QUALITY CONTROL PROCEDURE	SUBJECT	QCP 4.6
SQUARE D COMPANY	Mechanical Operation Tests	DATE 10/30/84
POWER EQUIPMENT GROUP		SUPERSEDES NEW
		DATED
		PAGE 1 OF 2
	PREPARED BY R. H. Agee	DISTRIBUTION
	APPROVED BY	A, B, C, D

I. PURPOSE

The purpose of this procedure is to describe the method and equipment required to perform mechanical operation tests on high voltage circuit breakers. Mechanical operation tests are made to check the adjustments and to qualify the ability of the circuit breaker and its components to operate correctly over the entire range of control voltages without damage to parts or substantial change in adjustments. This procedure is in accordance with ANSI-C37.09-5.11.

II. EQUIPMENT

Power supply appropriate for the products range of control voltages.

III. PROCEDURE

1. At the minimum control voltage as specified in table one, perform:

   a. Five (5) close operations
   b. Five (5) open opeations

2. At maximum control voltage as specified in table one, perform:

   a. Five (5) close operations
   b. Five (5) open operations

3. At rated control voltage as specified in table one, perform:

   a. Five (5) close/open operations with the shunt trip coil energized simultaneously with the closing of the main breaker contacts.

   b. Five (5) reclosing operations (if breaker is intended for reclosing service).

4. After tests are complete, inspect all components to ensure that no parts have sustained damage.

IV. ACCEPTANCE CRITERIA AND RECORD

Tests are considered acceptable if circuit breaker operates over entire control voltage range and no components have deteriorated as a result of the tests.

Record results on the appropriate QC inspection checklist.

REV.	DATE	BY	APPROVED BY	REV.	DATE	BY	APPROVED BY

(CONTINUED)

TABLE ONE (ANSI C37.06)

RATED VOLTAGE	MINIMUM OPERATING VOLTAGE, CLOSE COIL AND MOTOR	MINIMUM OPERATING VOLTAGE TRIP COIL	MAXIMUM OPERATING VOLTAGE
24 VDC	N/A	14 VDC	28 VDC
48 VDC	36 VDC	28 VDC	56 VDC
125 VDC	90 VDC	70 VDC	140 VDC
250 VDC	180 VDC	140 VDC	280 VDC
120 VAC	104 VAC	104 VAC	127 VAC
240 VAC	208 VAC	208 VAC	254 VAC