

## SWIMMING POOLS

Swimming pools require care and constant attention to keep them in a state that is suitable for swimming. Putting in the required effort to maintain the water quality and cleaning works out as far more cost effective than letting the pool get out of hand and trying to “remedy” the situation from time to time. The intention of this guide is to provide you with some assistance in maintaining the swimming pool as mandated in your lease agreement and also how to trouble shoot if there are any problems.

At the time of you moving into the property at the commencement of your lease period, the property owner would have ensured that the pool was maintained to the desired level. (In rare circumstances, there might be a change of tenants and the owner requiring to remedy the state of the pool after you have moved in, but this will be specified in the property fault list that is compiled on commencement of your lease)

### CLEANING THE POOL

It is imperative to remove leaves and other items that might blow into the pool as soon as possible (like after a windy day) – The reason for this is that leaves might float on the surface, but fairly soon they will sink and start to rot and this will affect the chemical balance of the water in the pool.

It is preferred that you use a device that will vacuum the bottom of the pool on an ongoing basis.

The property owner does not supply a pool cleaner as part of the contract. That is an item that you need to purchase and maintain and it will remain your own property once you vacate the premises. There are occasions where a previous tenant leaves their pool cleaner behind and in those cases, you are welcome to adopt it.



If you do not have a pool cleaner, then you will need to manually clean the pool using a pool brush at the end of a pole that has the pool hose coupled to it.

### POOL PUMPS AND FILTERS

The most common type of pool filter is the sand filter. This filter requires the sand filter to be backwashed on a regular basis (preferably weekly). If the filter is not rinsed, then it will build up back pressure and reduce the volume of water that the



pool filter can process, increase the pump electricity consumption and compromise the healthy state of the water. It is also important to open the basket filter on the pump motor and clear it from leaves and other items that it traps on a regular basis.



Backwashing the filter is an easy process and should be undertaken when the pump is not busy with its routine cleaning daily pump cycles.

### BACKWASHING THE FILTER

The picture below depicts the typical swimming pool multiport valve that you need to use to clean the filter.



Please note that it is imperative that the pump is **NOT** running whenever you change the valve lever position. If you don't, the

water pressure will damage the valve's gasket seal and the valve will become ineffective until repaired. There are several valve lever positions and these are explained as follows:

### **Filter**

The lever should be on the 'Filter' setting most of the time. This is the setting that provides normal pool filtration by pushing the water through the filter media (sand, glass beads or D.E) that then traps any dirt and debris before the water is returned to the pool. This is the setting that you would use when you are vacuuming your pool as well.

### **Backwash**

When the Multiport valve is set to 'Backwash' the flow of water through the filter is reversed so that all the dirt and debris that the filter has cleared from your pool water and has accumulated in the filter medium is then flushed out and sent to waste.

You should backwash your filter for about 2-3 minutes or until the waste water runs clean. This can usually be seen in the clear plastic sight glass on the multiport valve.

### **Rinse**

The 'Rinse' setting should be used after backwashing and again run just for a minute or two. On this setting the water is flowing through the filter in the normal direction but once again is being sent to the waste pipe rather than being returned to the pool. This setting does pretty much what it says and rinses out any last traces of dirt and debris from your filter after the backwashing

process. These three settings are the ones that you will use most of the time on the pool filter; filter, backwash and rinse.

### **Waste**

This setting draws water from the pool and sends it straight to the waste outlet without passing through the filter.

You would use the 'Waste' setting to drain or partially drain the pool or you may use it when vacuuming if there is a lot of dirt and debris on the bottom of your pool so that it does not clog up the filter. **Never drain a pool** without first discussing it with us. In many cases, if there is insufficient water in the pool, it can "pop" out of the ground and the remedy to fix can run into tens of thousands of rands. It will be in very rare circumstances that consent will be given to allow the pool water level to drop significantly below normal level.

### **Closed**

This setting is only used when servicing the pool pump. Never run the pump with the valve in the 'Closed' position.

### **Recirculate**

In the 'Recirculate' position, the filter is bypassed. Water is drawn in from the pump and then returned straight to the pool.

In some instances, if you are adding pool chemicals, then it can be used to make sure that the chemicals are thoroughly dissolved through the pool water without going through the filter.

## TESTING THE WATER

### Type of Tests

The four main tests to perform with a test kit are pH, chlorine, Total Alkalinity(TA) and Calcium Hardness. Cyanuric Acid levels should be tested for on outdoor pools which use chlorine. Acid or Base Demand tests may also be performed with a pH test sample, to determine the amount of acid or base is needed (demanded) to make the desired change to pH level.

#### Frequency of testing

One should check the pool pH and chlorine levels 2-3 times per week. If pH level has changed, check the TA level. Total Alkalinity levels tend to fluctuate less, so weekly testing is fine. Calcium Hardness and Cyanuric acid levels are slower to change, so monthly testing is recommended.



### Recommended levels

pH: 7.2 - 7.8

Chlorine: 1.0 - 2.0 ppm

Total Alkalinity: 80 - 120 ppm

Calcium Hardness: 200 - 400 ppm

Cyanuric Acid: 20 - 50 ppm

Total Dissolved Solids: below 5000 ppm

To determine the amount of Chlorine or other chemicals required for the pool, you need to test the pool water and follow the test kit guide to determine what action to take.

### **How to test**

There are several products on the market that you can purchase and use to test with. These products usually come with their own instruction manual.

Should you prefer to have an expert test the water (FREE SERVICE) and **advise what chemicals need to be added**, we highly recommend that you take your water sample (in a plastic bottle) to them on a frequent basis. The service provider that we recommend is:

Norman's Pool Centre

15 Vincent Road, Vincent,

East London

Tel: 043 726 8445

Web Site: <http://www.normanspoolcentre.co.za>

### **WATER FILTRATION & PUMP TIMERS**

The pool pump run times will vary during winter and summer months. We recommend that you use a pool timer (If there is not one built in) and set the timer in summer to run for 3 hours in the morning and three hours in the evening. Changing the times to 2 hours each in winter should be sufficient.

## WATER EVAPOURATION

### How Much Water a Pool Loses In A Day

Larger bodies of water can lose a lot of their contained water due to leaks (which we will discuss further on) – but the biggest culprit of water loss is evaporation. On average, swimming pools lose about 6.5mm of water each day, yet variations in wind intensity, humidity and sunlight can drastically change water loss rates. In South Africa, where we have experienced summertime temperatures from the beginning of spring, sometimes reaching into the 30 degree mark – our largest factor for cause of evaporation is intense sunlight. Wind and humidity factors do come into play. There are three main factors for evaporation: Exposure, temperature and humidity levels.

**Exposure** - The more your pool is exposed to the sun and wind, the more evaporation you'll see. A screened pool will evaporate less than an unscreened pool. A pool surrounded by a fence, trees or a structure will evaporate less than a pool that's facing an open sky. A pool that isn't on a lake, golf course or other large piece of land will evaporate less than a pool that is.

**Temperature** - Throughout our cooler months, we see a significant contrast between the high and low temperatures, sometimes in excess of 25 degrees. This allows your pool to heat up during the day and evaporate all night. In fact, if the sun is down and you turn on your pool light, you'll likely see a mist



above the pool. This is the water evaporating and it does this all night, every night.

**Humidity** - High humidity equals very low evaporation, whereas low humidity equals high evaporation. The air is like a towel or a sponge: The dryer it is, the more water it can hold.

We mentioned earlier that on average, you should expect your pool water level to drop around 6.5mm per day due to evaporation. Below is a calculation of a typical pool to illustrate the expected amount of water loss during a typical month:

Water Volume Loss = Pool Length x Pool Width x 6.5mm

Therefore an 8m x 4m pool will lose around 208 Litres of water per day due to evaporation that adds up to 6200 litres of water per month.

Should your family be active in the pool where water is frequently splashed out of the pool, the water loss becomes significantly greater.

## **How To Stop Pool Water From Evaporating**

One of the best ways to minimise water loss due to evaporation is to use a “pool blanket” to place over your swimming pool when it is not in use. Covering the surface area with a non-porous material will prevent any water loss.

Pool covering can be found at most major retailers and pool shops – but an inexpensive fix is to take an industrial-sized roll of “bubble wrap” and lay it out over your pool. Keeping the “bubble side” down allows for continued and better buoyancy.

Here are some other tips on how to save pool water:

- Don’t “bomb” or splash in the pool too much.
- Drip dry on the top step so the water goes back into the pool.
- Avoid overfilling the pool: the water level should be about half way up the skimmer box opening for the filter to function properly.

## TROUBLE SHOOTING

### POOL HAS GONE GREEN – REMEDY

There might be an occasion where you have lost control of the pool water’s state completely and the pool has turned green. In these circumstances, you can take a water sample to a pool expert and ask them to advise the remedy steps to take. We have a set formula that our maintenance team often applies to remedy a pool on change of tenant when the pool has turned green. The remedy formula is as follows:

<b>STEP</b>	<b>ITEM</b>	<b>PUMP STATE</b>	<b>TIME</b>
1	Algae Killer	On	1Hr
2	Settling Salts	Off	24hrs
3	Vacuum Pool	On	
4	Shock It (2 x Bags)	On	12 hrs
5	Stabilizer	On	24 hrs
6	Test Water & Chems as req		

## HOW TO TEST FOR SUSPECTED WATER LEAKS

### TEST PART 1:

So you have noticed that the pool seems to be using a lot of water and you suspect that perhaps the pool is leaking somewhere. If you have taken into account the normal anticipated water loss due to evaporation as discussed previously, then there is a test that you need to perform as evidence. This test is called the “**bucket test**” and is very easy to perform and is described below:

1. Take a plastic bucket and fill it up to two thirds
2. Mark the water line inside and outside the bucket
3. Let the bucket float in your pool for **about three days**.
4. After the three days check by how much the water level in the pool has gone down in comparison to how much water the bucket has lost.

If the pool and the bucket have lost the same amount of water during the period, then the loss can be attributed to evaporation. If the pool has lost significantly more than the bucket, then you need to contact us and we will send in a pool maintenance expert to investigate and localize and remedy the leak.

### TEST PART 2:

Assuming that you have determined that the water level is dropping very differently from the water level in the bucket and the indication is that there is possible a leak, the second test is to

determine whether the leak is in the pool itself or in the pump reticulation system. Take note of by how much the water level dropped in the test above (over 3 days) and divide that by 3 to get the level dropped in 1 day.

Now run the pool pump continuously for one day and then measure the pool's level drop. If the amount dropped equals the expected level drop for one day, then one can assume that the leak is in the pool itself. If the level drop is substantially more, then we can assume that the pump reticulation system is leaking.

Please note that when a pool expert is testing for water leaks, they require that the water to be crystal clear (In other words you need to get the water condition normalized) and the water level to its normal position. The investigation for leaks is done using dyes in the water and near potential suspected leak areas.