

Gaggia Classic Pro — Complete Service Guide

All repairs, specifications, and maintenance procedures for the Classic Pro (2019+). Field-measured data — not from Gaggia documentation.

MACHINE SPECIFICATIONS

Component	Specification	Notes
Group head material	Brass (chrome plated)	Higher thermal mass than stainless
Group head diameter	58mm	Commercial standard — wide aftermarket
Gasket OD × ID × thickness	58 × 49 × 8.5mm	Silicone preferred over EPDM
Shower screen screw	M5 × 8mm Philips	Brass thread — do not overtighten
Portafilter basket (double)	58mm, ~18g dose	VST, IMS precision baskets fit
Pump model	ULKA EP5	48W, 15 bar rated, ~\$22 replacement
Pump type	Vibratory (solenoid piston)	Standard replacement pump
Boiler material	Brass	~300ml volume
Boiler capacity	~300ml	Single-boiler — brew and steam share
Heating element	1425W	Standard 120V AC
Brew temperature (default)	~100–105°C	Set by pressurestat
Steam temperature	~120–125°C	Via steam switch
OPV factory setting	11–12 bar	Adjust to 9 bar for quality espresso
OPV adjustment screw	M6 × 1.0mm	Flathead, behind OPV lock nut
OPV lock nut	10mm hex	Loosen before adjusting
Pressure change per OPV turn	~0.8–1.2 bar	CCW = lower pressure
3-way solenoid voltage	120V AC	Releases group pressure after shot
Thermal fuse	240°C, 15A axial	Non-resettable safety device
Max descaling concentration	1.5g citric acid / 100ml	EPDM seal protection

O-RING SPECIFICATIONS (ALL EPDM)

Location	OD	ID	Cross-section
Steam valve stem	10mm	7mm	1.5mm

Steam wand base fitting	12mm	9mm	1.5mm
Solenoid valve body	14mm	11mm	1.5mm

REPAIR 01 — GROUP HEAD GASKET REPLACEMENT

Tools & Parts: Required: Philips #2 screwdriver, flathead screwdriver, 58×49×8.5mm silicone gasket. Machine must be fully cool (45 min minimum after power-off).

- 1 Cool machine 45 min minimum. Brass group head retains heat — do not rush.
- 2 Remove portafilter (CCW, pull down). Remove shower screen screw and screen.
- 3 Insert flathead at 3 o'clock position. Work CCW around gasket groove in 3cm increments. Extract old gasket.
- 4 Wipe groove with damp cloth. Cotton swab for inner radius. Remove all debris — any fragment creates a leak point.
- 5 Press new silicone gasket into groove by hand around circumference. Seat with back of wooden spoon. No metal tools.
- 6 Reinstall shower screen. Tighten screw snugly — not overtightened. Brass into brass strips easily.
- 7 Run 2 water-only cycles before pulling shots. New silicone needs heat cycles to fully seat.

REPAIR 02 — OPV PRESSURE ADJUSTMENT TO 9 BAR

Overview: Factory setting: 11–12 bar. Target: 9 bar. Method A (free): screw adjustment. Method B (~\$10): 9-bar spring swap. Fully reversible — no permanent modification.

- 1 Remove 3 top panel screws + 2 rear screws. Lift top panel. OPV = brass cylinder on right side.
- 2 Loosen 10mm hex lock nut one quarter turn CCW. Now the adjustment screw can move.
- 3 Turn adjustment screw 1 full CCW turn. Re-loosely assemble top panel.
- 4 Power on → heat to ready → lock blind portafilter → press brew. Read gauge at steady state.
- 5 Gauge under 9 bar: quarter turn CW and retest. Gauge over 9 bar: quarter turn CCW and retest.
- 6 At 9 bar: hold adjustment screw stationary, retighten lock nut. Replace top panel fully.

REPAIR 03 — DESCALING PROCEDURE

CRITICAL: ■ Maximum concentration: 1.5g citric acid per 100ml. Brass boiler + EPDM seals require lower pH than stainless machines. Do NOT use vinegar — acetic acid leaves residue requiring 7+ rinse cycles and degrades EPDM seals over repeated use.

- 1 Mix 1.5g citric acid per 100ml cold water. For full 1.5L tank: 22.5g citric acid. Remove filter if present.

- 2 Power on, heat to ready. Place container under group head and steam wand.
- 3 Run 100ml through group head (10 sec brew). Stop. Wait 30 sec (dwell time). Repeat 4–5 times.
- 4 Run 100ml through steam wand (10 sec steam open). Stop. Wait 30 sec. Repeat twice.
- 5 Continue group head / steam wand alternating until tank empty.
- 6 FLUSH 1: Fill tank with fresh cold water. Run entire tank through same alternating cycle without stopping.
- 7 FLUSH 2: Repeat with second full tank. Taste output — must be neutral. Run flush 3 if any sourness.
- 8 Backflush after descaling: run Cafiza backflush cycle — descaling loosens coffee oil deposits.

REPAIR 04 — STEAM VALVE O-RING REPLACEMENT

Parts: 10mm OD × 7mm ID × 1.5mm EPDM for stem. 12mm OD × 9mm ID × 1.5mm EPDM for wand base. Replace both simultaneously — if one is worn the other is close.

- 1 Cool fully. Unplug. Remove top panel.
- 2 Unscrew steam knob CCW — stem pulls free from valve body.
- 3 Remove O-ring from groove with wooden toothpick (no metal — brass groove scratches).
- 4 Roll new O-ring into groove. Apply small amount food-grade silicone grease to O-ring and stem.
- 5 Reassemble. Test steam cycle with top panel off — check for leaks before closing.
- 6 If leak at wand base: remove wand fitting, replace 12mm O-ring same procedure.

MAINTENANCE SCHEDULE

Task	Interval	Product
Steam wand purge + wipe	After every steam use	Damp cloth
Portafilter and basket rinse	After every shot	Warm water
Group head flush	After every shot	10-sec hot water cycle
Backflush — water only	Weekly	Blind basket
Backflush — detergent	Monthly	Blind basket + 1g Cafiza
Shower screen remove and soak	Monthly	Cafiza solution
Steam tip soak + bore clear	Monthly	Warm soapy water, toothpick
Descaling cycle	Per water hardness	Citric acid 1.5g/100ml max
Gasket inspection	Every 6 months	Visual + tactile check

Gasket replacement	Every 12–18 months	58×49×8.5mm silicone
OPV pressure verification	Every 6 months	Blind basket test

FAULT DIAGNOSIS QUICK REFERENCE

Symptom	Likely Cause	First Action
Portafilter leaks at collar	Group head gasket failed	Replace gasket — see Repair 01
Gauge reads under 8 bar (blind basket)	Pump pressure loss or scale	Descale; if persists, replace ULKA EP5
Gauge reads 12+ bar during shot	OPV at factory setting	Adjust OPV — see Repair 02
Gauge bounces ±2 bar during shot	Channeling in puck	Check grind distribution, tamp evenness
No steam or weak steam	Blocked 1.0mm steam tip bore	Soak tip, clear bore with toothpick
Steam drips at rest from tip	Steam valve O-ring failed	Replace O-ring — see Repair 04
Coffee sprays on portafilter removal	3-way solenoid scaled or failed	Monthly Cafiza backflush; then replace solenoid
Machine takes 10+ min to heat	Scale on heating element	Descaling cycle — see Repair 03
No heat at all	Thermal fuse blown	Diagnose root cause first; then replace 240°C fuse
Shot fast + pale crema	Grind too coarse OR OPV too low	Grind finer first; check OPV if persists
Shot very slow or no flow	Grind too fine OR scale restriction	Grind coarser; if water-only also slow: descale