READY TO INSPECT — FIELD CHECKLIST

Motor control center (MCC) annual maintenance checklist

The annual motor control center 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 NFPA 70B, NETA maintenance testing standards. Confirm the edition your authority having jurisdiction has adopted.

Who runs it: The facility electrician recording the inspection during a planned outage, pulling and inspecting buckets while the testing firm performs the electrical tests on the lineup. When: Once a year during a scheduled shutdown, coordinated with the NETA technician so buckets are racked out and inspected while the lineup is dead, then tested before it's returned to service.

Isolation and access

- [ ] Owner told which loads go down and for how long
  Outage window put in writing with the owner, listing the motors and processes that stop, the restart order and any temporary or standby feed the owner needs.
  No photo required
- [ ] Quarterly findings listed by bucket for the outage
  Hot readings, trips, dead lamps and interlock defects from the year's rounds listed by bucket, so the crew opens those units first and records what it finds.
  No photo required
- [ ] Every source feeding the lineup identified for lockout
  Main, any second feed or tie, remote control power and outside heater or auxiliary circuits each listed and locked; where the lineup is service equipment, the utility is coordinated too.
  No photo required
- [ ] MCC locked out and buckets verified dead
  Main isolated, absence of voltage tested, lockout applied before any bucket is racked out or opened.
  2 photos required
- [ ] Buckets pulled and stabs inspected
  Bucket stabs and bus contacts checked for pitting, discoloration or spring fatigue, compartments vacuumed clean of dust and debris.
  2 photos required

Bus and structure

- [ ] Vertical and horizontal bus inspected section by section
  Bus bars, supports and barriers seen from each emptied space and behind removed covers, no pitting, heat marks, carbon tracking or cracked insulators.
  1 photo required
- [ ] Horizontal bus splices between sections verified
  Splice bolts at each shipping split torque-verified or resistance-measured per the manufacturer, re-torqued only where found loose, results kept by section.
  1 photo required
- [ ] Ground bus and bucket ground stabs checked
  Ground bus continuous across the sections, each unit's ground stab or clip present and making contact, and the lineup's bond to the building ground intact.
  1 photo required

Contacts and connections

- [ ] Starter contacts and overload elements inspected
  Contact tips checked for wear, pitting and alignment, overload elements confirmed matched to the motor rather than filed to survive another year.
  2 photos required

- [ ] Line and load connections checked to torque
  Bucket line and load terminations verified to the manufacturer's torque value, re-torqued only where found loose, any that moved or discolored noted for re-scan.
  2 photos required
- [ ] Disconnect handle and door interlock operated dead
  With the unit dead, handle cycled on and off and the door shown to stay shut with the handle on, mechanism lubricated only where the manufacturer calls for it.
  1 photo required
- [ ] Control power and fuses checked on each starter unit
  Control transformer, or the common control feed where units share one, free of heat marks, fuses sized as the drawings show, none oversized or bypassed, control wiring undamaged.
  1 photo required

Testing observed and recorded

- [ ] NETA electrical tests witnessed and logged
  Insulation-resistance and any contact-resistance results from the testing tech recorded per bucket, out-of-range values flagged before re-energizing.
  2 photos required

Return to service

- [ ] Buckets reinstalled and doors latched before re-energizing
  Each unit fully engaged on its stabs, doors closed and latched, no tools or grounds left inside, and each lock and tag removed by the person who hung it.
  1 photo required
- [ ] Lineup re-energized and motors restarted with the owner
  Main closed per the plan, voltage confirmed under the energized-work procedure, loads restarted in the owner's order and each motor seen running.
  1 photo required