

Trouble Shooting

FILTER

- **Running at high pressures.**
 - DE coated with normal accumulation of pool dirt, algae, etc.
 - Bump
 - Overcharge of DE.
 - Bump – Drain – Recharge
 - Restriction in return line caused by small eyeball fitting.
 - Change to larger size fitting.
 - Partially closed valve on return line.
 - Open valve.

- **Drop off of return flow.**
 - DE coated with normal accumulation of pool dirt, algae, etc.
 - Bump
 - Pump strainer basket clogged.
 - Clean
 - Skimmer basket clogged.
 - Clean
 - Pump impeller vanes clogged.
 - Cleaning with a stiff wire brush through the pump strainer opening will usually work. Alternate method would be to disassemble and clean.
 - Air leak on suction side of pump.
 - Check cover gasket, hand knobs, hose, clamps, etc. Replace or tighten as necessary.
 - Electric motor running less than maximum R.P.M. (underspeed).
 - Consult pump and motor troubleshooting guide. Note: Most motor problems are due to: 1. Undersized or improper wiring. 2. Power cutbacks. 3. Combination of both 1 and 2.

- **Short Cycles.**
 - DE loaded to capacity with pool dirt, algae, etc.
 - Bump – Drain – Recharge
 - Bumping incorrectly.
 - Slow down stroke – brisk up stroke. Repeat 6 times.
 - Bump handle bent.
 - Check and straighten or replace.
 - Pump output exceeds design flow rate of filter.
 - Check GPM/LPM output. Regulate pump GPM/LPM output to max filter GPM/LPM rating.
 - Presence of algae.
 - Super-chlorinate; Bump-Drain-Recharge as needed.

- **Short cycles – even after proper Bump-Drain-Recharge.**
 - Contaminated (clogged) Flex-Tube braids caused by: 1. Natural accumulation of chemical deposits (accelerated if chemicals are fed through skimmer). 2. Running DE charge too long with excessive amounts of live algae present in pool. 3.

Operating filter without DE. 4. Operating too long without DE after starting pump. DE must be added as soon as filter is full of water and pump is putting out a steady stream. **IMPORTANT: Testing a new pool plumbing system without adding DE will cause this type of clogging.**

- Clean tube nest (2 methods).
 - 1. Detergent Cleaning: Remove tube nest and hose down with forceful stream of clean water. Soak tube nest in strong solution of laundry detergent (such as Cheer) and warm water. Hose down again.
 - 2. Chemical Cleaning. This requires use of water and muriatic acid solution (or filter cleaner-type preparations) to chemically dissolve contaminants. Consult your pool dealer for chemical cleaning instructions.

- **DE leaking to pool via the return lines.**
 - Opening or tear in one or more Flex-Tubes.
 - Replace Flex-Tube.
 - Rip or hole in diaphragm gasket.
 - Replace gasket.
 - Worn or loose fitting diaphragm gasket (chemicals fed through suction lines may shorten life of the part.)
 - Replace gasket.
 - Loose bolts on tube nest plates.
 - Tighten bolts.

- **Hard Bumping.**
 - Caking of DE under tube sheet. Sometimes caused by accumulation of sun tan oils, hair or floating particles that bind together in a clay-like form.
 - Bump-Drain-Recharge more often and reduce the use of oils.
 - Overloaded with DE. Sometimes happens when last charge of dirty DE was not properly drained.
 - Bump- Drain – Recharge more often.
 - Filter runs too long between bumping.
 - Bump more frequently.

- **DE leaking back to pool via skimmer or main drain.**
 - Filter check valve worn or stuck open.
 - Clean and/or replace.

PUMP

- **Motor won't start.**
 - Check for improper or loose connections, open switches or relays, blown circuit breakers or fuses.
 - Manually check rotation of motor shaft for free movement and lack of obstruction.

- **Motor cuts out – check for:**

- Wiring, loose connections, etc.
- Low voltage at motor (frequently caused by undersized wiring).
- Binding and overload. (Amperage reading)
- **Motor hums, but does not start – check for:**
 - Governor stuck in open position.
 - Open capacitor.
- **Pump won't prime.**
 - Make sure pump/strainer housing is filled with water and that cover gasket is clean and properly seated. Tighten hand nuts.
 - Make sure all suction and discharge valves are open and unobstructed, and that pool water level is above all suction openings.
 - Block off suction as close to pump as possible and determine if pump will develop a vacuum.
 - If pump does not develop a vacuum and pump has sufficient “priming water”.
 - Tighten all bolts and fittings on suction side.
 - Check voltage to make sure pump is up to speed.
 - Open pump and check for clogging or obstruction.
 - Remove and replace shaft seal.
 - If pump develops a vacuum, check for blocked suction line or strainer, or air leak in suction piping.
- **Low Flow – Generally, check for:**
 - Clogged or restricted strainer or suction line; undersized pool piping.
 - Plugged or restricted discharge line of filter (high discharge gauge reading).
 - Air leak in suction (bubbles issuing from return fittings).
 - Pump operation underspeed (low voltage).
 - Plugged or restricted impeller.
- **Noisy Pump – check for:**
 - Air leak in suction causing rumbling in pump.
 - Cavitation due to restricted or undersized suction line and unrestricted discharge lines. Correct suction condition or throttle discharge lines, if practical.
 - Vibration due to improper mounting, etc.
 - Foreign matter in pump housing.
 - Motor bearings made unserviceable by wear, rust, or continual overheating