FIELD TECHNICAL SERVICES

With extensive capabilities, decades of experience, and a full-service approach, we offer a full spectrum of Field Technical Services. From on-site repairs and testing to preventative maintenance and diagnostic evaluations, we cover every aspect of your transformer equipment service needs.

Our field service technicians troubleshoot and repair any type of substation equipment, including transformers, regulators, and reclosers.

TESTING

- Perform Megger, TTR, power factor, winding resistance, excitation current, and SFRA tests

VISUAL INSPECTION

- Thoroughly inspect each unit for leaks, along with broken or damaged components
- Inspect and test all gauges, trip and alarm circuits, and fan circuits
- Inspect sudden pressure relay and sudden pressure relief device and test, if necessary
- Check nitrogen system for proper operation

BUSHINGS

- Inspect for leaks, cracks, and other possible damage
- Test for overall power factor and capacitance (C1 & C2 tests)
- Compare measurements to nameplate data and check at each scheduled maintenance interval for degradation
- Perform hot collar testing, if necessary

NO-LOAD TAP CHANGER

- If TTR or winding resistance test shows a potential problem, perform an internal inspection to determine if the tap changer needs to be repaired or replaced
- Load tap changer
- TTR test in all tap positions
- Clean tap changer compartment
- Check all contacts for wear and replace as necessary
- Check operating mechanism, control, position indicator, limit switches, and counter for proper operation
- Perform hipot test if equipped with vacuum bottles
- Install new door gasket and new oil

RADIATORS

- Check shutoff valves and radiators for leaks
- Inspect for obstructions and clean, if necessary
- Check to confirm fans are operational

CURRENT TRANSFORMERS

- Test with CT Analyzer and Megger

OIL TESTING

- Pull oil samples for PCB, DGA, and dielectric tests
- Perform testing once a year to ensure there are no problems that could cause early failure
- If oil tests show a potential problem, perform further testing for metals in oil and furanic compounds
- Test at three-month intervals if any of the tests show abnormal results
- Oil filtration, including Fuller's Earth

DONE EFFICIENTLY, TIMELY, & SAFELY

Field Technical Services tailored to your needs by a company you know and trust

EMERALD TRANSFORMER

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RECLOSERS

- Hipot
- Contact resistance
- Control timing tests
- Control installation
- Control upgrades
- Trip checks

OIL CIRCUIT BREAKERS

- Megger
- Power factor unit and bushings
- Test timing, travel, and current draw on trip and close coils with a circuit breaker analyzer
- Contact resistance
- Check air compressor
- Check or change compressor oil
- Check compressor V-belt
- Test air cut-out switches

SF6 BREAKERS AND CIRCUIT SWITCHERS

- Megger
- Power factor unit and hot collar bushings
- Test timing, travel, and current draw on trip and close coils
- Check alarms and trip circuits
- Controls
- Test electromechanical relays
- Test solid-state relays
- Relay upgrades

CONTROLS

- Test electromechanical relays
- Test solid-state relays
- Relay upgrades

REGULATORS

- Megger
- TTR
- Hot collar test for power factor
- Winding resistance on all taps
- Test controls for proper operation
- Control panel upgrades

OTHER STATION EQUIPMENT

- Control cabinets – Change electromechanical to solid-state relays
- CTs and PTs – Megger, ratio, polarity, CT analyzer, excitation knee point
- Lightning arrestors – Power factor tests
- Ground switches – Megger and timing
- Cables – Megger and hi-pot
- GOAB Switches – Visual inspection

FIELD REPAIRS

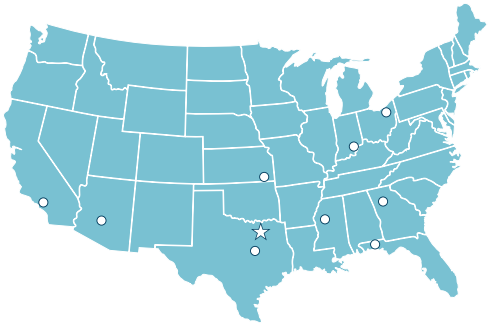
- Transformer leaks
- Bushing replacement
- Fuse replacement
- Oil retrofill
- Radiator repair
- Gauges

Oil Processing, Retrofilling, & Infrared Scanning
We offer Oil Processing and Envirotemp™ FR3™ Retrofilling, along with infrared scanning to check for hot spots in all equipment, transformers, breakers, air break switches, and circuit switches.

Total Turnkey Relocation Solutions
We offer pretesting, disassembly, logistics, assembly, and post-testing for all electrical equipment.

OUR SERVICES

- Transformer Repair
- Transformer Decommission
- PCB Disposal
- Oil Services
- Substation Field Decommission
- Field Technical Services
- Sold from Stock
- Transformer Parts



- **Nationwide Coverage**
- **10 Locations**
- **350+ Employees**
- **EPA-Permitted Facilities**

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