

CASE STUDY:

Wayne Xflo™ Fuel Meter Helps Make Fuel Loss a Thing of the Past for Go-Mart

Fuel Retailer Finds a Way to Avoid What Was Previously Unavoidable - Fuel Lost to Meter Inaccuracies

As a retailer, you are probably acutely aware of any shortages that show up in your food and dry goods inventories as well as shortfalls in fuel levels on your forecourt. While there are many things you can do to gain tighter control over inventories in your store, such as installing security systems and applying best practices in sales tracking and order management, gaining control over fuel loss can be more complex.

Aside from fuel loss due to theft, there is a more subtle, costly source of inventory loss associated with fuel-meter drift, or measurement inaccuracies due to piston-meter-component wear over time. Every time a customer fills a vehicle's tank on your forecourt, the fuel dispenser could be delivering slightly more fuel than the customer has actually paid for. In other words, you could be giving fuel away.

Meter drift is an expected and common issue throughout the industry. While it more often not only results in too much fuel dispensed; it can also result in too little. The former means you are giving away fuel, while the latter could expose your business to fines and penalties. In order to promote fuel-dispensing consistency, the NIST National Conference on Weights and Measures requires fuel retailers to maintain meter accuracy within particular limits:—plus or minus three cubic inches, or .012 gallons of variance in a five-gallon test.

This means that even if your meters comply with Weights and Measures accuracy standards, the cost of meter drift can still be significant. The amount of extra fuel delivered may be very small on a per-transaction basis, approximately .04 gallons. Chances are customers don't notice, but consider the number of customers served in a day, a month, a year, or several

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years, and multiply that result by the number of sites you have, and the costs can add up quickly. For example, a retailer dispensing 200,000 gallons per month at a variance rate of three cubic inches could be giving away more than 32,000 gallons of fuel over the course of five years. Using an average fuel price of four dollars per gallon, this rate of fuel loss could cost a business close to \$26,000 per year at just one site.

For retailers with many sites, such as Go-Mart, Inc. located in Gassaway, West Virginia, the cost of fuel loss company-wide can add up quickly. With 97 stores in Virginia, Kentucky and Ohio, Go-Mart recognizes that reducing meter drift can enable tighter control over fuel inventories.

Crompco, based in Plymouth Meeting, Pennsylvania, performs calibration testing for fuel retailers including Go-Mart. After serving the industry for more than 30 years, Crompco has noticed the negative impact that meter drift can have on fuel retail profit margins. Crompco has developed AccuMeasure™ technology that calibrates meters with pinpoint accuracy to address the issue, but the company also sees the potential for a better meter that could help retain that accuracy longer.

Both Go-Mart, Inc. and Crompco have recently found that there is now a way to prevent meter drift and the resulting cost of fuel loss using the Wayne Xflo fuel meter. The axial flow design that Wayne uses in its Xflo meter decreases meter wear, dramatically reducing meter drift. The result is measurement accuracy that surpasses Weights and Measures allowable accuracy variance limits. Retailers can do more than comply with the standards; they can help prevent fuel loss and save money lost to meter drift by upgrading to the Wayne Xflo meter.

Go-Mart Gains Better Inventory Control through Improved Technology

Established in 1914, Go-Mart began when the Heater brothers started delivering fuel from flat-bottomed boats to customers along the Little Kanawha River in West Virginia. Since then, Go-Mart has been embracing innovations in the industry, including being one of the first fuel retailers to open a combination convenience store and self-service gas station in the 1970s.

Go-Mart continues to invest in innovative technologies that help better serve its customers and manage its business. When Go-Mart replaced its fuel dispensers with Wayne Ovation™ dispensers, its owners were interested to learn that the Wayne Xflo fuel-meter design could virtually eliminate meter drift. Go-Mart decided to put the claim to the test by installing the meters across all of its sites and tracking the results.

“Since installing the Xflo meters, we’ve noticed a difference in our meter testing results,” Mike Conant, environmental director of Go-Mart explains. “The meters are consistently accurate so Go-Mart customers receive the fuel they buy, and we receive the full value of the fuel in our inventory.”

Every month, Go-Mart conducts a statistical inventory to determine meter performance and ensure its meters comply with Weights and Measures standards. If there is a problem with the fuel measurement, the testing technician will receive an “inconclusive” reading. After receiving such a reading, the technician then must recalibrate the meter to determine the problem and correct the issue. “With the installation of the Xflo meters, we rarely see inconclusive readings,” Conant adds. “We have no maintenance issues with the meters. Overall, the meters make it much easier to run operations. It saves us money on many levels, such as lower maintenance costs and less fuel inventory shrinkage.”

Crompco Proves Xflo Meter's Accuracy in the Field

Similar to Go-Mart's findings on the Xflo meter's accuracy, Crompco also has been able to attribute positive results to the Xflo meter.

Crompco offers their customers such as Go-Mart fuel-meter-testing and recalibration services to help retailers comply with Weights and Measures standards. However, compliance with such standards is not enough to overcome the full impact of meter drift.

"With the high cost of fuel today, meeting the minimum Weights and Measures requirement may result in considerable profit lost to meter drift," Bob Dee, chief operations officer of Crompco says. "The standards aren't enough to address today's environment in which retailers are selling higher fuel volumes than ever before and fuel prices are rising. Our goal is to calibrate meters so that they measure fuel with as close to 100 percent accuracy as possible. "

Using advanced technologies such as Crompco's AccuMeasure meter-calibration-solution or "prover," the testing company can set meters to accuracy levels that surpass Weights and Measures standards of plus or minus three cubic inches. The closed-loop mechanical design of AccuMeasure reduces fuel vaporization and evaporation during meter testing to offer testing results that are more precise. It enables better calibration accuracy than traditional provers with an open design.

While this calibration technology goes a long way toward helping retailers maintain tighter control over fuel inventories, curtailing meter drift is often limited by the fuel meter. The Wayne Xflo meter's measurement precision can overcome traditional fuel-meter limitations. Compared to traditional meter technology, the Xflo meter's axial flow performs better in two key areas that dramatically reduce meter drift —its pinpoint-calibration accuracy and its ability to maintain accuracy over time.

"Once the Xflo meters are set they tend to stay in calibration longer than other meters I've seen," Bill Callaway, Crompco manager, Measurement and Technical Services, explains. "This translates to cost savings for the retailer, reduced maintenance costs and less fuel given away." The Xflo meter's dual radial spindle design has fewer moving parts that create less friction than traditional meter designs, which means the parts do not wear as quickly or as much as those in piston displacement meters.



Multiple high to low calibration points allow for measurement accuracy across a range of volumes and flow rates. Because the Xflo meter virtually eliminates meter drift, it is easier for Crompco to maintain the accuracy of customers' meters and fulfill its mission of helping fuel retailers protect assets and improve profitability. Retailers can gain even more control over their fuel inventories through a combination of accurate calibration and meters that will retain that accuracy longer.

Xflo Fuel Meter Eases Fuel Loss Worries

As more Wayne customers such as Go Mart install Xflo meters in their dispensers, retailers are discovering the Xflo meter's ability to help save them money. In addition, companies that perform calibration testing, such as Crompco, can attest that Xflo meters retain their precision.

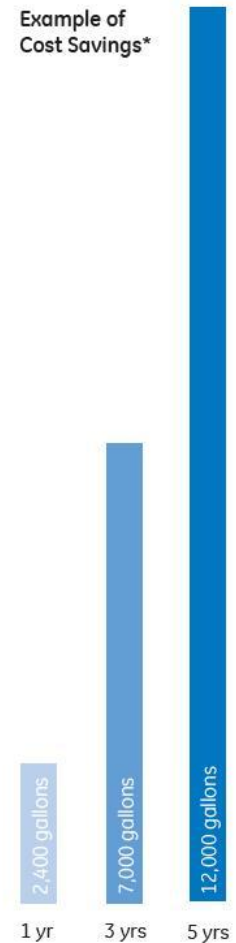
The Xflo meter's precise accuracy in measuring fuel means that retailers are less likely to give away extra fuel and customers are more likely to receive the full amount of fuel they purchase. Retailers can gain better control over their fuel inventories, and can realize improved profitability because they are not losing money to meter drift. With accuracy levels remaining consistent for a longer time than that seen with traditional meters, retailers need to recalibrate the meters less frequently, and can spend less on maintenance. The Xflo meter's precision also surpasses Weights and Measures standards, meaning retailers are even less likely to give away even the .04 gallons per fill-up, as allowed within the requirements.

For years, fuel retailers have just accepted that fuel lost to meter inaccuracy and the expense of recalibrating meters are normal costs of doing business. As Go-Mart, Crompco, and others know, this is not the case. By installing the Xflo meter, they are taking steps to eliminate losses due meter drift, focus their attention on other aspects of their business, and improve their bottom lines. For a station dispensing 200,000 gallons per month, the Xflo meter's average accuracy increase of .01 percent could equate to savings as much as \$125,000 over five years. Retailers can worry less about fuel loss and focus on minimizing inventory loss in other areas

About Wayne

Wayne, a GE Energy Business, is a global leader in the design, manufacture, and servicing of fueling forecourt solutions where reliability and uptime are critical. Dispensers, payment platforms, control systems, and technology from Wayne play an essential role in traditional and alternative fueling sites around the world.

Example of Cost Savings*



* Assumes five dispensers per site dispensing 200,000 gallons per month and a 0.1% accuracy improvement.