READY TO INSPECT — FIELD CHECKLIST

Plate-and-frame heat exchanger quarterly maintenance checklist

A quarterly heat exchanger round is short on purpose: it catches the wear items that fail between annual services. This checklist is sized for a tech with a phone. Every item says what to look at and the photo that proves the round happened. Work is commonly verified against manufacturer's published instructions. Confirm the edition your authority having jurisdiction has adopted.

Who runs it: The mechanical or building maintenance tech on the quarterly round, reading the exchanger in service. When: Every quarter while the exchanger is running under load, so a slipping approach temperature is caught as early fouling rather than a comfort complaint.

Performance

- [ ] Approach temperature read across both circuits
  Inlet and outlet temperatures taken on both sides under load and the approach compared to what the exchanger normally holds, a widening approach flags fouling before it becomes a complaint.
  2 photos required
- [ ] Pressure drop across the unit observed
  Differential across each side compared to normal; a climbing drop with no valve change points at scaling or debris packing the plate gaps.
  1 photo required
- [ ] Thermometers and gauges on each nozzle readable
  Thermometers, gauges or sensors on both circuits legible and agreeing with the building controls or a handheld check, since the approach is only as good as the instruments.
  1 photo required

Leaks

- [ ] Plate pack and connections checked for external leaks
  No weeping along the plate pack edges or at the port connections, no drip trail down the frame, dry under the unit.
  2 photos required
- [ ] No sign of cross-contamination between circuits
  Neither circuit showing the other's pressure, color or make-up behavior, which would say a plate or gasket is passing internally.
  1 photo required
- [ ] Frame, tie bars and nuts checked for corrosion
  Frame plates, tie bars and nuts free of heavy rust or mineral crust left by a slow weep, with the exposed bar threads kept clean and protected.
  1 photo required
- [ ] Vents and drains on both circuits shut and capped
  High-point vents and low-point drains on both circuits closed, capped and dry, with no air hissing at a vent on the closed loop.
  1 photo required

Controls and supports

- [ ] Leaving temperature read against its setpoint
  Leaving temperature on the controlled side read on the controller or building controls display against its setpoint, with the control output not pinned at full.
  1 photo required
- [ ] Inlet strainer differential noted on each circuit
  Any strainer ahead of the exchanger read across its gauges or ports; a loaded strainer shows up as false exchanger pressure drop.
  No photo required

- [ ] Unit and connected piping supported without nozzle strain
  Frame feet anchored tight, and the connected piping carried by its own hangers rather than hanging on the frame plate connections.
  1 photo required

Record

- [ ] Approach and drop logged against the baseline
  Approach and drop on both sides logged with the pump and load conditions at the time, next to the commissioning baseline and last quarter's values.
  No photo required
- [ ] Fouling trend or leak reported to the owner
  A widening approach, a climbing drop or any weep reported to the owner with a recommendation on whether to bring the cleaning forward.
  No photo required