

Fraud Prevention



Improper Positioning
Load-Cell Tampering
Lighten the Load
Disappearing Goods
Altering Data

Guide Book

Prevent Fraud at Your Truck Scale 5 Tips for Scalehouse Operations

METTLER TOLEDO

Is It Shrink, or Is It Fraud?

5 Ways Criminals Cheat at the Truck Scale

What if you were the victim of a crime that you didn't even know to look for? What if you were getting robbed of your product, but in small enough increments that you did not notice right away? That is exactly what happened to a major international bulk goods manufacturer recently; it was robbed of \$2 million in product over several years, right from the truck scale.

Many truck scale operations write off product shrinkage to scale inaccuracy, but the cause could be much more sinister. Even small, systematic thefts can net cons valuable profits over time – while thinning your margins. Just as cyber criminals continue to innovate and outsmart the system, thieves at the truck scale are doing the same. Though these types of crimes have been committed for years, we can now equip you with the technology to safeguard your scale and protect your profits from fraud.

In this guide, we will examine the top five ways criminals steal from the truck scale and how METTLER TOLEDO can protect your business from these crimes.



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Cheat #1: Improper positioning
The most common way to cheat at the truck scale is improper positioning on the weighbridge. By not driving onto the scale properly, criminals can alter the vehicle weight measurement, robbing the business and driving away unnoticed.
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Cheat #2: Load-cell tampering
Unfortunately, this type of criminal activity at the scale is often difficult to catch. Tampering with load cells can go undetected for months before a scale operator notices the problem.
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Cheat #3: Lightening the load
Most common at sites with two-pass transactions, this sneaky cheat occurs when the driver expels additional weight hidden on the truck, resulting in a weight inconsistent with the initial measurement.
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Cheat #4: Disappearing goods
Product theft often starts out small but can really add up. When performing this cheat, the thief will steal small amounts of product over a long period of time, causing a gradual – but significant – loss of profit.
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Cheat #5: Data altering
The final cheat is perhaps also the most direct: the intentional altering of data at the scale. Whether the criminal activity occurs in the scalehouse or through unsecured data management software, data altering can be a huge threat to an operation.
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"How can I protect my operation from fraud at the scale? With the amount of trucks we see per day, any loss in profit would greatly impact our bottom line."
Facility Manager



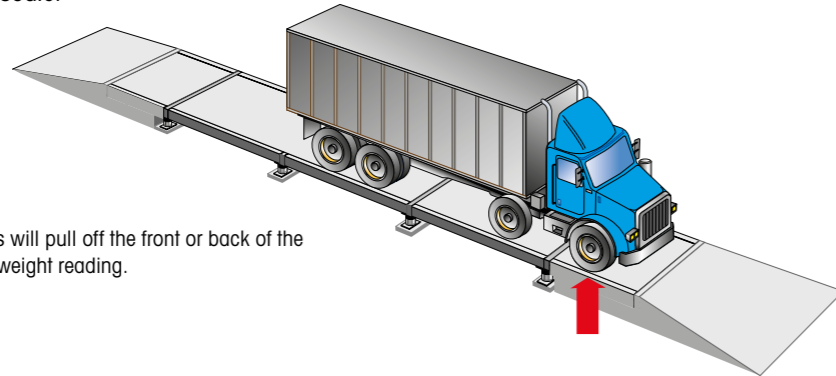
Cheat #1: Improper Positioning

The Most Common Cheat at the Scale

Improper positioning of a truck on your weighbridge is a common and effective way for thieves to target your operation and drain your pockets. There are several scenarios that make this possible for a truck driver to accomplish.

Scenario 1

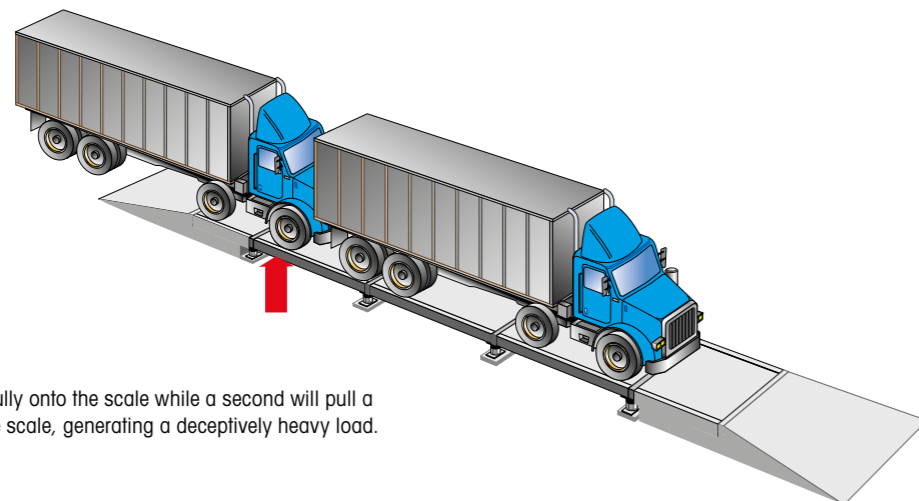
At an unattended weigh station or a busy station at which the scalehouse attendant is not paying attention, a truck drives onto the scale leaving a set of back axles off or pulls far enough forward that the front axles are past the scale. It is also possible, if guide rails are not in place on a pit foundation scale, that the truck is slightly off the side of the scale, also altering the weight. That provides a weight reading that is deceptively light. A driver may want to weigh light if he or she is the one purchasing your goods, essentially stealing product right from the scale.



A truck with one set of axles will pull off the front or back of the scale, resulting in a lighter weight reading.

Scenario 2

Another scenario can occur when a truck driver wants to weigh heavy, perhaps when selling to you. Again, that can occur at unattended weigh stations or stations that are too busy for staff to police. A truck pulls fully onto the scale with all axles on and creeps toward the very front of the weighbridge. A truck driver waiting next in line will then pull his or her front axles onto the scale, creating a deceptively high weight. The driver then gets the ticket for a net load that is more than what is received by the company, robbing the business and driving away unnoticed.



One truck will pull fully onto the scale while a second will pull a set of axles onto the scale, generating a deceptively heavy load.



How can
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TOLEDO**
help?



Protection Against Lightening the Load

We offer a variety of solutions to help combat this cheat. With a few simple additions to a truck scale, thousands of dollars could be saved from would-be thieves.



Gates, loops, photo eyes, and more can work together or individually to help stave off theft at the scale. Gates help to prevent more than one truck driving onto the scale, such as in scenario 2. Often, gates and loops will be paired together. Loops send a signal when a truck pulls onto the approach. When the scale is empty and ready to weigh, the gate will lift, allowing the truck to pull on. Photo eyes can detect this cheat, as well as improper positioning of a single truck. With photo eyes, a weight reading will not be taken if something is blocking the laser between the two eyes. These are especially helpful for unattended weigh stations.



License plate capture is another feature that is helpful to deter cheating; if drivers know they could be held accountable, they are less likely to attempt stealing at the scale. License Plate Readers (LPR) can be incorporated into the data capture process, and transaction records can be retained in truck scale management software.



DataBridge™ software enables you to control inventory. The system identifies any discrepancies in inventory levels and notifies key users.

www.mt.com/DataBridge

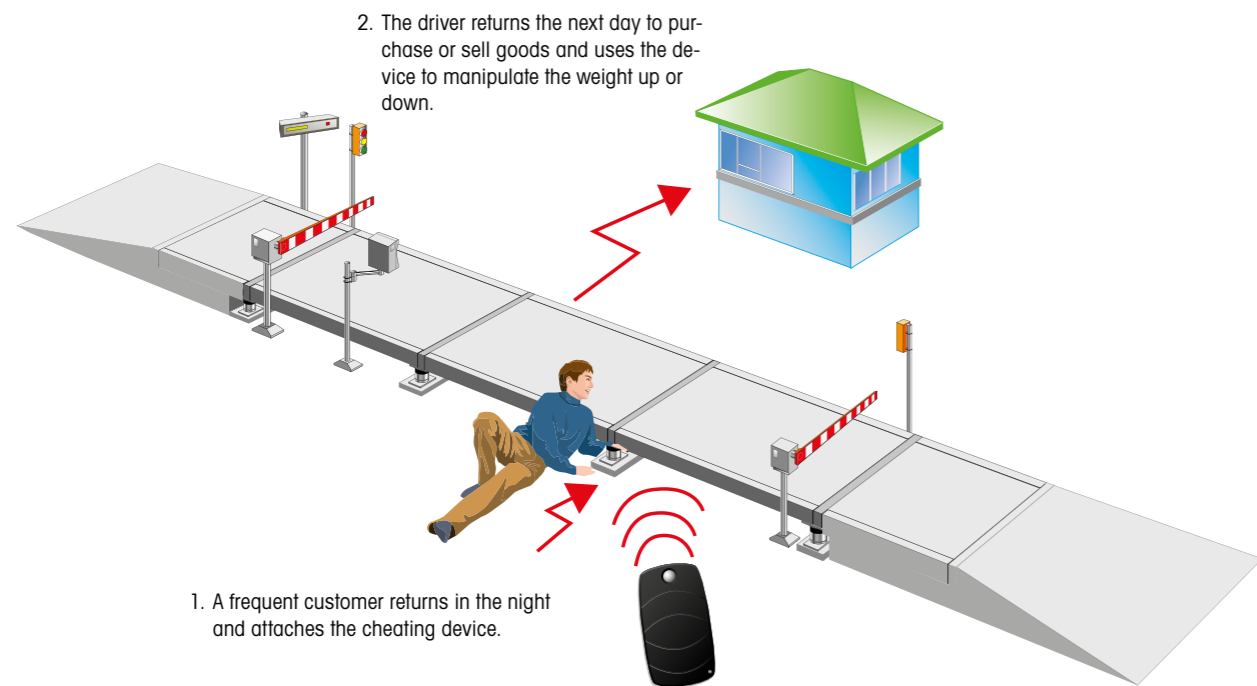
Cheat #2: Load-Cell Tampering

A Sneaky Threat, Difficult to Detect

Unfortunately, tampering with load cells is becoming a popular way of cheating the truck scale. This cheat could go undetected for months before a scale operator is aware of the problem, costing a company thousands of dollars.

Load-cell tampering can involve tampering with the load cell itself, cables in the system, or the junction box. Most commonly, a device is added at a point in the system, allowing the weight to be increased or decreased to the truck driver's benefit. A greater concern is that those devices can be purchased online, which often occurs with a driver who does business with the same operation regularly. The driver can return to the scale under the cover of night, affix the device to the scale, and cheat until the device is discovered.

Pictured below, these small remotes can control how the weight is read while the truck is on the scale. Once the driver has driven onto the scale, they can push the clicker up or down to their benefit (heavier or lighter) just before the weight reading is taken. Analog load cells are particularly susceptible to this type of scam, as they do not have a breach-detection system to alert scale owners that tampering or damage has occurred, unlike some digital load cells.



Protection Against Load-Cell Tampering

With analog load cells and an ineffective data-management system, a theft due to load-cell tampering could go undetected for months. Even once discovered, it is very unlikely that the person responsible will ever be caught. In fact, the cheater will probably continue to do business with the company.



POWERCELL® PDX® technology helps you outsmart criminals at the scale. These smart digital load cells are equipped with secure breach-detection technology which alerts the scale owner at the first sign of tampering or damage, even pinpointing the cell that has been compromised. That immediate alert will help to stop theft due to tampering before it begins.

www.mt.com/POWERCELL



For ultimate protection against load-cell tampering, pair POWERCELL PDX load cells with DataBridge™ software. DataBridge provides system-wide security monitoring and mobile alerts. It also has weight-curve functionality, allowing the scalehouse attendant to watch in real-time the weight of the truck as it is driving onto the scale and as it stops to have a weighment taken. A normal weight reading should look like a bell curve that flattens at the top when the truck is stopped. Any abnormal spike up or down in weight will stand out, prompting the scalehouse attendant and any other key players to review the weighment and check the scale.

www.mt.com/DataBridge



Normal weight curve.



Weight curve that has been tampered.

Cheat #3: Lighten the Load

An Innovative Cheat at the Truck Scale

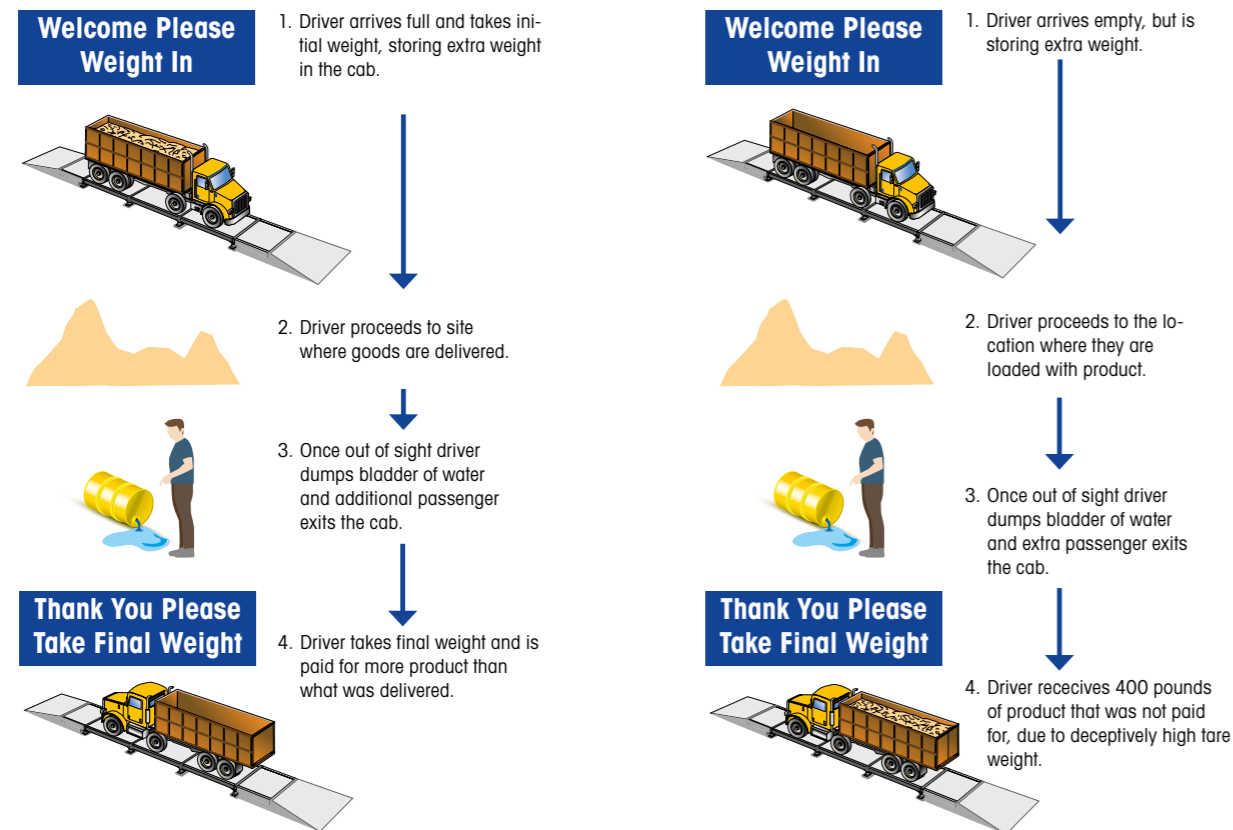
This method of fraud at the scale is a good example of how thieves are becoming more innovative. It is most common at sites with two-pass transactions and when there is some distance between the scale and where loading or unloading occurs.

Delivery cheat

A driver will arrive with a fully loaded truck, take an initial weight, and then drive to the site where the goods are unloaded. Once out of sight, the driver expels additional weight that was hidden on the truck to increase the initial weight. Commonly, a bladder of water is kept in the cab. Additionally, there might be another passenger in the cab that gets out, walks to the entrance, and waits to be picked up. At that point, the driver could have expelled an additional 400 lb (181 kg) by dumping 150 lb (68 kg) of water and 250 lb (113 kg) of passenger. Now the driver will go back to the scalehouse and take the outbound weight. The net weight (gross minus tare) will read 400 lbs (181 kg) more than it really was, and the driver will get paid for the extra.

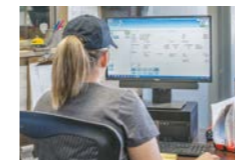
Pick-up cheat

A driver will arrive with an empty truck, take an initial weight, and then drive to the location on site to be loaded. Once out of sight, the driver expels additional weight that was hidden on the truck to increase the initial tare weight. Again, it is common that a bladder of water is kept in the cab to dump, or an additional passenger exits to the front gate. The driver could have expelled that additional 400 lbs, creating a tare (empty) weight that was 400 lbs (181 kg) higher than the true weight of the truck. Once loaded, the driver will go back to the scalehouse and take the outbound weight. The truck's tare, or empty weight, is recorded as 400 lbs (181 kg) heavier due to the cheat. The driver will receive 400 lbs (181 kg) of extra goods that were not paid for.



Protection Against Lightening the Load

DataBridge™ transaction management software has hundreds of features, but one that can be helpful in this scenario is tare-weight storage. When a truck arrives at the business operation for the first time, all information about that truck is recorded, including an accurate tare weight.

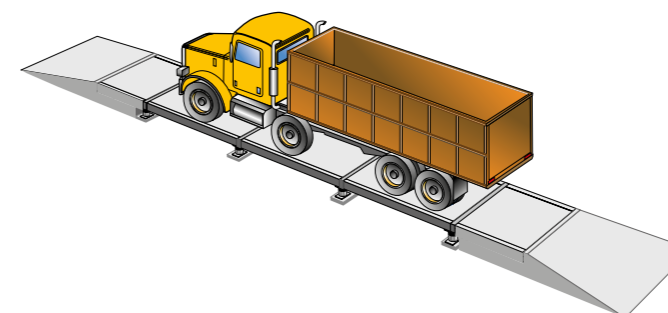


Business owners can set up regular or random tare-weight checks. If any abnormal fluctuation in tare-weight has occurred for a truck that is rechecked, the scalehouse attendant and any other key account holders will be notified.



An additional feature with DataBridge is the option to set a time limit for how long the driver has between the first and second weighment. If the time limit is surpassed, the driver will be flagged and questioned by the scalehouse staff. Perhaps the driver simply got a new set of tires or was stuck waiting in line to be emptied – or maybe the driver was trying to cheat the scale. With DataBridge, you can be sure with every load.

www.mt.com/DataBridge



Time limit is surpassed!



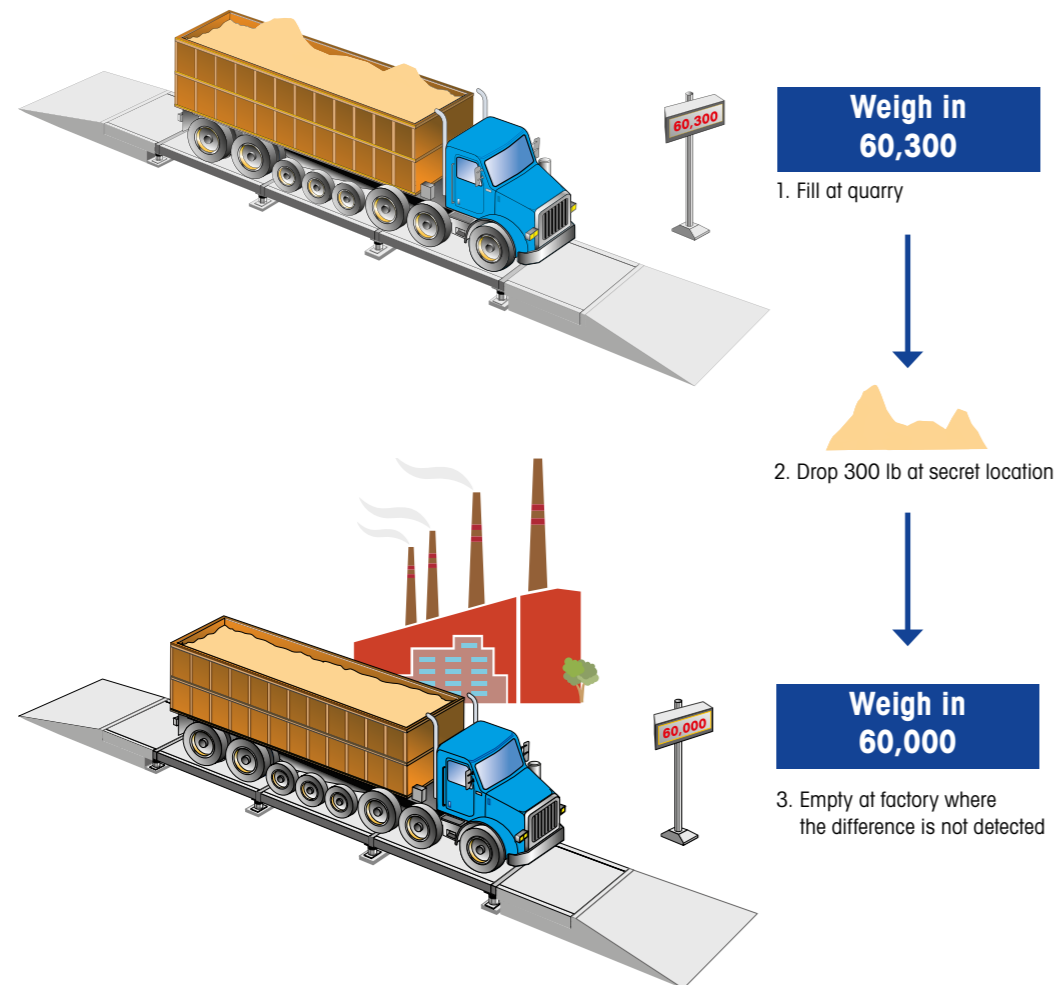
Solution: DataBridge™ can set a time limit for how long the driver has between the first and second weighment.

Cheat #4: Disappearing Goods Most Common Among Fleets

This cheat at the scale is most common at companies that have a dedicated fleet of trucks that run the same route all day. It is most easily explained through the following example.

A company that makes luxury countertops has a factory 30 mi (48 km) away from the closest quarry where it sources raw materials. Four trucks run the route five times per day. Each time, they buy 20 tons of river stone pebbles at \$100 per ton. Each trip costs the company \$2,000 for the full truckload it has purchased. Two drivers decide they deserve a raise, so they begin to steal a small amount of product from each load. To not get caught, they steal only 300 lbs (136 kg) from each loaded truck, dumping it in a secret location they can return to later. Stealing this small amount will only make each driver about \$375 per week, a seemingly small amount. However, after one year (50 working weeks), it adds up to \$18,750. That is a cost to the company of nearly \$37,500 between the two drivers. If all four truck drivers are in on the crime, the company would lose \$75,000 over one year.

Imagine that on a larger scale or with a more expensive product, and the costs can add up quickly. Are you willing to sit back and allow others to steal from your business?



Protection Against Disappearing Goods

With METTLER TOLEDO, the solution to the disappearing goods cheat is simple: accurate weighing. With a truck scale at both the quarry and the factory, there would be no room for theft at the scale.



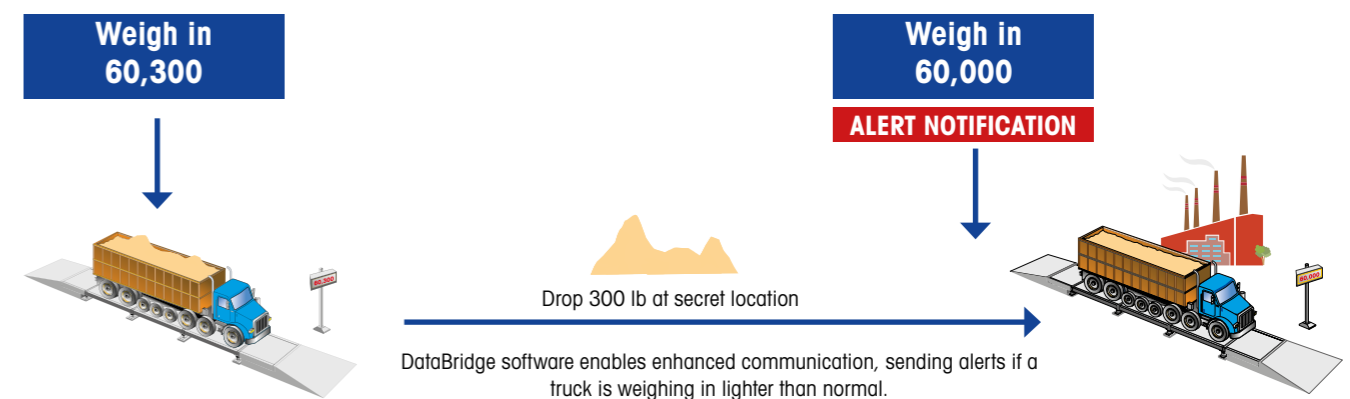
POWERCELL® PDX® technology provides industry-leading accuracy and gives any business confidence that the weight taken is the true weight.

www.mt.com/POWERCELL



When paired with DataBridge™ software, the communication between the quarry and factory is instant. If a driver is weighed at the quarry and then arrives at the factory 300 lbs (136 kg) lighter, you would notice the difference immediately. That kind of assured accuracy is a valuable theft deterrent.

www.mt.com/DataBridge



Cheat #5: Altering Data

A Direct Threat to Your Business

The final cheat that has been most observed in the field is perhaps the most direct: the intentional altering of data collected at the scale. There are a couple scenarios in which that can happen, and they are of equal concern to a business owner and operator.

A scalehouse attendant works with one or more drivers to alter data to the driver's benefit, and the attendant then gets a cut of the profits. Some small operations rely on hand-written tickets for transactions. As you can imagine, these are especially easy to alter maliciously or by mistake. While that may seem unlikely, it happens and can add up at an alarming rate. In fact, not long ago, a major bulk goods manufacturer in the United States was robbed of \$2 million worth of product over a period of a couple years – all at the hands of a scalehouse attendant working with drivers to alter their weight tickets. Company leaders thought their systems were secure, which proves that truck-scale fraud can happen to anyone.

Another variation of data altering can occur if the data-management software used is insecure and susceptible to hacking. Often, free programs are less secure and can easily be accessed from the back-end by hackers, going undetected in most cases.



How can
**METTLER
TOLEDO**
help?



Protection Against Altering Data

A secure system that is not vulnerable to hacking is critical for the protection of your scale – and the success of your business.



DataBridge™ software is the answer to prevent data-altering cheats at the scale. Any data altering that is done within the system will be tracked, including if a scalehouse attendant alters data for malicious reasons. Knowing these actions could cost employees their jobs is an effective deterrent to these types of crimes.

► www.mt.com/DataBridge

Make Maintenance a Priority

3 Ways to Protect Your Scale

Catching fraudsters in the act is often extremely difficult. Prioritizing the proper maintenance for your weighbridge and related technologies can help to identify the warning signs of theft at the scale before it has the chance to victimize your business.

Setting your scale up with the right technology to prevent fraud is a good first step. Implementing a regular maintenance regimen will take your protection to the next level. METTLER TOLEDO offers three types of service to set your business up for productive and accurate operation, while also helping to prevent fraud. Having these solutions available from a single-source provider makes your job easier than ever!

► www.mt.com/veh-service



1. Standard Vehicle Service

Defend your scale every step of the way with comprehensive service throughout its entire lifetime. From installation to preventive maintenance, calibration, and repair, we can help maximize uptime and help you to achieve compliant weighing. Regular maintenance with an expertly trained service professional can also help to catch fraud risks before they can impact your bottom line.



2. Scale Health Checks

Ensure maximum performance with regular check-ins. Even if you utilize a different service provider for regular maintenance, a trained METTLER TOLEDO service technician can perform a detailed health check to assess scale condition, including potential vulnerabilities or fraud risks. Vehicle scale health checks are available for any make or model of vehicle scale and include a 360° check of the scale, including the weighbridge, foundation, and load cell system.



3. Remote Condition Monitoring

METTLER TOLEDO can also provide advanced service technology that offers condition monitoring and authorization of remote access. If scale components such as the load cells or terminal experience a malfunction or are tampered with in a way that impacts their settings or weighing performance, the scale operator (or another defined user) is immediately alerted. The recipient of the alert can then grant their local METTLER TOLEDO authorized service provider remote access to the system for troubleshooting. This feature protects your organization from theft and allows service teams to perform maintenance and repairs quickly and efficiently by preparing for your specific needs before they arrive on site.



“ Our extensive service network is stationed around the globe, available to help you ensure peak performance of your asset. ”

METTLER TOLEDO Service

The Time is Now – Before It's Too Late!

Prevent Fraud at the Truck Scale

Criminals have been using these tactics for years to cheat at the scale. They have stolen innumerable amounts of product and profits from companies all over the world.

These types of crimes have been growing rapidly and are surprising easy to accomplish – especially when little has been done to prevent them. Fortunately, fraud prevention solutions from METTLER TOLEDO can ensure that your company is protected. Don't sit back and let criminals take advantage of the business you have built.

► www.mt.com/vehicle



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