

Tanknology

Environmental Compliance for Petroleum Systems

Sump Testing and Repair

Tanknology At a Glance

Founded in 1988, Tanknology has grown to become the largest forecourt compliance testing and inspection services company in the World.

Our fleet of 125 vehicles provides service in all 50 states domestically, and we have a presence in more than 30 countries, 6 continents through international licensees.

We hold 22 patents covering our test equipment and various leak detection methodologies.



Company Structure

Headquarters in Austin, TX

8 Strategically Located Regional Offices:

- Southern California
- Northern California
- Austin
- Minneapolis
- Chicago
- Columbus, OH
- Atlanta
- Philadelphia

Our regional operating structure empowers us to provide clients with the best customer experience.





Sump and Dispenser Pan Testing and Repair

- Tanknology was introduced to Sump and Dispenser Pan Testing in California during the SB 989 requirements which required UST owners to prove that their "containment systems" were not leaking
- The industry standard for testing was a 24 hour hydrostatic test.
 Tanknology adapted its VPLT system to more accurately measure the water level and subsequently reduce the time of the test to 30 minutes. The system was certified in California and started Tanknology's experience with testing Sumps and dispenser Pans.
- In 2001 Tanknology became involved with Sump and Dispenser Pan repair as a result of Sunoco's decision to repair their containment systems throughout their retail network. Tanknology was a one of several vendors who committed resources to the project. Paste
- □ As a result we have learned to use most of the materials available to repair sumps and dispenser pans.



The Evolution of Sumps



The Evolution of Sumps



The Evolution of Sumps







Pic # 001: Before repair view of a 3.75" DW Ameron LCX vent line as it enters a fiberglass vent sump, beneath the vent riser location. Our surprise was the pipe's position after scraping away tons of sump-tite that was added during the original installation. We had ordered a boot configuration with an insert sized to the pipe. Once we saw this, we realized what we ordered wasn't going to work.





 Pic # 002: This is what we ended up with when trying to get the parts we ordered to work. There was just no way to get that insert into the boot as it caused too much distortion to the boot. We realized that we were going to need a CUSTOM boot.





Pic # 003: Contacted Manufacturer and began describing the issues. Measurements were taken to verify clearances. Cell phone pictures were sent to show the challenges





Pic 004: Just to illustrate the difficulties presented here, that penetration is the one closer to the side of the sump. And that conduit and j-box kept us from having ideal access to the area to repair.





Pic 005: The next morning, UPS delivered the custom-drilled insert that ICON was able to create in their shop for us. As you can tell by the appearance of the outer ring of the boot, the insert Fit perfect! The boot was filled and then a test was run with passing results. Job Complete.





Pic # 001: Before repair view of a 2.5" Environ product line and the smaller 1.0" conduit penetrations.





Pic # 002: Before repair view of a 2.5" Environ product line, 1.4" conduit and the smaller 1.0" conduit penetrations.





Pic # 003: Before repair view of a 2.5" vapor line, 1.4" conduit and the smaller 1.0" conduit penetrations.





Setting Dispenser 3/4 down onto the ground with spill towels under the base.





Dispenser sump 3/4 before capping the impact valves and removing center cross brace for clearance.





Running Ventilator prior to beginning work inside the sump. This helps to dissipate any residual vapors from the sump.





Beginning the removal of the old Environ test boots and penetration fittings in the dispenser 3/4 UDC.





Wiping-down the surfaces of the sump walls with Acetone as a cleaning-prep before applying PetrolSeal to bond the flanged portion of the new split repair boots to the Poly sump wall.





Making progress with split repair boot installation. The smaller 1.0" conduit penetration boot is drying after being bonded-together with FastFuse. Note the new Icon test boot with air-test fitting already on the product line.





Finished installation in UDC ³/₄. From left-to-right: 2.5" Vapor, 1.0" conduit, 1.4" conduit, 1.0" conduit, 2.5" Environ product line, 1.0" conduit, 2.5" Environ product line.

















Finished installation in UDC $\frac{3}{4}$. From left-to-right: 2.5" Environ product line (2) with new Icon 2.5" x 2.5" Test Boots w/Air Test fittings and new Air-Test Jumper hoses installed.





Straight-down view into UDC ³/₄ showing the Secondary Piping Test Boots and Air-Test Jumper hoses installed. Note: The jumper hoses were shortened to prevent excess sagging and placing a pull on the ends wit h the excess hanging-down. **DISCONNECT AFTERWARDS**





Conducting the final Hydro-Test with Tanknology's VPLT® probe. No problems were encountered and we achieved a passing result. All water was removed after the test.





Close-Up view of the VPLT® testing system console.



What we have learned

□ It is most efficient to have a testing crew and repair crew on site together when making repairs. Therefore if the system fails the problem can be quickly identified, fixed and retested in the same day. If separate crews are utilized at different times communication can be a problem. We ultimately combined the test crew with the repair crew.

□ The technology for making repairs has improved tremendously in the past couple of years. Manufacturers such as Icon Technologies manufacture boot systems for virtually every type of pipe and size. These technologies enable the repairs to be conducted from the field.



What we have learned

□ It is critical to dedicate a crew to making the repairs. Although it is not technically difficult, experience is necessary in order to do it efficiently as well as avoid some mistakes that are common to a new crew. Physically the repair work can be rigorous especially when repairing dispenser pans.

□ Most of the water in sumps comes from the top of the sump and as a result a good lid is necessary to prevent water from entering the sump. As a result we developed a water tight lid called the sump shield.



Spill Containment Tester





Spill Containers in California





Tank Sumps and Under-Dispenser Containment in California



Tank and Piping Interstitial in California





Thank You!

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