READY TO INSPECT — FIELD CHECKLIST

Air-source heat pump annual maintenance checklist

The annual air-source heat pump 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, manufacturer's published instructions. Confirm the edition your authority having jurisdiction has adopted.

Who runs it: The HVAC service tech on the annual service visit. When: Once a year, best scheduled ahead of the heating season so the defrost and backup-heat sequence is proven before it is relied on.

Coils and airflow

- [ ] Every feed locked and tagged before panels come off
  Outdoor unit, indoor unit and any backup heat circuit locked and tagged; for powered tests, panels on, people clear, locks lifted by whoever hung them, then relocked before hands go back in.
  1 photo required
- [ ] Both coils cleaned and airflow restored
  Outdoor and indoor coils washed through, fins combed where bent, blower and drain pan cleaned, filters renewed.
  2 photos required
- [ ] Base pan heater and drain line heat checked where fitted
  With the unit locked out, base pan heater and any drain heat tape leads intact and secured; heater seen to warm during the powered tests so meltwater cannot refreeze in the pan.
  No photo required

Refrigerant and controls

- [ ] Charge assessed by superheat and subcooling
  Readings taken and compared against the unit's charging chart, not adjusted without evidence of an actual charge problem.
  1 photo required
- [ ] Reversing valve and defrost control proven
  Full changeover confirmed in both directions, defrost forced and terminating correctly, sensor and control response checked.
  1 photo required
- [ ] Sealed-system faults referred to a certified refrigerant technician
  A stuck or leaking reversing valve, a leak or any charge change is left to a certified refrigerant technician, with type and amount entered on the refrigerant log.
  No photo required

Backup heat and electrical

- [ ] Auxiliary heat lockout and staging tested
  Backup heat locked out so the compressor is proven alone, then staging and any balance-point control brought in and confirmed.
  No photo required
- [ ] Low-ambient and backup heat settings read at the controls
  Compressor low-ambient cutout and any backup heat enable or balance-point setting read at the controller and matched to the design or commissioning record, not a stray default.
  1 photo required
- [ ] Backup heat section inspected for its type
  Relocked first: electric strip elements, limits and lugs checked for scorching and looseness, or on a dual-fuel unit the furnace serviced to its own checklist by a qualified gas tech.
  No photo required
- [ ] Electrical connections and contactor checked
  Terminations tight, contactor and disconnect sound, amp draw on compressor and fans within the unit's published range.
  1 photo required

- [ ] Crankcase heater checked with the compressor off where fitted
  Under the site's energized-work procedure and its PPE, heater current read or shell warmth confirmed with the compressor idle, so liquid refrigerant is kept out of the crankcase.
  No photo required

Return to service

- [ ] Unit run through a full heating call after the service
  Panels and guards on, locks lifted by whoever hung them, unit run in heat pump mode until temperatures settle, backup heat staging in only as the controls intend.
  1 photo required

- [ ] Settings as left and readings entered against the unit
  Lockout, balance point and defrost settings as left, charge readings and staging results recorded, so a later change to the controls shows up at the next service.
  No photo required