

## Trouble Shooting

### FILTER:

- **Low Water Flow**
  - Check skimmer and pump strainer baskets for debris.
  - Check for restrictions in intake and discharge lines.
  - Check for air leak in intake line (indicated by bubbles returning to pool).
  - Backwash filter.
  
- **Short Filter Cycles**
  - Check for algae in pool and superchlorinate as required.
  - Be sure chlorine and pH levels are in proper range. (Adjust as required).
  - Check surface of filter sand for crusting and caking (remove 1" of sand if necessary).
  
- **Pool water won't clear up.**
  - Check chlorine, pH and total alkalinity levels and adjust as required.
  - Be sure flow rate through filter is sufficient.
  - Operate filter for longer periods.
  - Be sure Vari-Flo valve is set to "filter" position.

### 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 overheatings.