



## Technical Diagnostic Services Training Institute

### Medium Voltage Air & Vacuum Circuit Breaker Maintenance – 36 hours

**Who Should Attend:** Field and shop technicians, circuit breaker rebuilders, supervisors, and others responsible for the testing and maintenance of low-voltage molded-case and draw out air circuit breakers as well as medium-voltage draw-out air and vacuum circuit breakers.

**Course Description:** Students will learn safe and proper maintenance and testing procedures on a variety of 4160V & 13,800V circuit breaker manufacturers. Topics for Medium-voltage circuit breakers will include power factor, contact resistance and other standard tests and adjustments

All testing and maintenance is done in accordance with NETA, ANSI and NEMA standards.

**Lab vs. Lecture Time:** Approximately 60% hands-on lab time vs. 40% lecture. This will vary with the actual class.

#### Outline:

- I. **Introduction**
  - A) Student introductions
  - B) Pre-Test
- I. **Circuit breaker fundamentals**
  - A) Definitions
  - B) Nameplate data
  - C) Circuit breaker components
- II. **Circuit breaker cubicle service**
  - A) Circuit breaker removal
  - B) Restoring the circuit breaker to service
- III. **Circuit breaker service**
  - A) Circuit breaker adjustments
- IV. **Circuit breaker testing**
  - A) Contact resistance testing
  - B) Insulation resistance testing
  - C) AC and DC high potential tests
  - D) Power factor testing basics
  - E) Power factor testing
  - F) Mechanical timing

#### TDSTI

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