

Getting Every Drop, by Carla L. Romita The Mann Report, September 2007

Recent federal indictments of four fuel oil trucking company executives have shocked the oil industry and the public. You might be concerned about whether you are getting all the oil you pay for. If you are dealing with a reputable fuel oil supplier with many years in business, a substantial number of its own delivery vehicles driven by its own employees who are subject to a best delivery practices policy and stringent quality control procedures, you should not be unduly concerned. However, there are steps you can take to ensure accurate oil deliveries.

Install an oil tank gauge. Tank gauges fall into two categories, manual and electronic.

A manual gauge measures the volume of fuel oil contained in the tank in inches. A conversion chart translates the number of inches into the number of gallons of fuel oil in the tank. Problems arise if the gauge is not properly calibrated when it is installed, if it loses calibration over time, or if the person reading the gauge does not use the exact number of inches shown on the gauge to determine the volume in gallons or uses the wrong conversion chart. For example, if the gauge shows 36 3/8 inches but the superintendent or engineer mistakenly looks up 36 inches on the chart, the difference can be 33 gallons in a 5000 gallon tank.

Electronic tank gauges have recently achieved better accuracy than manual ones, but they still have drawbacks. This type of gauge automatically monitors the tank and sends information to a remote reader. Electronic tank gauges, like manual gauges, must be properly calibrated at the time of installation. Proper calibration for both manual and electronic gauges requires emptying the tank and refilling it while taking measurements at various intervals during the filling process. Electronic monitors tend to lose their calibration after power failures and surges. When this happens, most gauges will revert back to the manufacturer's default calibration, even if the gauge was properly custom-calibrated for the individual tank when it was installed.

Calibration needs to be verified on a regular schedule to ensure accuracy. The conditions inside a petroleum storage tank are different from tank to tank. Moisture, heat, sediment, and wax buildup can all affect the probes and instruments used in electronic gauging systems. Sensors or probes can become coated and distorted readings may be sent from the monitor. The probes must be periodically cleaned to ensure that they are taking accurate readings.

The tank in each building requires custom calibration because every tank is slightly different. A 5000 gallon tank in one building is not exactly the same as a 5000 gallon tank in the building next door. When most New York City buildings were converted from coal to oil-fired heating equipment, a fuel tank had to be custom built. The oil tank was usually placed in the basement in the area where the old coal bins had been located. To construct a 5000 gallon tank, the area required was typically 96" x 13' 4". If the coal storage bin was only 12 feet long, the tank would be custom built to fit that space. Thus, a tank that was originally planned to have a 5000 gallon capacity might now only have a capacity of 4650 gallons. The shape of the tank, as well as its size, changes the actual capacity it can hold. Tanks are cylindrical with slightly convex ends. The degree to which the ends bow outward varies slightly from tank to tank and can result in a tank being slightly smaller or larger than it is reported to be.

Both manual and electronic tank gauges are subject to inaccuracies. What's the best way to ensure that your building receives accurate deliveries? The simplest and best way is to have the building superintendent or engineer present during the entire delivery process. The building representative and the truck driver can jointly take "before" and "after" readings of the volume of fuel oil in the storage tank using a measuring stick. The difference between the two readings is then compared to the metered volume shown on the truck-imprinted delivery ticket. This method is somewhat time consuming, and can be impractical during the coldest winter months when deliveries may come at any hour of the day or night. However, having the superintendent in attendance is one of the best ways to ensure accurate deliveries.

You should have confidence in the integrity of your supplier's delivery personnel. Working together with your supplier and reporting any problems immediately so that they can be investigated and resolved is important. Communication is the best way to make sure you are getting every gallon you are paying for. Any fuel oil dealer that sincerely cares about its customers and its reputation will immediately investigate and resolve any reports of delivery problems.