

Automatic Tank Gauge Checklist for Mass Buoyancy Probes

From the National Work Group on Leak Detection Evaluations List, April, 1997

ATG MAINTENANCE CHECKLIST		
Mass Buoyancy Probes		
Minimum procedures to be conducted by a <i>qualified service technician</i>.		
Has all input wiring been inspected for proper entry and termination, including testing for ground faults?	Yes	No
Has the probe been checked for visible damage (such as residue buildup or cracks)? ¹	Yes	No
Has the battery been tested within the last 3 months?	Yes	No
Has the accuracy of the product sensor been tested? ²	Yes	No
Has the accuracy of the water sensor been tested? ³	Yes	No
Has the appropriateness of high-water level alarm setting been verified? ⁴	Yes	No
Are all alarms activated and functioning properly?	Yes	No
Comments:		

1. Damaged probes must be cleaned or replaced, as appropriate. The mass displacement probe is very susceptible to dirt and residue build-up and should be checked semi-annually and cleaned, if necessary. Mass displacement probes used in viscous products such as waste oil should be checked more frequently. Products of this type can leave heavy deposits on the probe which may inhibit the accuracy of the probe. Checking a reconciliation report and/or manual sticking could verify the system's accuracy.
2. To test the accuracy of the product sensor:
 - a. Using the tank console monitor, take an initial fuel level reading.
 - b. Dispense one gallon of product into a calibrated container.
 - c. Using the tank console monitor, take a second fuel level reading.
 - d. Verify that the change in tank volume is one gallon.
3. To test the accuracy of the water sensor: (Note: water sensor is separator from the mass buoyancy probe.)
 - a. Remove the probe from the tank.
 - b. By hand, move the water float up the probe to a point higher than the high water limit.
 - c. The monitor should respond with a high water alarm. (The water height may also appear on the tank monitor display console.)
 - d. Check this height against its actual location.
4. The high water level alarm should not be set so high that water ingress into the tank goes undetected for long periods of time.

Disclaimer: This checklist is not intended to tell the technician how to perform the maintenance and system check. Technicians should follow manufacturer's detailed instructions while making sure that all of the items on this checklist have been covered.