READY TO INSPECT — FIELD CHECKLIST

Air and dirt separator quarterly maintenance checklist

A quarterly air and dirt separator 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 IMC (mechanical code), manufacturer's published instructions. Confirm the edition your authority having jurisdiction has adopted.

Who runs it: The HVAC or building maintenance tech checking the separator on the quarterly mechanical-room round, venting air and blowing down the collected dirt. When: Every quarter, and more often on a loop that's been opened or refilled, since air the separator misses collects at the high points and dirt it doesn't drop settles into the pump seals and control valves.

Air removal

- [ ] Automatic air vent operating and not weeping
  Vent seen releasing air and reseating dry, float chamber not water-logged, no steady drip that means the seat is fouled or the vent is passing water.
  1 photo required
- [ ] Vent cap set open and outlet not plugged or painted over
  Vent cap backed off as the manufacturer directs so air can escape, outlet port clear of paint, scale or a plug, and any vent drip line running to a drain.
  1 photo required

Dirt removal and blowdown

- [ ] Blowdown discharge routed to a drain with people kept clear
  Hose or pipe from the blowdown secured into a floor drain or container before the valve opens, people kept clear, and flow throttled so hot or treated loop water can't splash.
  1 photo required
- [ ] Blowdown opened and discharge observed
  Blowdown or drain valve at the base opened to a bucket or drain, dirty water and settled sediment seen discharging, valve reseating clean with no drip after.
  2 photos required
- [ ] Sediment in the blowdown judged for color and amount
  Blowdown caught in a clear container, black magnetite, red rust or grit noted and compared with last quarter, heavy or rising dirt reported to the water treatment contractor.
  1 photo required
- [ ] Magnetic insert withdrawn during blowdown where fitted
  On a separator with a removable magnet in a dry well, the magnet pulled during blowdown so captured magnetite flushes out the dirt leg, then reseated fully.
  No photo required
- [ ] Blowdown outlet capped once the valve is closed
  Blowdown valve closed tight, hose removed and the outlet capped or plugged, so a bumped handle can't dump loop water on the mechanical room floor.
  1 photo required

Pressure and body

- [ ] System pressure and separator body checked
  Loop pressure at the gauge steady in its normal band, no rising make-up suggesting a leak here, separator body and connections dry with no weeping at the flanges or the vent.
  1 photo required
- [ ] Pressure drop across the separator read where gauged
  Where inlet and outlet gauges or test ports are fitted, pressure drop read and compared with the commissioning or last reading, a rising drop reported as a loaded element.
  No photo required
- [ ] Any bypass around the separator found closed
  Where a bypass is piped, its valve found closed and tagged normally closed, so loop water runs through the separator and not around it.
  No photo required

- [ ] Insulation and mounting intact
  Body insulation on a chilled or condensing loop intact so it doesn't sweat, mounting and supports sound, isolation valves in their normal positions.
  1 photo required

- [ ] Nameplate model and flow arrow read against the equipment list
  Nameplate model, size and pressure rating matched to the equipment list and the flow arrow agreeing with the piping, so it's serviced as a separator, not lumped in as a strainer.
  1 photo required

Treatment and record

- [ ] Glycol blowdown caught for disposal and make-up logged
  On a glycol loop, blowdown caught rather than drained unless site rules allow it, volume logged, and the treatment contractor told so concentration can be restored.
  No photo required

- [ ] Blowdown, vent and pressure findings logged to the tag
  Sediment, vent condition, loop pressure and any pressure drop logged under the separator's tag, and deficiencies reported to the owner and the water treatment contractor.
  No photo required