READY TO INSPECT — FIELD CHECKLIST

Variable frequency drive (VFD) quarterly maintenance checklist

A quarterly variable frequency drive 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 NEC (NFPA 70), manufacturer's published instructions. Confirm the edition your authority having jurisdiction has adopted.

Who runs it: The controls or electrical tech on the quarterly round, working at the drive without opening the power section. When: Every quarter, usually walked with the motors and starters it feeds in the same mechanical room or MCC lineup.

Before the walk-down

- [ ] Drive warning labels read, including the capacitor discharge time
  Arc-flash and stored-energy labels on the drive legible, and the manufacturer's DC bus discharge wait noted for anyone who later works inside.
  1 photo required

- [ ] Walk-down kept to the keypad, vents and viewing windows
  The quarterly stays doors-closed. A door opens only with the drive stopped and locked out, or under the energized-work procedure with PPE from the site's arc-flash risk assessment.
  No photo required

Cooling

- [ ] Cooling fan running and moving air
  Fan spinning freely at speed, air moving across the heatsink, no bearing rumble or blade contact noise.
  1 photo required

- [ ] Intake filter and vents clear
  Filter checked for dust loading and cleaned or swapped, enclosure louvers and vents unobstructed.
  1 photo required

- [ ] Clearance around the drive kept open for cooling air
  Top, bottom and side clearances the manufacturer calls for kept free of stored material, and hot exhaust not recirculating into the drive's intake.
  1 photo required

Enclosure and environment

- [ ] Enclosure and drive temperature checked
  Interior temperature read against the drive's ambient rating, no hot smell, no discoloration around the power section.
  1 photo required

- [ ] Dust and contamination inside the enclosure
  Surfaces and vents checked for dust, no conductive debris or moisture where the drive is mounted.
  1 photo required

- [ ] Enclosure door latched with gasket and conduit entries sealed
  Door and keypad cover latched, gasket intact, conduit entries sealed, and no water, drips or condensation above or around the drive.
  1 photo required

Faults and status

- [ ] Fault and warning log read and recorded before clearing
  Recent faults and warnings read off the keypad and noted, repeated trips or overtemperature warnings flagged rather than just cleared.
  1 photo required

- [ ] Output current, frequency and bus voltage read on the display
  Readings taken at normal running and compared with the motor nameplate current and last quarter's log, with any climb or sag noted.
  1 photo required

- [ ] Run hours and cooling fan age logged
  Drive hour counter read and fan hours or fan install date noted, so fans are replaced on the manufacturer's service life, not after an overtemperature trip.
  1 photo required

Control mode and records

- [ ] Drive in auto on its normal speed reference
  Hand-off-auto in auto and speed following the building automation or process signal, not left in hand at a fixed speed after a service call.
  1 photo required

- [ ] Bypass selector checked on drives with a bypass package
  Selector in drive mode and the motor not left running across the line on bypass; drives without a bypass marked not applicable.
  No photo required

- [ ] Parameter backup on file matches the drive's current settings
  Backup record dated after the last parameter change, and any settings changed this quarter noted so the annual upload captures them.
  No photo required

- [ ] Quarterly readings and follow-up work recorded
  Readings, fault history and fan or filter work logged in the drive's record, with anything needing the power section opened added to the annual list.
  No photo required