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.