

Variable frequency drive (VFD) annual maintenance checklist

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

Who runs it: The electrical service tech on the annual shutdown, with the drive locked out and the DC bus confirmed discharged.
When: Once a year during a scheduled outage, when the driven load can be down long enough to open the power section safely.

Safe shutdown

- ☐ Drive locked out and DC bus verified discharged
Upstream disconnect locked out, keypad dark, DC bus measured down to a safe level before the power section is opened. 2 photos required

Connections and cleaning

- ☐ Power and control terminals re-torqued to spec
Line, load and control terminations torqued to the drive's published values, no heat discoloration on lugs. 2 photos required
- ☐ Heatsink and power section cleaned
Heatsink fins and boards cleaned of dust, cooling fan replaced if worn, no debris bridging the power terminals. 1 photo required

Configuration and life

- ☐ Parameter set backed up off the drive
Active parameters uploaded to a keypad, tool or file kept off the unit, revision noted so a replacement can be reloaded. 1 photo required
- ☐ DC bus capacitor age and condition noted
Service age checked against the manufacturer's capacitor life guidance, any bulging or venting on older units flagged for planned replacement. 1 photo required

Return to service

- ☐ Drive restarted and run through its speed range
Unit brought up and run across its operating speed range under load, no unusual noise, no fault, output currents balanced. 1 photo required