

STRUCTURAL LEAK LOCATION

STEP 4: In Leak Detection

a slide show that will step you through the process



Structural Leak Location

Objective:

- Check suspected leak areas (fittings, cracks, etc.) for water loss

Method:

- Dye Testing

Assuming the Bucket Test indicates a leak but the Pressure Test shows no problem in the plumbing, the only place for the leak to be is in the structure, (or shell) of the pool. The sophisticated LeakTrac 2200 system can be used for finding leaks in the vinyl liners themselves, however visual inspection is still the most effective method to find leaks around fittings and lights in all types of pools. Our Dye Testers provide a means of visually inspecting suspected leak areas to determine if water is being lost from these locations.

Dye Testing



Dye Testing involves squirting a small amount of dye within $\frac{1}{4}$ " of a suspected leak area to see if that dye is pulled out of the pool with the escaping water.

The pool should be filled to its normal operating level and the circulatory system turned off before attempting to dye test. It is also helpful to assure that the pool has been cleaned prior to testing, as some leaks will be plugged up by dirt and debris and thus not draw dye.

Dye Testers



A Dye Tester is simply a syringe that holds a concentrated dye.

Such a tester offers several advantages over simple test reagent bottles which are commonly used for this procedure. First the Dye Tester uses a long nozzle that allows precise application of the dye without creating unwanted water currents. Second, the syringe allows the dye to stay concentrated even when used while diving. Squeeze bottles suck in water when released thus diluting the dye.

Leakmaster Dye Testers use a special concentrated dye that holds together well underwater. The dye is available in dark blue to show up against light backgrounds and fluorescent yellow to show up against dark backgrounds.

Dive Equipment



To completely survey all parts of the shell of the pool, it is eventually necessary to get into the water. Diving equipment allows for a thorough survey of areas in the pool below what is reachable from the deck.

Diving in the pool using any sort of breathing apparatus, (tanks or compressor operated unit) should only be done by one who has taken lessons on skin or SCUBA diving and is fully aware of the precautions to be taken when breathing air underwater.

Dive Equipment



#SS-E Super Snorkel

This completely filtered, oil-less, compressor operated dive unit allows you to breath underwater without the problems and expenses of cumbersome tanks.

The compressor provides a ready source of air anyplace there is an electrical outlet nearby, eliminating the need to re-fill tanks. The lightweight unit also stores easily in the service vehicle and can also be used as a source of air pressure for Sonic leak Location.

50 feet of breathing hose and a SCUBA type regulator

Test Pool Systematically



As with the entire leak detection procedure, using a systematic procedure when dye testing will assure efficiency.

One way of doing this is to start with suspect areas at the top of the pool and systematically work your way down. This is advantageous because it puts off a dive into the pool until it is absolutely necessary.

In a concrete pool, start with the tile line.

Test Pool Systematically

Moving down, check the skimmer. Check any joints or cracks inside the skimmer itself as well as at the throat where the skimmer bonds to the pool wall.



Test Pool Systematically

Check around lights. Lights can be partially tested from the surface. However, for a thorough test off all sides of the light ring, niche, and conduit a dive will be necessary.

A Light Cover Dye Tester is a fast way to determine if the light is leaking or not from the surface.



Test Pool Systematically

And finally along any visible cracks in the pool.



Test Pool Systematically

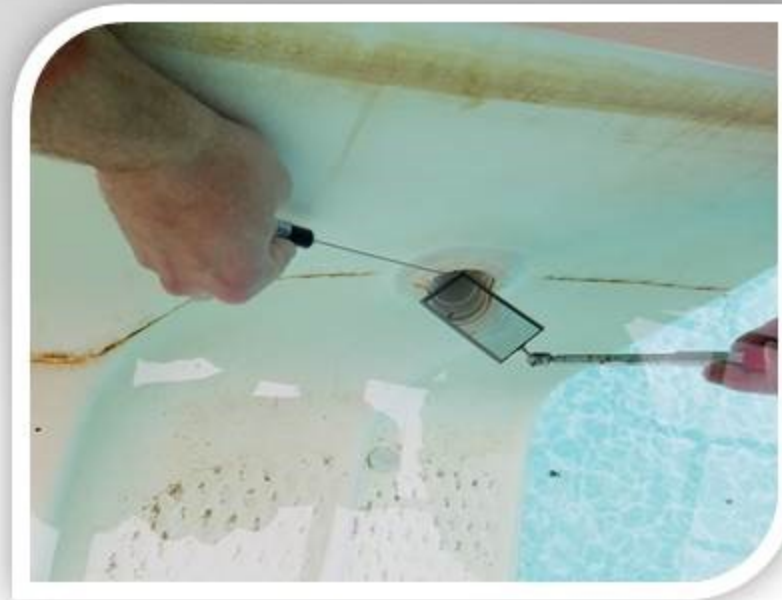
Suspect areas in a vinyl liner pool should be surveyed in a similar manner. Even if a LeakTrac Vinyl Liner Leak Detector is available these suspect areas could be dye tested first.



Test Pool Systematically

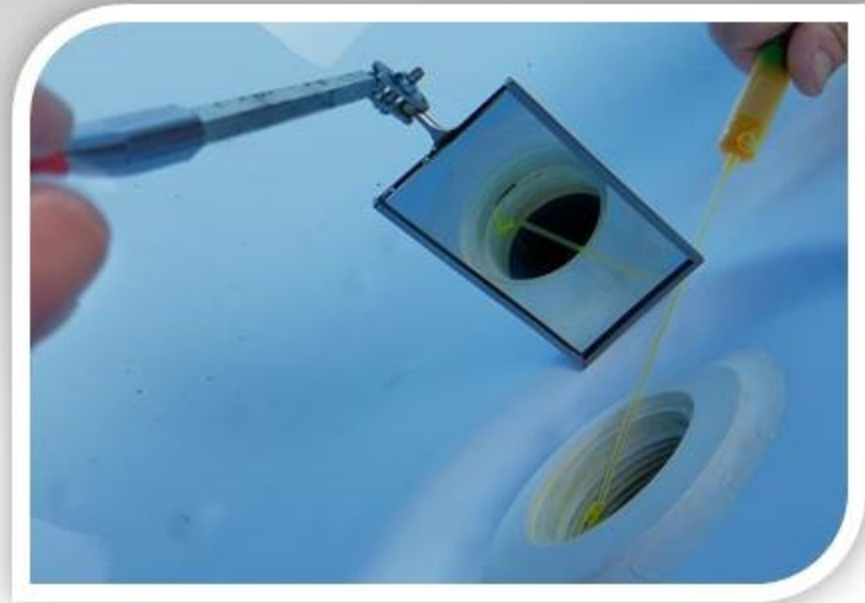


Any penetration through the shell of the pool is a suspect location. Check around returns.



Test Pool Systematically

Using an inspection mirror is helpful to view the underside of fittings and gaskets



Test Pool Systematically



Check stair gaskets.



Test Pool Systematically

If the liner has been surveyed with the LeakTrac and no leaks are found, or if a LeakTrac is not available. Dive the pool checking around the main drain and liner.

