



NAME: _____

Filter Type: _____

I/G POOL SHAPE AND SIZE: _____

Sanitizer: _____

POOL GALLONAGE: _____

Congratulations on the installation of your new Cannon Pool! Thank you for your purchase. With a little bit of maintenance and upkeep, your new pool will perform wonderfully for many years to come. Our expert team of "Pool Gurus" here at Cannon has assembled this quick guide to make pool maintenance a breeze!

Weekly Pool Maintenance

Providing proper care for your pool does not require a genius, it simply requires consistent attention to the little details. Pools are not hard to care for, but they can be rather unforgiving if you let up on any area of the pool's needed maintenance.

With over 40 years' experience in the field of swimming pool installation and maintenance, we have come up with a maintenance plan that is easy to follow. It takes about one hour per week on the typical pool if you do the maintenance visit in its entirety.

Step One: Preliminaries – 10 minutes

Empty skimmers, net surface.

Step Two: Vacuum the Pool – 30 minutes

Use your vacuum or leaf bagger to clean the bottom.

Step Three: Pool Chemical Care – 10 minutes

Test water chemistry 2-3 times a week and make adjustments as needed.

Step Four: Pool Equipment Care – 10 minutes

Empty traps, backwash (if needed), check for leaks.

Seasonal Maintenance

Pool equipment care that will extend the life of various components.



Pool Maintenance Preliminaries

Begin your pool service routine with some preliminaries. These are the things that you need to do first, and as you work through the process, you will see exactly why.

- 1. Empty the Skimmer Baskets** - so that debris will not float out of the skimmer and get the pool dirty again as you are trying to clean it.
- 2. Net the Surface** - to remove as much floating debris as possible so that it does not fall to the bottom.
- 3. Scoop out Large Items** - if there are any larger items in the pool (stones, toys, etc.) in the bottom of the pool, scoop them out with the net. You do not want to vacuum out anything large that may clog your hose or your skimmer lines.
- 4. Spray off the Deck** - again this is to keep the leafy material from blowing into the pool. It also makes things look really nice once you are done.



Vacuuming the Pool

The largest part of the pool service process is cleaning the dirt and debris off of the bottom of the pool. This is normally done using a pool vacuum, but in some cases, a leaf bagging device may be needed. Here is the process of setting up and using a pool vacuum.

- 1. Backwash** (see page 7) - prior to vacuuming it's a good idea to backwash your filter to guarantee the best possible suction. Note that anytime you move the valve on the filter, your pump should be shut off.
- 2. Rinse** (see page 7) - this is done to prevent leftover debris in the valve head from blowing back into the pool. When finished with rinse, shut off pump and return valve handle to filter setting.
- 3. Assemble the Equipment** - connect your extension pole to the vacuum head. Then connect the swivel cuff end of the vacuum hose (the other cuff is stationary) to the vacuum head.
- 4. Bleed the Vacuum Hose** - before you hook the vacuum hose into your skimmer, you need to get all the air out of it. If you don't, you will suck a bunch of air into your pump and you may lose prime (suction) on your pump. Extend the pole and put the head into the water, place the stationary cuff onto the skimvac plate. Then take the stationary cuff with skimvac plate attached and place it over the return to fill with water. Once you see the air bubbles stop rising from vacuum head, remove the hose from the return and cover the opening with your hand to keep air from entering the hose.
- 5. Connect to the Skimmer** - place the hose and skimvac plate into the skimmer. Move quickly to avoid letting air back into the system. It is best to put the hose over the deck and into the skimmer, as opposed to putting through the skimmer door. This keeps the hose from floating out if the pump loses prime.
- 6. Adjust the Valves** (if applicable) - if you are vacuuming from one intake line (i.e., a skimmer), it is important to close down the other intakes (additional skimmer or a main drain) in order to force adequate suction to the skimmer from which you are vacuuming. If you don't restrict the other intakes, the suction to your vacuum head will be insufficient and it may not vacuum properly.
- 7. Vacuum the Pool** - use straight, slightly overlapping slow strokes, keeping the head of the vacuum on the floor of your pool.

When you are done vacuuming, shutoff pump, return suction valves to original position, and pull the vacuum head, hose and pole out of the water. Be sure to pull the skimvac plate out of the skimmer and then restart the pump. If pressure is 8-10 psi higher than normal, either clean cartridge or backwash and rinse per Page 7 instructions. If the area you are vacuuming is ridden with debris and/or mustard algae, you can vacuum on the waste setting rather than filter (water will not travel through filter body). Before vacuuming to waste, fill the pool above the skimmer as water will be lost during the process.



Pool Chemical Maintenance

This is the part of pool maintenance that many pool owners dislike the most. Many pool owners perceive pool chemistry is complicated, when in fact it typically is not.

1. Test the Chemicals - using a test strip, test the chemicals on the following schedule:

- **Chlorine** - two to three times per week
- **Total Alkalinity** - two to three times per week
- **pH** - two to three times per week
- **Stabilizer (Cyanuric Acid)** - two to three times per week
- **Calcium Hardness** - once per year after opening at our store
- **Salt** (only for AutoPilot Salt Chlorine Generator customers) - once per year after opening at our store

For calcium hardness and salt, bring your pool water sample to your nearest Cannon Pools location, so a staff member can test it for you. Most strips will not test for calcium or salt.

2. Make Adjustments - add chemicals as needed to bring chemical levels up the recommended levels:

- **Chlorine:** 1.0 - 3.0 ppm (part per million)
- **Total Alkalinity:** 80 - 120 ppm
- **pH:** 7.2 - 7.8
- **Stabilizer:** 30 - 50 ppm (60 – 80 ppm for salt pools)
- **Calcium Hardness:** 100 - 200 ppm, is the suggested range for calcium hardness in vinyl liner pools. Please note there is no need to go above 200 ppm.
- **Salt:** 2500 – 3500 ppm

Remember the pool should be free from swimmers while adding chemicals, and after adding chemicals to allow the pool chemicals sufficient time to dissolve and dilute. You may re-open the pool once the chemical levels are within the proper ranges. All chemicals should be added through the skimmer while pump is running except muriatic acid which is added directly to the pool.



Pool Service Equipment

Taking care of the pool equipment will ensure that it takes proper care of your pool. The circulation and filtration system must be kept in proper working order. This requires a small amount of attention each week as outlined in this section.

- 1. Empty the Pump Trap (strainer basket)** - turn off the pump, close the intake valves and empty the trap basket. Inspect the basket closely and replace if it is damaged in any way.
- 2. Clean the Screen to the AutoPilot salt system (not on all pools)** - with pump off undo the union, remove screen and clean any debris. When done, replace screen and hand-tighten union.
- 3. Backwash or Clean the Filter** - when the pressure on the filter gauge rises 5-10 psi above normal operating pressure, it is time to backwash the filter (DE and sand filters) or disassemble and clean the filter (cartridge filters). When backwashing, remember to rinse after.
- 4. Check for Leaks** - look carefully around the equipment area to make sure that there are no leaks that may damage the equipment. Pump seal leaks should be repaired ASAP.

Occasionally, the equipment will require preventative maintenance items that are covered in the next section.



Seasonal Maintenance

The pool equipment requires more in-depth maintenance on a periodic basis. These are preventative maintenance items that help to extend the life of the equipment and insure dependable operation.

1. Pool Filter

Sand Filters - change the sand every 5-7 years (best done prior to pool opening)

DE Filters - disassemble and manually clean twice per season

Cartridge Filters - replace the cartridges every 1-2 years

2. Pool Pump - lubricate pump lid o-ring with a silicone-based lubricant, like Lube Tube once per month. This allows for easier removal of pump lid when emptying the pump trap.

3. Backwash Valve (if applicable) - disassemble and lubricate the seals on the valve with Lube Tube. This will help them to operate smoothly and avoid premature wear and tear.

4. Valves (if applicable) - make sure the valves operate smoothly and fairly easily. Some valves can be disassembled and lubricated with Lube Tube.

5. Autopilot Salt Chlorine Generator (if applicable) - the unit needs to be calibrated after pool is opened. To accomplish this, bring a water sample to Cannon Pools. One of our knowledgeable pool professionals will test your salt level and walk you through recalibrating your Autopilot.



Waterway Sand Filter Valve Function Guide

- **ALWAYS TURN OFF THE PUMP BEFORE CHANGING POSITIONS ON VALVE**
- **FILTER** – Set valve to FILTER for normal filtering. Also use for regular vacuuming.
- **BACKWASH** – For cleaning filter. When filter pressure gauge rises 8 – 10 psi above normal. Stop the pump, set valve to BACKWASH. Start pump and backwash until water in clear fitting is clear. Approximately 2-3 minutes depending on dirt accumulation. Proceed to RINSE.
- **RINSE** – After backwashing, turn pump off, set valve to RINSE. Start pump and operate for about 30 seconds. This ensures that all dirty water from backwashing is rinsed out of the filter head, preventing possible return to the pool. Stop pump, set valve to FILTER, and start pump for normal filtering.
- **BYPASS TO WASTE** – To bypass filter for draining or lowering water level and for vacuuming heavy debris directly to waste.
- **BYPASS TO POOL** – Water is recirculated through the pool system bypassing the filter.
- **CLOSED** – Shuts off flow from pump to filter. Do not use this setting with pump operating.
- **WINTERIZE** – Holds valve open so no moisture collects in valve head. Used only during winter storage.



Waterway Cartridge Filter Function Guide

CARTRIDGE CLEANING PROCEDURE WHEN TO CLEAN THE FILTER: The filter cartridge should normally be removed and cleaned when the pressure gauge reading increases 10 PSI over the start-up pressure. **NOTICE:** When sanitizing your pool using Baquacil (PHMB polyhexamethylene biquanide) based cleaners, use ONLY PHMB cleaners to clean the cartridge. When using PHMB sanitizers, the filter cartridge **MUST** be cleaned more thoroughly and frequently than for a pool using chlorine. Follow manufacturer's instructions carefully. Use of any other type of cleaners with PHMB pool sanitizers will void the filter's warranty.

Removing the filter cartridge.

1. Turn off pump and open drain cap
2. Allow the tank to drain.
3. Lift out the cartridge and hose it down thoroughly. Spray the entire cartridge surface. Allow cartridge to drain.
4. Inspect the cartridge. If necessary, repeat the washing operation. If the cartridge is damaged, replace it.

NOTICE: When this procedure no longer adequately cleans the cartridge, discard the cartridge and replace it with a new one. **SYSTEM INSPECTION GENERAL NOTICE:** ONLY use approved filter cleaners to clean the filters. **NOTICE:** Open the air release valve and bleed all air from the filter each time the filter is drained or disassembled.

WEEKLY INSPECTION:

1. Remove debris from the pool skimmer basket.
2. Stop the pump; open the air release valve to release all pressure.
3. Remove the pump trap cover and basket; remove debris.
4. Check the pump for leaks. If found, see pump owner's manual.
5. Replace the trap basket and the cover. Tighten the cover securely hand tight. **DO NOT** use a lid wrench to tighten it.
6. Start the pump. When the filter air release valve runs a solid stream of water, close the valve.
7. When the system has returned to normal operation, check the filter pressure. If the filter pressure is 10 PSI (69 kPa) higher than the initial start-up pressure, the filter needs cleaning.



Water Chemistry Tips

Regardless of sanitization system, the key to good quality water is pH and alkalinity balance. Alkalinity is the pH buffer, or “backbone” of pH. If the alkalinity is off, the pH will be inconsistent. Always correct alkalinity before adjusting pH. If the pH is off, consequences can include: chemicals added to the pool not working properly, damage to pool liner and/or equipment, cloudiness, scale, algae, irritation to skin and eyes.

Stabilizer (Cyanuric Acid) is very important if using Cannon quick tabs, Poolife Brite Stix, or salt. Stabilizer should be added to your skimmer slowly, and do not backwash or clean filter cartridge for 4 days after adding. Stabilizer is like sun block, but for chlorine. Too little, and chlorine dissipates at a faster rate. Too much, and the chlorine becomes ineffective.

Phosphates have become a source of water chemistry problems. Phosphates are food for plants, therefore contributing to cloudy and green pools. Phosphates are added to the municipal water supply to prevent calcification in plumbing. They also come from sun tan lotions, detergents, and runoff from yard fertilizers. If you are experiencing cloudy / green water, bring in a sample to be tested for phosphates. There are products you can add to remove them.

For reoccurring water problems, consider adding a borate into the water. Borates are compatible with any sanitization system. Pools with borates have softer-feeling water, a more consistent pH, a reduction in scaling, and limited algae.

Cannon Quick Tabs:

- 1 tab per 8,000 gallons into the skimmer basket daily.
- Maintain stabilizer between 30 – 50ppm.
- Shock every 10-14 days with Cannon liquid chlorine, Cannon granular shock, or Turbo shock at a rate of 1 bag or gallon per 10,000 gallons.

Poolife Brite Stix:

- 1 stick per 5,000 gallons into the skimmer basket every 10 – 14 days.
- Maintain stabilizer between 30 – 50ppm.
- Shock every 10-14 days with Cannon liquid chlorine, Cannon granular shock, or Turbo shock at a rate of 1 bag or gallon per 10,000 gallons.



AutoPilot (Salt):

- Maintain a level of 2500 – 3500 ppm salt in the pool.
- Salt pools are more susceptible to high alkalinity and pH, so it is recommended to keep muriatic acid at home to counter this.
- Maintain the stabilizer level at 60 – 80 ppm.
- Chlorine is produced only when the pump is on and no debris interrupting water circulation. Run pool a minimum of 8 hours per day, clean pump basket, skimmer basket, and manifold drain screen regularly. A Check Flo alert usually indicates that these areas need to be cleaned.
- the purifier % fluctuates on its own based on water temperature, and the AutoPilot regulates this efficiently. To change purifier % manually, press the up or down arrow on the home screen and then press select on the desired %.
- Press boost for 24-hour shock. Hold boost for 8 seconds for a 72-hour shock.
- If pump is being controlled by the AutoPilot, it will shut off after a “boost” and you will have to manually turn it back on unless the timer(s) are being used.

Baquacil:

- E-guide, help line, and troubleshooting on <http://www.baquacil.com/>.
- Maintain sanitizer level at 50 ppm
- Add oxidixer weekly at a rate of 1 gallon per 10K gallons.
- Add CDX weekly at a rate of 1 pint per 10K gallons.
- Use a Baquacil brand filter cleaner at least 3x per season.

TEST YOUR WATER WEEKLY. MAINTAIN pH AND ALKALINITY BALANCE. BRING A WATER SAMPLE TO ANY CANNON LOCATION FOR COMPLIMENTARY TESTING.



TROUBLESHOOTING GUIDE

Symptom	Cause	Solution
Scale on walls & fixtures.	High pH. High total alkalinity.	Lower PH to 7.2 – 7.8* with Cannon pH Minus. Lower total alkalinity to 80 – 120 ppm with Muriatic Acid.
Bleached hair or bathing suits. Eye irritation.	Excessive chlorine.	Add Baquacil Chlorine Neutralizer to neutralize the chlorine.
Eye irritation and/or itchy skin. Water has foul odor. Complaints of “too much chlorine” in water.	High combined chlorine**, low free chlorine. (Chlorine lock)	Adjust pH to 7.2 – 7.8.* Perform breakpoint chlorination to eliminate combined chlorine. Breakpoint chlorination can be achieved by multiplying the combined chlorine level by 10. The result is the amount of free chlorine that needs to be added in ppm. Add 5 gallons of liquid or 3 turbo shock per 15,000 eliminate chlorine lock.
Skin and or eye irritation.	Improper pH.	Adjust PH to 7.2 – 7.8.*
Hazy or cloudy water. No sparkle.	Early algae growth. Poor filtration. High PH. High total alkalinity.	Superchlorinate*** or shock chlorine pools with Cannon Shock. Add 5 gallons of liquid or 3 turbo shock per 15,000. If problem persists use clarifier following manufactures directions. It is also recommended to add a maintenance dose of Cannon Algae Eliminator. For Baquacil pools, add Baquacil Algaecide following manufactures directions. If problem persists, use Baquacil Water Clarifier and Baquacil Flocculent following manufactures directions. Check filter for proper operation. Lower pH to 7.2 – 7.8* with Cannon pH Minus. Lower total alkalinity to 80 – 120 with Muriatic Acid.



<p>Red-brown water. Purple-black water. Blue-green water.</p>	<p>Iron. Manganese. Copper.</p>	<p>Add Poolife Stain Stop following manufactures directions. It is also recommended to add a maintenance dose of Mineral Stain Out weekly.</p>
<p>Green, slippery pool surfaces and cloudy or green water.</p>	<p>Algae.</p>	<p>Adjust pH to 7.2 – 7.8.* Superchlorinate*** or shock chlorine pools with Cannon Shock. Add 5 gallons of liquid or 3 turbo shock per 15,000. Let pool run overnight if problem persists repeat chlorination. If pool looks cloudy add Cannon Concentrated Clarifier following manufactures directions. Then add initial dose of Cannon Algae Eliminator. It is also recommended to add a maintenance dose of Cannon Algae Eliminator weekly.</p> <p>For Baquacil pools, add Baquacil Performance algaecide following manufactures directions. If pool looks cloudy use Baquacil Water Clarifier and Baquacil Flocculent following manufactures directions.</p>

* Bring total alkalinity into recommended range before adjusting pH

** Combined chlorine can be measured by subtracting free chlorine from total chlorine

*** Superchlorination is chlorinating the water to 30ppm

For issues with the AutoPilot Salt Chlorine Generator please refer to the trouble shooting guide under the front cover of the unit or gladly call Cannon Pools.

We appreciate your business at Cannon Pools and want you and your family to have many years of fun with your Cannon Pool. This maintenance guide is a great resource for you in the regular upkeep of your new pool. If you get stumped with a pool question, please don't hesitate to contact the experts at Cannon Pools for assistance.

Experience. The Cannon Difference.

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