READY TO INSPECT — FIELD CHECKLIST

Expansion tank annual maintenance checklist

The annual expansion tank service is the deep pass: the measurements, cleanings and tests a quarterly round doesn't reach. This checklist keeps the full service on record with the photos that make it defensible later. Work is commonly verified against manufacturer's published instructions. Confirm the edition your authority having jurisdiction has adopted.

Who runs it: The plumbing service tech on the annual service, with the tank isolated and the water side relieved so the pre-charge can be read cold. When: Once a year, the only pass where the tank is actually isolated and gauged rather than judged by tapping, and re-charged to match the current system pressure.

Pre-charge

- [ ] Tank isolated and water side relieved before gauging
  Tank valved off from the system and its water pressure bled down so the air pre-charge is read with no system pressure fighting the gauge.
  No photo required

- [ ] Isolation valve tag hung while the tank is off line
  Tag hung on the closed tank valve, the heat source held off or the loop held at steady temperature while the tank is out, and anyone near the relief discharge warned.
  1 photo required

- [ ] Air-side gauge checked against a reference before charging
  The air-side gauge compared with a second or calibrated gauge before the charge is adjusted, since a gauge that reads off sets every tank it touches wrong.
  No photo required

- [ ] Pre-charge set to the system fill pressure
  Air pre-charge measured and adjusted to match the system's cold fill pressure at that location per the published instructions, then re-checked after adjustment.
  No photo required

- [ ] Plain steel tank drained and air cushion restored
  On a plain steel tank, the tank drained through its drain fitting to let air back in, then refilled until the gauge glass shows its normal marked level.
  No photo required

Bladder integrity

- [ ] Bladder proven intact under charge
  Air valve holds the set pre-charge and blows clean air with no water, confirming the bladder is separating air from water rather than passing it.
  No photo required

- [ ] Drained water checked for sediment and rust
  Water drained from the tank side looked at for rust, scale or sediment, which points to corrosion inside the shell or debris loading the bladder.
  1 photo required

Shell, connection and air vent

- [ ] Shell, tapping and any air vent serviced
  Shell and seam free of corrosion under a close look, connection re-sealed and supported, and any automatic air vent on the tank tapping proven to seat and not leak.
  2 photos required

- [ ] Nameplate rating checked against the system relief setting
  Rated working pressure and temperature on the tank nameplate confirmed above the system relief valve setting and the loop's operating temperature.
  1 photo required

- [ ] Air control piping checked on a plain steel tank
  On a plain steel tank, the air control fitting and piping from the air separator slope up to the tank and are clear, so separated air reaches the cushion.
  No photo required

Return to service

- [ ] Tank reopened to the system and tag removed
  Isolation valve fully reopened by the person who tagged it and the tag removed, with the system gauge back at fill pressure and the tank on line.
  1 photo required

- [ ] System pressure checked at operating temperature after service
  Gauge near the tank read once the loop is back at operating temperature; the rise from fill pressure sits within the design range and the system relief stays dry.
  1 photo required

- [ ] Annual tank record filed with the owner
  As-found and as-left precharge, nameplate data, sediment findings and any replacement recommendation filed with the owner on the tank record.
  No photo required