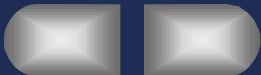


Leak Detection

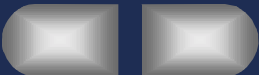
Manual Tank Gauging

- Owners and Operators Seminars



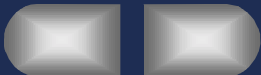
What is Manual Tank Gauging?

- A leak detection test performed once a week using a dip-stick and an accurate strapping chart specifically prepared for the tank by the manufacturer. To determine the volume changes of the product over a 36 hour period of time.
- This method is a valid monthly monitoring leak detection method for tanks having a capacity of 660 gallons or less.



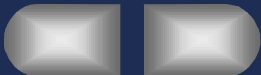
How is Manual Gauging Done?

- Each Week A tank is gauged twice each time the strapping chart is used to convert the level of the liquid in the tank to a volume. The two volumes are averaged and the average volume is recorded.
- The tank is gauged again twice after a minimum of 36 hours and the measurements are again converted to volumes, averaged, and the average volume recorded.
- The difference between the before and the after volumes is the weekly loss (sometimes gain if the tank is taking in water).



How Accurate is Manual Gauging?

- For Tanks having a capacity of 660 gallons or less this method is capable of detecting a leak rate of less than 0.2 gallons per hour leak.
- The accuracy of this method is diminished when the size the tank capacity increases. This method is not reliable for tanks having a capacity of more than 2000 gallons





Manual Tank Gauging

Is only allowed for tanks that are not connected to a motor-fueling dispenser. These tanks usually store waste oil.





Manual Tank Gauging

The Three Likely scenarios:

First Scenario

Existing single wall tanks of more than 660 gallons capacity installed before 1988 and upgraded for corrosion protection before 1991.

These tanks must: a) Have external monitoring (vapor or groundwater monitoring), OR b) Be provided with new internal primary containment (like ReTank or Phoenix), OR c) Have a Mass/Buoyancy ATG system installed and Use Manual Tank Gauging, OR d) Must be replaced.



Manual Tank Gauging A Second Scenario:

Existing single wall tanks of more than 660 gallons in capacity, installed before 1988, and upgraded for corrosion protection after 1991.

These tanks can continue to use Manual Tank Gauging and tank tightness testing every five years until the corrosion protection upgrade is ten years old (before 2010) then take the same actions specified in the *First Scenario*.





Manual Tank Gauging A Third Scenario:

Existing single wall tanks having less than 660 gallons in capacity, and upgraded for corrosion protection before 1998

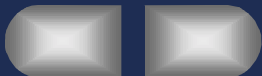
These tanks can use Manual Tank Gauging for the rest of the useful life of the tank



Please Keep in Mind



- You can use a dip-stick or you can use an automatic tank gauge to perform this leak detection test on tanks not used for motor fueling.
- You may Use a Mass/Buoyancy ATG in waste oil tank having more than 660 gallons in capacity.



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- [Http://www.deq.state.mi.us/std](http://www.deq.state.mi.us/std)

