READY TO INSPECT — FIELD CHECKLIST

Air and dirt separator annual maintenance checklist

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

Who runs it: The hydronic service tech on the annual mechanical service, isolating the separator to clean the internal element and service the vent. When: Once a year, paired with the rest of the loop service, the pass that opens the separator to clean the coalescing medium the quarterly blowdown can't fully clear.

Notice and isolation

- [ ] As-found readings taken with the loop still running
  Loop pressure at the nearest gauge, plus any pressure drop across the separator, read and photographed before isolation so post-service readings have a baseline.
  1 photo required
- [ ] Owner told the loop loses flow while the separator is out
  Owner and building operator told when the loop goes down or onto bypass, with pumps and the heating or cooling plant held off by their own procedures while the separator is open.
  No photo required
- [ ] Isolation valves closed and tagged and the body relieved
  Inlet and outlet valves closed and tagged under the site's procedure, the body drained through the blowdown until flow stops and let cool before any head bolt is loosened.
  1 photo required

Internal element

- [ ] Coalescing element cleaned or replaced
  Separator isolated and drained, the internal coalescing medium pulled and cleaned or replaced per the instructions, magnetite and sludge flushed from the body before it closes back up.
  No photo required
- [ ] Magnetic insert cleaned and its sleeve checked where fitted
  Magnet withdrawn and captured magnetite wiped into a bag, the sleeve checked for cracks that would let loop water reach the magnet, then reseated, a step past the quarterly pull.
  No photo required
- [ ] Shell interior inspected where the model has a removable head
  Where the model has a removable head, inside of the shell, the inlet and outlet nozzles and the dirt leg checked for erosion, scale and pitting, findings shared with the treatment contractor.
  No photo required
- [ ] Dirt leg flushed clear and blowdown valve serviced
  Dirt leg flushed with clean water until it runs clear, blowdown valve stroked fully and repacked or replaced if it weeps, so next quarter's blowdown isn't blocked.
  1 photo required

Vent and connections

- [ ] Air vent serviced and connections resealed
  Automatic air vent cleaned or rebuilt, float and seat seen releasing air and reseating dry, flange gaskets and threaded connections resealed with no weeping on refill.
  1 photo required
- [ ] Head bolts torqued where the model has a removable head
  Where the model has a removable head, its bolts or clamp tightened in a cross pattern to the manufacturer's value with a torque wrench, so the gasket seals evenly without crushing.
  No photo required

Refill and pressure

- [ ] System refilled, vented and pressure confirmed
  Loop refilled and vented at the high points, isolation valves returned fully open, system pressure back at its fill value with the make-up not running on.
  1 photo required
- [ ] Pressure drop compared with the as-found after cleaning
  Where gauged, pressure drop across the separator read at normal flow and set against the as-found and commissioning values, a drop still high after cleaning reported.
  No photo required
- [ ] Glycol mix restored and checked after the drain
  On a glycol loop, drained volume replaced with the specified mix and concentration read on a refractometer, drained glycol disposed of per site rules.
  No photo required

Close-up and record

- [ ] Insulation refitted over the head and dirt leg
  Insulation removed for the service refitted and sealed, going further than the quarterly look, with the vapor barrier closed on a chilled loop so the body won't sweat.
  1 photo required
- [ ] Tags cleared and annual separator findings filed
  Isolation tags removed by whoever hung them, owner told flow is restored, and element, magnetite and pressure findings filed and sent to the treatment contractor.
  No photo required