READY TO INSPECT — FIELD CHECKLIST

Automatic transfer switch (ATS) annual maintenance checklist

The annual automatic transfer switch 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), NFPA 110, manufacturer's published instructions. Confirm the edition your authority having jurisdiction has adopted.

Who runs it: The electrical service tech on the annual, with a plan for the momentary outage the on-load test creates. When: Once a year, scheduled when the served loads can ride through a real transfer and back, and when the switch can be opened de-energized afterward.

Outage plan

- [ ] Outage or bypass-isolation plan agreed for the switch's loads
  Owner agrees when loads drop or ride on the bypass, how long the switch is out of service, and how life-safety loads are covered under their procedure.
  No photo required

- [ ] Generator service booked for the transfer and the outage
  Generator service on site for the on-load transfer and to hold the set out of auto during the outage, with engine-side work left to them.
  No photo required

Live-load transfer

- [ ] Full on-load transfer to the alternate source and back
  Actual building load transferred to the generator, run under load, then retransferred, transition timing observed against the settings.
  2 photos required

- [ ] Voltage sensing checked against a calibrated meter
  Controller readings on both sources compared with a calibrated meter under the energized-work procedure, pickup and dropout confirmed to the setup sheet.
  1 photo required

Heat and connections (thermography awareness)

- [ ] Line and load connections scanned for heat under load
  Terminations checked with a thermal camera or infrared spot while loaded, any hot lug compared against its neighbors and flagged.
  2 photos required

- [ ] Both sources locked out and verified dead at the switch
  Normal and emergency feeds opened and locked, or the switch drawn out of its bypass-isolation frame per the manufacturer, and the parts to be worked on tested dead.
  1 photo required

- [ ] Terminations re-torqued de-energized after the scan
  Switch locked out after the load test, lugs torque-verified or resistance-measured, re-torqued only where found loose, heat-discolored hardware replaced.
  1 photo required

Mechanism and control power

- [ ] Main contacts and mechanism inspected
  Contacts checked for pitting and burning where accessible, mechanism and arc structures inspected, lubrication per the manufacturer.
  1 photo required

- [ ] Controller battery and control power verified
  Controller battery or control-power source tested, so the switch can still run its logic during an actual outage.
  1 photo required

- [ ] Insulation resistance recorded pole to pole and across open contacts
  Readings taken with the switch dead and the controller isolated as the manufacturer directs, recorded and compared with last year's results.
  1 photo required

- [ ] Mechanism operated by hand through both positions
  With the switch dead, the manual operator moves it smoothly to each source, it latches fully, and the auxiliary position contacts change state.
  1 photo required

Return to service

- [ ] Barriers and covers back on before either source is restored
  Tools cleared, barriers and covers refitted, and each lock and tag removed by the person who hung it before normal or emergency power returns.
  No photo required

- [ ] Switch re-energized on normal and left in automatic
  Normal source restored under the outage plan, switch on normal, controller in automatic with no alarms, and the exercise schedule still set.
  1 photo required

- [ ] Owner and generator service told, and the service report filed
  Owner told the switch is back in automatic, generator service released to return their set to auto, and readings, test results and deferred work filed.
  No photo required