

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 cut-backs. 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.
- **Very short cycles when vacuuming.**
 - Very dirty water.
 - Bump – Drain – Recharge more often.
 - Presence of live, vigorously growing algae.
 - Add enough chlorine to control this growth – then vacuum.
 - Presence of alum or flocking agents, which will clog filter.

- Vacuum so as to bypass filter. Avoid using flocking agents

PUMP

Motor Will NOT Start – Check For:

1. Improper or loose wiring connections; open switches or relays; tripped circuit breakers, GFCI's, or blown fuses.
2. Manually check rotation of motor shaft for free movement and lack of obstruction. (See steps 4 & 5 of “Shaft Seal Change Instructions” in this manual.)
3. If you have a timer, be certain it is working properly. Bypass it if necessary.

Motor Shuts OFF – Check For:

1. Undersized wiring; loose connections; etc.
2. Low voltage at motor or power drop (frequently caused by undersized wiring or extension cord use).
3. Mechanical binding and electrical overloads.

NOTE: Your Hayward pump motor is equipped with an “automatic thermal overload protector.” The motor will automatically shut off if power supply drops before heat damage can build up causing windings to burn out. The “thermal overload protector” will allow the motor to automatically restart once the motor has cooled, provided the power source is again up to proper levels. It will continue to cut On/Off until the problem is corrected. **Be sure to correct cause of overheating.**

Motor Hums, But Does NOT Start – Check For:

1. Centrifugal switch stuck in OPEN position.
2. Binding of motor shaft.

Pump Won't Prime

1. Make sure pump/strainer housing is filled with water and the cover O-ring is clean, also be sure it is properly seated in the cover O-ring groove. Make sure strainer cover is locked firmly in position and lubricated with “Jack's 327.”
2. Make sure all suction and discharge valves are fully open and not blocked, that pool water level is at proper level, and that skimmer weir is not hung up or banded on skimmer wall.
3. Block off to determine if pump will develop a vacuum. You should have 5”-6” of vacuum at the strainer cover (**Only your pool dealer can confirm this with a vacuum gauge**). You may be able to check by removing the skimmer basket and holding your hand over the bottom port with skimmer full and pump running. If no suction is felt, check for line blockage.
 - a. If pump develops a vacuum, check for blocked suction line or dirty strainer basket, an air leak in the suction piping may be the cause.
 - b. If pump does not develop a vacuum and pump has sufficient “priming water”:
 - i. Re-check strainer housing cover and all threaded connections for suction leaks. Check if all hose clamps are tight.
 - ii. Check voltage to ensure that the motor is rotating at full RPM's.
 - iii. Open housing cover and check for clogging or obstruction in suction. Check impeller for debris.
 - iv. Remove and replace shaft seal only if it is leaking.

Low Flow – Generally, Check For:

1. Clogged or restricted strainer or suction line; undersized pool piping.
2. Plugged or restricted discharge line of filter, valve partially closed (high gauge reading).
How to correct: Sand filters – backwash as per manufacturer's instructions; D.E. filters – backwash as per manufacturer's instructions; Cartridge filters – clean or replace cartridge.
3. Air leak in suction (bubbles issuing from return fittings). Re-tighten using Teflon tape.
4. Plugged or restricted impeller or impeller sheared off. Replace including new seal assembly.

Noisy Pump – Check For:

1. Air leak in suction piping causing rumbling in pump.
2. Cavitation due to restricted or undersized suction line or leak at any joint, low water level in pool, and unrestricted discharge return lines. Correct suction condition or throttle return lines, if practical. Holding hand over return fitting will sometimes prove this point or putting in a smaller eyeball fitting.
3. Vibration due to improper mounting, etc. Put a rubber pad under metal mounting feet.
4. Foreign matter in pump housing. Loose stones/debris hitting impeller could be cause, remove any of the above.
5. Motor bearings noisy from normal wear, rust, overheating, or concentration of chemicals causing seal damage, which will allow chlorinated water to seep into bearings wiping out the grease causing bearing to whine. All seal leaks should be replaced at once.
6. Equipment base vibrating.