Troubleshooting Pressure Sand Filters

PROBLEM	CAUSE	SOLUTION
Pool water is not clear or clean	1. Too frequent of a backwash cycle.	Backwash according to pressure and not time. See manufacture's I/O instructions for proper pressure differential (usually 7-10 psi above starting pressure).
	2. Freeboard not sufficient or improper sand was used for replacement purposes.	Check freeboard and sand depth. Make sure of sand specifications.
	3. lnsufficient turnover rate as compared to total user load.	Check flow meter and determine if there are any hydraulic restrictions. Limit user load if necessary.
	4. Algae growth.	Maintain proper pool chemistry and treat algae as necessary. Test water for total and free chlorine.
Short filter cycles	1. Improper backwash procedures.	Follow manufacturer's l/0 instructions. Watch sight gauge and backwash until effluent is clear.
	2. Sand bed blocked.	Remove top 1 to 2 inches of sand and replace. Chemically soak sand bed with commercial sand cleaner and flush to waste.
	3. Algae growth.	Maintain proper pool chemistry and treat algae as necessary. Test water for total and free chlorine.
	4. High flow rate exceeds Filter Media Rate (FMR).	Use flow meter to manage and restrict water flow through filter.
	5. Pool chemicals being fed into recirculation prior to the filter.	Relocate chemical input lines to feed after all equipment including filters and heaters.
High filter pressure	1. Insufficient backwashing.	Follow manufacturer's l/0 instructions. Watch sight gauge and backwash until effluent is clear.
	2. Sand bed blocked with mineral deposits.	Chemically soak sand bed with commercial sand cleaner, flush to waste.
	3. Blocked return line or partially closed valve.	Remove line obstruction or open valve.
Sand in pool	1. Broken under-drain lateral.	Replace damaged laterals. Examine sand to determine if high filter pressure caused damage to laterals.
Sand in waste water	1. Damaged distributor or air strainer.	Replace damaged items.
	2. Backwash rate too high.	Reduce backwash flow rate.
	3. Improper sand size.	Replace sand with new sand having the specifications required by the filter manufacturer.
Flow rate to pool below minimum required and low influent pressure	1. Blockage in suction line to the pump.	Check the hair and lint basket. Check the skimmer strainer. Open valves on the suction line.
	2. Impeller damaged or broken.	Disassemble the pump and repair.

Warning: Pressure filters operate under high pressure. Always open all air bleed valves and turn off the pump before changing valve positions or removing any clomps or fittings. Failure to follow proper procedures could result in violent separation of the equipment, causing possible serious injury or death.

Troubleshooting Pressure Cartridge Filters

PROBLEM	CAUSE	SOLUTION
Pool water is not clear or clean	1. Cartridge filter dirty.	Hose cartridge filter, soak in commercial cleaner and rinse. Acid wash only if necessary to remove minerals.
	2. Media element is torn or punctured.	Replace element.
	3. Insufficient turnover rate as compared to total user load.	Check flow meter and determine if there are any hydraulic restrictions. Limit user load if necessary.
	4. Algae growth.	Maintain proper pool chemistry and treat algae as necessary. Test water for total and free chlorine.
Short filter cycles	1. Cartridge filter dirty.	Hose cartridge filter, soak in commercial cleaner and rinse. Acid wash only if necessary to remove minerals.
	2. Algae growth.	Maintain proper pool chemistry and treat algae as necessary. Test water for total and free chlorine.
	3. High flow rate exceeds Filter Media Rate (FMR).	Use flow meter to manage and restrict water flow through filter.
	4. Pool chemicals being fed into recirculation prior to the filter.	Relocate chemical input lines to feed after all equipment including filters and heaters.
High filter pressure	1. Cartridge filter dirty.	Hose cartridge filter, soak in commercial cleaner and rinse. Acid wash only if necessary to remove minerals.
	3. Blocked return line or partially closed valve.	Remove line obstruction or open valve.
Unfiltered water returning to pool	1. Damaged cartridge filter element.	Replace element.
	2. Flow rate too high.	Reduce flow rate
	3. Cartridge filter element not properly seated or located on center pipe.	Re-seat element.
	4. Air strainer is damaged or missing.	Replace air strainer.
Flow rate to pool below minimum required and low influent pressure	1. Blockage in suction line to the pump.	Check the hair and lint basket. Check the skimmer strainer. Open valves on the suction line.
	2. Impeller damaged or broken.	Disassemble the pump and repair.
	3. Obstruction in impeller.	Remove obstruction, disassemble pump if necessary.

Warning: Pressure filters operate under high pressure. Always open all air bleed valves and turn off the pump before changing valve positions or removing any clomps or fittings. Failure to follow proper procedures could result in violent separation of the equipment, causing possible serious injury or death.

Troubleshooting Pressure D.E. Filters

PROBLEM	CAUSE	SOLUTION
Pool water is not clear or clean	1. Filter covering is plugged.	0ils, dirt, and minerals have clogged the fabric openings. Remove oils and grease with commercial cleaner. Acid wash only if necessary to remove minerals. Follow the manufacturer's instructions in the l/0 manual.
	2. No D.E. powder on filter grids.	Follow manufacturer's recommendations in the I/O manual regarding the proper amount of new D.E. to add. The usual amount is 2 ounces per square foot of filter area.
Air bubbles in water returning to pool	1. Excessive air build-up in pump housing.	Use air relief valve to discharge air. Check pool water level, clogged skimmer basket, and O-ring on hair and lint basket. Correct, repair, or replace as necessary.
Short filter cycles	1. Filter covering is plugged.	See #1 in first section.
	2. Pool chemicals being fed into recirculation prior to the filter.	Relocate chemical input lines to feed after all equipment including filters and heaters.
	3. Too little D.E. being added during the pre-coat cycle.	Follow manufacturer's recommendations in the I/O manual regarding the proper amount of new D.E. to add. The usual amount is 2 ounces per square foot of filter area.
High filter pressure	1. Filter covering is plugged.	See #1 in first section.
	2. Dirty D.E. powder has accumulated at the bottom of the filter housing.	Open the tank drain and hose out interior of tank to remove all settled debris.
	3. Pool chemicals being fed into recirculation prior to the filter.	Relocate chemical input lines to feed after all equipment including filters and heaters.
D.E. in pool	1. Damaged filter element(s).	Inspect element for any tears or holes. Inspect internal air bleed sock for tears and proper installation.
Unfiltered water returning to pool	1. Damaged filter element(s).	Inspect element for any tears or holes. Inspect internal air bleed sock for tears and proper installation.
	2. Damaged manifold.	Inspect manifold for chips and cracks. Inspect manifold joints. Replace as necessary.
Flow rate to pool below minimum required and low influent pressure	1. Blockage in suction line to the pump.	Check the hair and lint basket. Check the skimmer strainer. Open valves on the suction line.
	2. Impeller damaged or broken.	Disassemble the pump and repair.
	3. Obstruction in impeller.	Remove obstruction, disassemble pump if necessary.

Warning: Pressure filters operate under high pressure. Always open all air bleed valves and turn off the pump before changing valve positions or removing any clomps or fittings. Failure to follow proper procedures could result in violent separation of the equipment, causing possible serious injury or death.

Troubleshooting Vacuum D.E. Filters

PROBLEM	CAUSE	SOLUTION
Pool water is not clear or clean	1. Filter covering is plugged.	0ils, dirt, and minerals have clogged the fabric openings. Remove oils and grease with commercial cleaner. Acid wash only if necessary to remove minerals. Follow the manufacturer's instructions in the l/0 manual.
	2. Unfiltered water is returning to pool.	See unfiltered water instructions below.
	3. No D.E. powder on filter grids.	Follow the manufacturer's recommendations in the I/O manual regarding the proper amount of new D.E. to add. The usual amount is 2 ounces per square foot of filter area.
Air bubbles in water returning to pool	1. Filter covering is plugged, causing the pump to pull air from the weakest point in the system above water level.	0ils, dirt, and minerals have clogged the fabric openings. Remove oils and grease with commercial cleaner. Acid wash only if necessary to remove minerals. Follow the manufacturer's instructions in the l/0 manual.
	2. Damaged manifold or vacuum piping connections.	Inspect manifold, connections and piping for cracks. inspect all joints. Replace or repair as necessary.
	3. Blockage in suction line to the pump.	Check the hair and lint basket. Check the skimmer strainer. Open valves on the suction line.
Short filter cycles	1. Filter covering is plugged.	See item #1 first section.
	2. Pool chemicals being fed into recirculation prior to the filter.	Relocate chemical input lines to feed after all equipment including filters and heaters.
	3. Too little D.E. being added during the pre-coat cycle.	Follow the manufacturer's recommendations in the I/O manual regarding the proper amount of new D.E. to add. The usual amount is 2 ounces per square foot of filter area.
High filter pressure	1. Filter covering is plugged.	See item #1 first section.
	2. Pool chemicals being fed into recirculation prior to the filter.	Relocate chemical input lines to feed after all equipment including filters and heaters.
D.E. in pool	1. Damaged filter element(s).	Inspect element for any tears or holes.
Unfiltered water returning to pool	1. Damaged filter element(s).	Inspect element for any tears or holes.
	2. Damaged manifold or vacuum piping connections.	Inspect manifold, connections and piping for cracks. Inspect all joints. Replace or repair as necessary.
Flow rate to pool below minimum required and low influent pressure	1. Blockage in suction line to the pump.	Check the hair and lint basket. Check the skimmer strainer. Open valves on the suction line.
	2. Impeller damaged or broken.	Disassemble the pump and repair.
	3. Obstruction in impeller.	Remove obstruction, disassemble pump if necessary.