Advanced Lesson: The Clack WS1 Seal Cage Swap

An advanced module for hands-on owners on Aqua Pro installs — taught in person, at your unit, free on install day. This sheet is the outline and the part numbers, not a substitute for having done it once with your installer standing there.

The part — one assembly, three names

- What it is: the WS1 Spacer Stack Assembly — the one-piece cage that carries the valve's seals and spacers. “Spacer stack,” “seal cage,” and “the Clack seals” are three names for this one assembly.
- Clack's own number: the Clack WS1 & WS1.25 Service Manual lists it as Drawing No. 1, Order No. V3005 — WS1 Spacer Stack Assembly.
- What you actually order today: Clack V3005-02 WS1 Spacer Stack Assembly — the current version, black-and-grey body. Online retail checked November 2, 2026 (it will move): about $39.99 at one dealer listing, $48.29–$59.99 at others. On Aqua Pro installs, the part lives on our shelf — ask before you order one.
- The rest of the core, same manual drawing: V3004 drive cap assembly; V3011 main piston (downflow); V3174 regenerant piston — the small brine piston that rides on the main piston, the one you're warned not to knock off its rod. The tool is the Clack service wrench, part V3193-02.

The field claim, labeled as ours

From years of servicing these valves, about 90 percent of Clack WS1 problems we get called for are the cage. That is a field claim from our own service calls, not a manufacturer or study statistic — no published figure backs the 90 percent number. The failure mode itself is real and documented: one damaged seal in the stack lets water run continuously out the drain — the classic WS1 call. If yours is doing that: bypass first (see the Emergency & Bypass sheet).

The swap, as taught at your unit

1. Bypass the unit and relieve pressure first — that is base-lesson step 1 doing double duty.
2. Face plate and display cover off.
3. Service wrench on the drive cap; unscrew and draw the core out — main piston and seal cage together.
4. Swap the cage. Mind the little brine piston (V3174) — it sits on the main piston and can be knocked off if the core is handled rough.
5. Core back in, cap tightened with the wrench, cover on, back in service.

One manual warning, taught word for word

Do not lubricate the piston rod, the main piston, or the regenerant piston — the Clack manual states lubricant harms the red/clear lip seals. The manual also notes the stack itself can be drawn out by hand once the drive cap and piston are off; the wrench work is the drive cap.

What this sheet does not promise

The lesson states the swap, not the coverage. Whether an owner rebuild sits inside the 3-year warranty — and on what terms — is a written-terms question that lives on the warranty sheet. What is decided: the lesson is free, the part lives on our shelf, and a taught owner turns a failed cage from a service call plus days of hard water into a same-day fix.

Not a hands-on person? Nothing changes — call (727) 342-0091 and we'll do it.