ways to protect your business from fuel card fraud and how to arm your business against fraudsters.

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The real cost of fuel fraud

Fuel fraud results in substantial revenue losses each year for all kinds of carriers. Commercial driving companies experience significant economic losses annually — with 5%–10% of an OTR company's annual fuel consumption lost to theft or misallocation.

Dealing with fraud can be especially challenging for smaller trucking businesses — and those without a dedicated IT team — to beat back the efforts of skimmers. About 1.2 million trucking companies operate within the United States, and 91% of these companies own six or fewer vehicles. With small and medium-sized businesses dominating American fleet services, improved technology from WEX can help your trucking business combat this rise in fraud.



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Using improved technology to increase security and savings

Skimming isn't the only type of fuel fraud causing concern for carriers. The misuse of fleet cards by employees, or the unauthorized use of a lost or stolen card, can quickly add up to thousands of dollars in stolen revenue. Deploying the right security controls is a must.

Two-factor authentication for safer transactions

Fuel fraud can present itself in a variety of forms that can be hard to catch, ultimately creating significant costs for the carrier. WEX designed a feature — Dynamic Prompt — that provides an extra layer of security through two-factor authentication at the pump. Drivers simply generate a time-sensitive code from a mobile app and enter it before each transaction. This helps reduce fraudulent transactions, keeps accounts safe, and mitigates disruptions from cards being shut off due to suspicious activity.

Dynamic Prompt minimizes the threat of fraudulent activity with two-factor authentication. This creates an additional barrier: even if skimmers access your card data, the dynamic code required to authorize the purchase prevents them from completing unauthorized transactions. This security feature helps you avoid disruption to your business and keeps your drivers moving.



SecureFuel: Telematics-driven fraud protection and spend visibility

SecureFuel technology from WEX can be added to many of the WEX-issued trucking (over-the-road) fleet cards. This technology provides greater fleet card control, gives fleet managers sophisticated data reporting and telematics features, and helps prevent and catch fraudulent use.

No hardware required

WEX's SecureFuel technology — which requires no hardware — integrates into a truck's built-in telematics data to monitor fueling transactions in real time. This creates many more ways for you to keep an eye on your drivers. When experiencing fluctuations in fuel prices, protecting your overall fuel spend remains a top priority.

How it works

When drivers attempt to purchase fuel using their fleet card, the SecureFuel technology checks the truck's location and tank level before securely authorizing the purchase. By combining telematics with fleet card transaction data, WEX's SecureFuel technology identifies any unauthorized purchases or misuse. Companies can choose to be immediately notified of the incident or even automatically decline a transaction that presents itself as potential fraud.

ECM reconciliation and skimming protection

By combining truck telematics with fleet card transaction data to pinpoint suspicious transactions in real time — and by providing a report on the vehicle's proximity and tank level after fuel purchases — WEX SecureFuel can quickly find purchase irregularities and trigger an alert to your operations manager.

With SecureFuel, no additional hardware is needed. Plus, as a broadly accepted solution, SecureFuel technology works at more than 16,000 truck stops across the United States. SecureFuel also provides protection against the impacts of skimming by monitoring where the truck is in real time compared to where it was fueled up. If the legitimate truck is not at the fueling location, SecureFuel will send an alert to the operations manager who can then disable or shut off the card.

Sources

Fueling Integrity: How Tech Combats Fuel Fraud In The Transportation Sector
Trucking Industry Trends, Statistics, & Forecast
Gitnux
New FTC Data Show a Big Jump in Reported Losses to Fraud to $12.5 Billion in 2024
The hidden hazard: how fraud is impacting fleets' bottom line

Conclusion

With fraud and fuel theft on the rise, small and mid-sized carriers must adopt smarter, more secure tools to stay ahead of costly disruptions. WEX's Dynamic Prompt and SecureFuel technologies give trucking businesses the power to defend against skimming, misuse, and unauthorized purchases — without the need for additional hardware or complex IT systems. Whether your business includes two trucks or two hundred, these tools help protect your bottom line, keep your drivers moving, and give you peace of mind.

Additional resources

Learn more on how to better manage your over-the-road fleet:

Fuel card FAQs

Fraud prevention

Safety tips

Tax prep



All fleet cards are not the same, and different types of fuel cards suit the needs of different kinds and sizes of businesses. View WEX's fleet card comparison chart to see which fuel card is right for you.

Apply for a fleet card today!